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Bioinspired structural materials

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2254	Bioinspired Reductionistic Peptide Engineering for Exceptional Mechanical Properties. 2015 , 5, 16070		33
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2252	The cuttlefish Sepia officinalis (Sepiidae, Cephalopoda) constructs cuttlebone from a liquid-crystal precursor. 2015 , 5, 11513		56
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2250	Bone, implants, and their interfaces. 2015 , 68, 40-45		20
2249	Bioinspired membrane-based systems for a physical approach of cell organization and dynamics: usefulness and limitations. 2015 , 5, 20150038		43
2248	Directional Electrical Transport in Tough Multifunctional Layered Ceramic/Graphene Composites. 2015 , 1, 1500132		6
2247	Biomimetic Carbon Nanotube Films with Gradient Structure and Locally Tunable Mechanical Property. 2015 , 25, 7173-7179		17
2246	Instructive Conductive 3D Silk Foam-Based Bone Tissue Scaffolds Enable Electrical Stimulation of Stem Cells for Enhanced Osteogenic Differentiation. 2015 , 15, 1490-6		41
2245	Virus-Inspired Mimics Based on Dendritic Lipopeptides for Efficient Tumor-Specific Infection and Systemic Drug Delivery. 2015 , 25, 5250-5260		64
2244	Porous Zirconium-Phytic Acid Hybrid: a Highly Efficient Catalyst for Meerwein-Ponndorf-Verley Reductions. 2015 , 54, 9399-403		169
2243	Instability-Assisted Direct Writing of Microstructured Fibers Featuring Sacrificial Bonds. 2015 , 27, 3676-	-80	36
2242	A Hierarchical Lattice Spring Model to Simulate the Mechanics of 2-D Materials-Based Composites. 2015 , 2,		18
2241	Scaling up self-assembly: bottom-up approaches to macroscopic particle organization. 2015 , 11, 5597-6	09	32

2240	Biomaterials: Recipe for squid beak. 2015 , 11, 455-6	6
2239	Regulating the respiration of microbe: A bio-inspired high performance microbial supercapacitor with graphene based electrodes and its kinetic features. 2015 , 15, 697-708	34
2238	Amyloid-directed assembly of nanostructures and functional devices for bionanoelectronics. 2015 , 3, 4953-4958	23
2237	Carbonaceous photonic crystals as ultralong cycling anodes for lithium and sodium batteries. 2015 , 3, 13786-13793	17
2236	Modular Architecture of Protein Binding Units for Designing Properties of Cellulose Nanomaterials. 2015 , 127, 12193-12196	7
2235	Effects of humidity on shear behavior of bamboo. 2015 , 5, 236-243	50
2234	Bioinspired large-scale aligned porous materials assembled with dual temperature gradients. 2015 , 1, e1500849	230
2233	Bio-inspired functional wood-based materials [hybrids and replicates. 2015 , 60, 431-450	69
2232	Architectured materials in engineering and biology: fabrication, structure, mechanics and performance. 2015 , 60, 413-430	91
2231	Hierarchal multi-lamellar silica vesicle clusters synthesized through self-assembly and mineralization. 2015 , 5, 102256-102260	4
2230	Bioactive nanoengineered hydrogels for bone tissue engineering: a growth-factor-free approach. 2015 , 9, 3109-18	439
2229	Artificial nacre-like papers based on noncovalent functionalized boron nitride nanosheets with excellent mechanical and thermally conductive properties. 2015 , 7, 6774-81	205
2228	Asymmetric flexural behavior from bamboo's functionally graded hierarchical structure: underlying mechanisms. 2015 , 16, 178-86	115
2227	Nanoasperity: structure origin of nacre-inspired nanocomposites. 2015 , 9, 2167-72	54
2226	Bioinspired highly electrically conductive graphene poxy layered composites. 2015, 5, 22283-22288	26
2225	Molecular Origin of Strength and Stiffness in Bamboo Fibrils. 2015 , 5, 11116	132
2224	Strong Crack Blunting by Hierarchical Nanotwins in Ultrafine/Nano-grained Metals. 2015, 3, 190-196	11
2223	Spiderweb honeycombs. 2015 , 66, 218-227	49

2222	Tension-induced tunable corrugation in two-phase soft composites: Mechanisms and implications. 2015 , 4, 26-37	6
2221	Modulation of Assembly and Dynamics in Colloidal Hydrogels via Ionic Bridge from Cellulose Nanofibrils and Poly(ethylene glycol). 2015 , 4, 829-833	29
2220	Multiple facets for extracellular matrix mimicking in regenerative medicine. 2015 , 10, 689-92	30
2219	A General Route to Robust Nacre-Like Graphene Oxide Films. 2015 , 7, 15010-6	39
2218	Graphene-and-Copper Artificial Nacre Fabricated by a Preform Impregnation Process: Bioinspired Strategy for Strengthening-Toughening of Metal Matrix Composite. 2015 , 9, 6934-43	155
2217	Smaller Calcite Lattice Deformation Caused by Occluded Organic Material in Coccoliths than in Mollusk Shell. 2015 , 15, 2761-2767	17
2216	Bioinspired hybrid materials from spray-formed ceramic templates. 2015 , 27, 3073-8	46
2215	Synthesis and modification of apatite nanoparticles for use in dental and medical applications. 2015 , 51, 85-95	109
2214	The Role of Water Compartments in the Material Properties of Cortical Bone. 2015 , 97, 292-307	135
2213	Learning from nature: constructing integrated graphene-based artificial nacre. 2015 , 9, 2231-4	142
2212	Bioinspired air-retaining nanofur for drag reduction. 2015 , 7, 10651-5	63
2211	Bioinspired Hierarchical Alumina-Graphene Oxide-Poly(vinyl alcohol) Artificial Nacre with Optimized Strength and Toughness. 2015 , 7, 9281-6	72
2210	Biomimicking Robust Hydrogel for the Mesenchymal Stem Cell Carrier. 2015 , 32, 3213-27	10
2209	Self-Assembled Ultra High Strength, Ultra Stiff Mechanical Metamaterials Based on Inverse Opals. 2015 , 17, 1420-1424	38
2208	Sensitive Humidity-Driven Reversible and Bidirectional Bending of Nanocellulose Thin Films as Bio-Inspired Actuation. 2015 , 2, 1500080	79
2207	Cell-based therapy technology classifications and translational challenges. 2015 , 370, 20150017	97
2206	Ceramics and ceramic coatings in orthopaedics. 2015 , 35, 4327-4369	126
2205	Predictable Shrinkage during the Precise Design of Porous Materials and Nanomaterials. 2015 , 27, 6918-6928	36

(2015-2015)

2204	Magnetically assisted slip casting of bioinspired heterogeneous composites. <i>Nature Materials</i> , 2015 , 14, 1172-9	219
2203	Carbon Nanotubes as Reinforcement of Cellulose Liquid Crystalline Responsive Networks. 2015 , 7, 21005-9	19
2202	Amplified Responsiveness of Multilayered Polymer Grafts: Synergy between Brushes and Hydrogels. 2015 , 48, 7106-7116	31
2201	Designing bioinspired composite reinforcement architectures via 3D magnetic printing. 2015 , 6, 8641	278
2200	Engineering Pre-vascularized Scaffolds for Bone Regeneration. 2015 , 881, 79-94	71
2199	Cell membrane-camouflaged nanoparticles for drug delivery. 2015 , 220, 600-7	276
2198	Compressive fatigue and fracture toughness behavior of injectable, settable bone cements. 2015 , 51, 345-55	24
2197	Integrated Ternary Bioinspired Nanocomposites via Synergistic Toughening of Reduced Graphene Oxide and Double-Walled Carbon Nanotubes. 2015 , 9, 11568-73	98
2196	High-performance TiO2 nanoparticle/DOPA-polymer composites. 2015 , 36, 1129-37	12
2195	Coating nanoparticles with cell membranes for targeted drug delivery. 2015 , 23, 619-26	70
2194	Biomineralization-inspired synthesis of chitosan/hydroxyapatite biocomposites based on a novel bilayer rate-controlling model. 2015 , 136, 457-64	10
2193	Transmission electron microscopy analysis of hydroxyapatite nanocrystals from cattle bones. 2015 , 109, 73-78	15
2192	Porous ZirconiumPhytic Acid Hybrid: a Highly Efficient Catalyst for MeerweinPonndorfVerley Reductions. 2015 , 127, 9531-9535	24
2191	Biomimetic sensor design. 2015 , 7, 18379-91	21
2190	Expanding Two-Dimensional Electrospun Nanofiber Membranes in the Third Dimension By a Modified Gas-Foaming Technique. 2015 , 1, 991-1001	83
2189	Electrochemical deposition to construct a nature inspired multilayer chitosan/layered double hydroxides hybrid gel for stimuli responsive release of protein. 2015 , 3, 7577-7584	28
2188	Facile Preparation of Superelastic and Ultralow Dielectric Boron Nitride Nanosheet Aerogels via Freeze-Casting Process. 2015 , 27, 5849-5855	98
2187	A novel scalable manufacturing process for the production of hydrogel-forming microneedle arrays. 2015 , 494, 417-29	60

2186	Hyperbranched Self-Immolative Polymers (hSIPs) for Programmed Payload Delivery and Ultrasensitive Detection. 2015 , 137, 11645-55	103
2185	Matriarch: A Python Library for Materials Architecture. 2015 , 1, 1009-1015	6
2184	Density functional theory screening of gas-treatment strategies for stabilization of high energy-density lithium metal anodes. 2015 , 296, 150-161	49
2183	Use of Synergistic Interactions to Fabricate Strong, Tough, and Conductive Artificial Nacre Based on Graphene Oxide and Chitosan. 2015 , 9, 9830-6	197
2182	Mechanical properties of atomic layer deposited Al2O3/ZnO nanolaminates. 2015 , 284, 198-205	15
2181	Strengthening mechanisms of the nanolayered polycrystalline metallic multilayers assisted by twins. 2015 , 72, 168-184	68
2180	Nacre-inspired integrated nanocomposites with fire retardant properties by graphene oxide and montmorillonite. 2015 , 3, 21194-21200	116
2179	Acoustic field controlled patterning and assembly of anisotropic particles. 2015 , 5, 37-46	55
2178	Engineering Mineralized and Load Bearing Tissues. 2015,	3
2177	. 2016,	1
2177 2176	. 2016, A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016, 9,	4
2176	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel	
2176	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016, 9, Elastic Modulus of Mechanical Model for Mineralized Collagen Fibrils. 2016, 25, 75-80	4
2176 2175	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016 , 9, Elastic Modulus of Mechanical Model for Mineralized Collagen Fibrils. 2016 , 25, 75-80	2
2176 2175 2174	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016, 9, Elastic Modulus of Mechanical Model for Mineralized Collagen Fibrils. 2016, 25, 75-80 Vacuum-Induced Surface Freezing to Produce Monoliths of Aligned Porous Alumina. 2016, 9, The Potential of CO2 Capture and Storage Technology in South Africal Coal-Fired Thermal Power	2 9
2176 2175 2174 2173	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016, 9, Elastic Modulus of Mechanical Model for Mineralized Collagen Fibrils. 2016, 25, 75-80 Vacuum-Induced Surface Freezing to Produce Monoliths of Aligned Porous Alumina. 2016, 9, The Potential of CO2 Capture and Storage Technology in South Africa® Coal-Fired Thermal Power Plants. 2016, 3, 24	4 2 9 30
2176 2175 2174 2173 2172	A Review of Natural Joint Systems and Numerical Investigation of Bio-Inspired GFRP-to-Steel Joints. 2016, 9, Elastic Modulus of Mechanical Model for Mineralized Collagen Fibrils. 2016, 25, 75-80 Vacuum-Induced Surface Freezing to Produce Monoliths of Aligned Porous Alumina. 2016, 9, The Potential of CO2 Capture and Storage Technology in South Africa® Coal-Fired Thermal Power Plants. 2016, 3, 24 Measurement of microfibril angles in bamboo using Mueller matrix imaging. 2016, 55, 8971-8978	4 2 9 30 7

2168	Cloning Nacre's 3D Interlocking Skeleton in Engineering Composites to Achieve Exceptional Mechanical Properties. 2016 , 28, 5099-105	79
2167	Smart Hierarchical Bio-Based Materials by Formation of Stimuli-Responsive Hydrogels inside the Microporous Structure of Wood. 2016 , 3, 1600233	40
2166	Integration of 3D Printed and Micropatterned Polycaprolactone Scaffolds for Guidance of Oriented Collagenous Tissue Formation In Vivo. 2016 , 5, 676-87	69
2165	Bioinspired Synthesis of CaCO3 Superstructures through a Novel Hydrogel Composite Membranes Mineralization Platform: A Comprehensive View. 2016 , 28, 610-6	23
2164	Bioinspired Interfacial Materials with Enhanced Drop Mobility: From Fundamentals to Multifunctional Applications. 2016 , 12, 1825-39	159
2163	Self-assembled nanomaterials based on beta ([B)) tetrapeptides. 2016 , 27, 135606	11
2162	3D Printing of Graphene Aerogels. 2016 , 12, 1702-8	316
2161	Bone-Inspired Materials by Design: Toughness Amplification Observed Using 3D Printing and Testing . 2016 , 18, 1354-1363	99
2160	Ultrarobust Transparent Cellulose Nanocrystal-Graphene Membranes with High Electrical Conductivity. 2016 , 28, 1501-9	234
2159	Integrated ternary artificial nacre via synergistic toughening of reduced graphene oxide/double-walled carbon nanotubes/poly(vinyl alcohol). 2016 , 3, 075002	21
2158	Three-dimensional bioprinting speeds up smart regenerative medicine. 2016 , 3, 331-344	11
2157	Hierarchical Structures of Bone and Bioinspired Bone Tissue Engineering. 2016 , 12, 4611-32	172
2156	Surface-Anchored Poly(-isopropylacrylamide) Orthogonal Gradient Networks. 2016 , 49, 5076-5083	13
2155	Special Rolling Techniques for Improvement of Mechanical Properties of Ultrafine-Grained Metal Sheets: a Review . 2016 , 18, 754-769	42
2154	Directed Motility of Hygroresponsive Biomimetic Actuators. 2016 , 26, 1040-1053	79
2153	Graphene-Functionalized Natural Microcapsules: Modular Building Blocks for Ultrahigh Sensitivity Bioelectronic Platforms. 2016 , 26, 2097-2103	72
2152	Inherent Role of Water in Damage Tolerance of the Prismatic Mineral Drganic Biocomposite in the Shell of Pinna Nobilis. 2016 , 26, 3663-3669	12
2151	Ternary Artificial Nacre Reinforced by Ultrathin Amorphous Alumina with Exceptional Mechanical Properties. 2016 , 28, 2037-42	77

2150 Biomimetic Nanostructured	d Interfaces for Hierarchical Composites. 2016 , 3, 1500404	21
2149 Science behind nacre: matrix	ix-directed mineralization at ambient condition. 2016 , 59, 889-891	4
2148 A mineralogical view of apal	ntitic biomaterials. 2016 , 101, 2594-2610	29
2147 Bio-inspired Composites: Us	sing Nature to Tackle Composite Limitations. 2016 , 165-190	4
Function by internal structu 21 46 2016 , 11, 060301	ure-preface to the special issue on bioinspired hierarchical materials.	8
2145 Body armour materials: fron	m steel to contemporary biomimetic systems. 2016 , 6, 115145-115174	56
Insights from the Plant Wor 2144 Scaffolding Matrix in Thin Fi	rld: A Fractal Analysis Approach to Tune Mechanical Rigidity of ilms. 2016 , 1141, 57-64	
Interface instability modes i instability. 2016 , 6, 23358	in freezing colloidal suspensions: revealed from onset of planar	9
2142 Plasticized protein for 3D pr	rinting by fused deposition modeling. 2016 ,	2
2141 Printing soft matter in three	e dimensions. 2016 , 540, 371-378	806
	solidification of colloidal suspensions: analyses with quantitative	806
Interfacial undercooling in s measurements. 2016 , 6, 284	solidification of colloidal suspensions: analyses with quantitative	
Interfacial undercooling in s measurements. 2016 , 6, 284 Multiscale Experimental Cha Biomineralized Exoskeleton	solidification of colloidal suspensions: analyses with quantitative 434 haracterization of the Delamination Resistant Mechanisms Found in the	
2140 Interfacial undercooling in s measurements. 2016, 6, 284 2139 Multiscale Experimental Cha Biomineralized Exoskeleton 2138 Sustainable use of vegetable	solidification of colloidal suspensions: analyses with quantitative 434 Paracterization of the Delamination Resistant Mechanisms Found in the In Fish Scale Composite. 2016 ,	23
Interfacial undercooling in s measurements. 2016 , 6, 284 Multiscale Experimental Characterista Biomineralized Exoskeleton 2138 Sustainable use of vegetable 2137 Passive and active mechanic	solidification of colloidal suspensions: analyses with quantitative 434 Paracterization of the Delamination Resistant Mechanisms Found in the In Fish Scale Composite. 2016, Resistant Mechanisms Found in the In Fish Scale Composite. 2016,	6
2140 Interfacial undercooling in s measurements. 2016, 6, 284 2139 Multiscale Experimental Cha Biomineralized Exoskeleton 2138 Sustainable use of vegetable 2137 Passive and active mechanic 2136 Correlative multiscale tomo	solidification of colloidal suspensions: analyses with quantitative 434 paracterization of the Delamination Resistant Mechanisms Found in the Fish Scale Composite. 2016, le fibres and particles in civil construction. 2016, 477-520 cal properties of biotemplated ceramics revisited. 2016, 11, 065001 ography of biological materials. 2016, 41, 549-556 rmal Expansion Precedes the Thermosalient Effect in Dynamic	6 5
2140 Interfacial undercooling in s measurements. 2016, 6, 284 2139 Multiscale Experimental Cha Biomineralized Exoskeleton 2138 Sustainable use of vegetable 2137 Passive and active mechanic 2136 Correlative multiscale tomo 2135 Strong and Anomalous Ther Molecular Crystals. 2016, 6,	solidification of colloidal suspensions: analyses with quantitative 434 paracterization of the Delamination Resistant Mechanisms Found in the Fish Scale Composite. 2016, le fibres and particles in civil construction. 2016, 477-520 cal properties of biotemplated ceramics revisited. 2016, 11, 065001 ography of biological materials. 2016, 41, 549-556 rmal Expansion Precedes the Thermosalient Effect in Dynamic	23 6 5

2132	clathrate hydrates. 2016 , 114, 67-79	21
2131	Self-assembled hierarchically structured organic-inorganic composite systems. 2016 , 11, 035002	10
2130	A hybrid elastomeric foam-core/solid-shell spherical structure for enhanced energy absorption performance. 2016 , 92-93, 17-28	14
2129	In-drop capillary spooling of spider capture thread inspires hybrid fibers with mixed solid-liquid mechanical properties. 2016 , 113, 6143-7	53
2128	Elastoplastic Deformation of Silk Micro- and Nanostructures. 2016 , 2, 893-899	5
2127	Structural commonalities and deviations in the hierarchical organization of crossed-lamellar shells: A case study on the shell of the bivalve Glycymeris glycymeris. 2016 , 31, 536-546	13
2126	A nonlinear mechanics model of bio-inspired hierarchical lattice materials consisting of horseshoe microstructures. 2016 , 90, 179-202	155
2125	Graphene-based artificial nacre nanocomposites. 2016 , 45, 2378-95	194
2124	Sulfonated poly(ether ether ketone)-based hybrid membranes containing graphene oxide with acid-base pairs for direct methanol fuel cells. 2016 , 203, 178-188	94
2123	Synergistic Biomineralization Phenomena Created by a Combinatorial Nacre Protein Model System. 2016 , 55, 2401-10	22
2122	Nature-inspired optimization of hierarchical porous media for catalytic and separation processes. 2016 , 40, 4016-4026	50
2121	Hybrid Gold Single Crystals Incorporating Amino Acids. 2016 , 16, 2972-2978	12
2120	Supramolecular Engineering of Hierarchically Self-Assembled, Bioinspired, Cholesteric Nanocomposites Formed by Cellulose Nanocrystals and Polymers. 2016 , 8, 11031-40	53
2119	Bioinspired Ternary Artificial Nacre Nanocomposites Based on Reduced Graphene Oxide and Nanofibrillar Cellulose. 2016 , 8, 10545-50	84
2118	Recent progress and innovation in carbon capture and storage using bioinspired materials. 2016 , 172, 383-397	21
2117	Coordination nanoarchitectonics at interfaces between supramolecular and materials chemistry. 2016 , 320-321, 139-152	74
2116	Nanostructured Antireflective and Thermoisolative Cicada Wings. 2016 , 32, 4698-703	36
2115	Probing Flexural Properties of Cellulose Nanocrystal-Graphene Nanomembranes with Force Spectroscopy and Bulging Test. 2016 , 32, 5383-93	24

2114	Silica Nanopollens Enhance Adhesion for Long-Term Bacterial Inhibition. 2016 , 138, 6455-62	157
2113	Tuning hardness in calcite by incorporation of amino acids. <i>Nature Materials</i> , 2016 , 15, 903-10	127
2112	Renewable graphene-like nitrogen-doped carbon nanosheets as supercapacitor electrodes with integrated high energypower properties. 2016 , 4, 8690-8699	126
2111	Strain analysis of nanowire interfaces in multiscale composites. 2016 ,	
2110	Micromechanical modelling of oil palm empty fruit bunch fibres containing silica bodies. 2016 , 62, 106-118	7
2109	Nonclassical crystallization in vivo et in vitro (II): Nanogranular features in biomimetic minerals disclose a general colloid-mediated crystal growth mechanism. 2016 , 196, 260-287	54
2108	Tensile versus AFM testing of electrospun PVA nanofibers: Bridging the gap from Microscale to nanoscale. 2016 , 54, 2418-2424	7
2107	Multivariable Sensors for Ubiquitous Monitoring of Gases in the Era of Internet of Things and Industrial Internet. 2016 , 116, 11877-11923	194
2106	Fibrin Networks Support Recurring Mechanical Loads by Adapting their Structure across Multiple Scales. 2016 , 111, 1026-34	38
2105	An Introduction to Scaffolds, Biomaterial Surfaces, and Stem Cells. 2016 , 1-37	
2104	Ca Enhanced Nacre-Inspired Montmorillonite-Alginate Film with Superior Mechanical, Transparent, Fire Retardancy, and Shape Memory Properties. 2016 , 8, 28816-28823	63
2103	A Novel Approach to Developing Biomimetic ("Nacre-Like") Metal-Compliant-Phase (Nickel-Alumina) Ceramics through Coextrusion. 2016 , 28, 10061-10067	53
2102	Biomimetic additive manufactured polymer composites for improved impact resistance. 2016 , 9, 317-323	81
2101	Mechanical enhancement of a nanoconfined-electrodeposited nacre-like Cu2O layered crystal/graphene oxide nanosheet composite thin film. 2016 , 6, 94845-94850	4
2100	The in-plane elastic properties of hierarchical composite cellular materials: Synergy of hierarchy, material heterogeneity and cell topologies at different levels. 2016 , 103, 135-147	6
2099	Poly(p-phenylenebenzobisoxazole) nanofiber layered composite films with high thermomechanical performance. 2016 , 84, 622-630	8
2098	Great apes anticipate that other individuals will act according to false beliefs. 2016 , 354, 110-114	336
2097	Functionalization of Silk Fibroin Materials at Mesoscale. 2016 , 26, 8885-8902	55

2096	17, 3508-3515	24
2095	Mechanically Viscoelastic Properties of Cellulose Nanocrystals Skeleton Reinforced Hierarchical Composite Hydrogels. 2016 , 8, 25621-30	55
2094	Investigation of the Effect of Internal Pores Distribution on the Elastic Properties of Closed-Cell Aluminum Foam: A Comparison with Cancellous Bone. 2016 , 2, 1285-1294	7
2093	The nanocomposite nature of bone drives its strength and damage resistance. <i>Nature Materials</i> , 2016 , 15, 1195-1202	125
2092	Bioinspired Composite Materials: Applications in Diagnostics and Therapeutics. 2016 , 04, 1640004	26
2091	Strong, Tough, and Lightweight Materials. 2016 , 13-48	O
2090	Enhanced protective role in materials with gradient structural orientations: Lessons from Nature. 2016 , 44, 31-40	56
2089	Mesocrystals: structural and morphogenetic aspects. 2016 , 45, 5821-5833	129
2088	Nonclassical crystallization in vivo et in vitro (I): Process-structure-property relationships of nanogranular biominerals. 2016 , 196, 244-259	45
2087	Hybrid cementitious materials: Nanoscale modeling and characterization. 2016 , 79-96	5
2086	Hierarchical Self-Assembly of Cellulose Nanocrystals in a Confined Geometry. 2016, 10, 8443-9	122
2085	Hydroactuated Configuration Alteration of Fibrous Dandelion Pappi: Toward Self-Controllable Transport Behavior. 2016 , 26, 7378-7385	15
2084	Solidification of 3D Printed Nanofibril Hydrogels into Functional 3D Cellulose Structures. 2016 , 1, 1600096	90
2083	A novel profiled corelhell nanofibrous membrane for wastewater treatment by direct contact membrane distillation. 2016 , 4, 14453-14463	31
2082	Dramatic Enhancement of Graphene Oxide/Silk Nanocomposite Membranes: Increasing Toughness, Strength, and Young's modulus via Annealing of Interfacial Structures. 2016 , 8, 24962-73	63
2081	Low-Cost Coir Fiber Composite with Integrated Strength and Toughness. 2016 , 4, 5450-5455	16
2080	Engineered phage films as scaffolds for CaCO3 biomineralization. 2016 , 8, 15696-701	12
2079	Synthetic nacre by predesigned matrix-directed mineralization. 2016 , 354, 107-110	487

2078	The well-designed hierarchical structure of Musa basjoo for supercapacitors. 2016 , 6, 20306	5
2077	Solving conflicting functional requirements by hierarchical structuring Examples from biological materials. 2016 , 41, 667-671	20
2076	Fracture toughness anomalies: Viewpoint of topological constraint theory. 2016 , 121, 234-239	62
2075	Regenerated silk materials for functionalized silk orthopedic devices by mimicking natural processing. 2016 , 110, 24-33	40
2074	Controlled Growth of Nanostructured Biotemplates with Cobalt and Nitrogen Codoping as a Binderless Lithium-Ion Battery Anode. 2016 , 8, 26868-26877	8
2073	The complexity of silk under the spotlight of synthetic biology. 2016 , 44, 1151-7	5
2072	Autofluorescent gelatin nanoparticles as imaging probes to monitor matrix metalloproteinase metabolism of cancer cells. 2016 , 104, 2854-60	22
2071	Hydrogele aus amorphem Calciumcarbonat und Polyacryls□ūre: bioinspirierte Materialien f□	12
2070	Hydrogels from Amorphous Calcium Carbonate and Polyacrylic Acid: Bio-Inspired Materials for "Mineral Plastics". 2016 , 55, 11765-9	141
2069	Light and Strong SiC Networks. 2016 , 26, 1636-1645	73
	Light and Strong SiC Networks. 2016 , 26, 1636-1645 Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016 , 16, 5176-82	73 36
	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016 , 16, 5176-82	
2068	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016 , 16, 5176-82 Algorithm for Designing Nanoscale Supramolecular Therapeutics with Increased Anticancer Efficacy. 2016 , 10, 8154-68 Hierarchical Eabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D.	36
2068	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016 , 16, 5176-82 Algorithm for Designing Nanoscale Supramolecular Therapeutics with Increased Anticancer Efficacy. 2016 , 10, 8154-68 Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D	36
2068 2067 2066 2065	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016 , 16, 5176-82 Algorithm for Designing Nanoscale Supramolecular Therapeutics with Increased Anticancer Efficacy. 2016 , 10, 8154-68 Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D Bioprinting: Integrating Regional Bioactive Factors into Architectural Design. 2016 , 5, 2174-81 Bioinspired Graphene-Based Nanocomposites and Their Application in Flexible Energy Devices.	36 14 122
2068 2067 2066 2065	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016, 16, 5176-82 Algorithm for Designing Nanoscale Supramolecular Therapeutics with Increased Anticancer Efficacy. 2016, 10, 8154-68 Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D Bioprinting: Integrating Regional Bioactive Factors into Architectural Design. 2016, 5, 2174-81 Bioinspired Graphene-Based Nanocomposites and Their Application in Flexible Energy Devices. 2016, 28, 7862-7898	36 14 122 159
2068 2067 2066 2065 2064	Light-Adaptive Supramolecular Nacre-Mimetic Nanocomposites. 2016, 16, 5176-82 Algorithm for Designing Nanoscale Supramolecular Therapeutics with Increased Anticancer Efficacy. 2016, 10, 8154-68 Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D Bioprinting: Integrating Regional Bioactive Factors into Architectural Design. 2016, 5, 2174-81 Bioinspired Graphene-Based Nanocomposites and Their Application in Flexible Energy Devices. 2016, 28, 7862-7898 Hydrophobic Properties of Biofilm-Enriched Hybrid Mortar. 2016, 28, 8138-8143	36 14 122 159 27

2060	steel wires. 2016 , 6, 33228	39
2059	Controlling three-dimensional ice template via two-dimensional surface wetting. 2016 , 62, 4186-4192	19
2058	Biomimetic Design of Mussel-Derived Bioactive Peptides for Dual-Functionalization of Titanium-Based Biomaterials. 2016 , 138, 15078-15086	112
2057	Bio-inspired Plasmonic Nanoarchitectured Hybrid System Towards Enhanced Far Red-to-Near Infrared Solar Photocatalysis. 2016 , 6, 20001	33
2056	Highly-stretchable 3D-architected Mechanical Metamaterials. 2016 , 6, 34147	82
2055	Design of anti-icing surfaces: smooth, textured or slippery?. 2016 , 1,	728
2054	Interphase tuning for stronger and tougher composites. 2016 , 6, 26305	26
2053	Structure and mechanics of interfaces in biological materials. 2016 , 1,	319
2052	Large-deformation and high-strength amorphous porous carbon nanospheres. 2016 , 6, 24187	39
2051	Functional lignocellulosic materials prepared by ATRP from a wood scaffold. 2016 , 6, 31287	45
2050	High content reduced graphene oxide reinforced copper with a bioinspired nano-laminated structure and large recoverable deformation ability. 2016 , 6, 33801	25
2049	Shape Memory Cellulose-Based Photonic Reflectors. 2016 , 8, 31935-31940	54
2048	Mineralization by Dendritic Oligomers of Apatite-Binding Peptide under Body Fluid Conditions. 2016 , 73, 55-61	1
2047	Cold-induced changes in cell wall stability determine the resistance of winter triticale to fungal pathogen Microdochium nivale. 2016 , 126, 77-90	7
2046	Ultrastrong Bioinspired Graphene-Based Fibers via Synergistic Toughening. 2016 , 28, 2834-9	92
2045	Structural and Material Properties of Amyloid A🛮 0/42 Fibrils. 2016 , 17, 2558-66	6
2044	Two-Dimensional Magnesium Phosphate Nanosheets Form Highly Thixotropic Gels That Up-Regulate Bone Formation. 2016 , 16, 4779-87	51
2043	Carboxylated Agarose (CA)-Silk Fibroin (SF) Dual Confluent Matrices Containing Oriented Hydroxyapatite (HA) Crystals: Biomimetic Organic/Inorganic Composites for Tibia Repair. 2016 , 17, 2437-47	18

2042	Ultratough cellular films from graphene oxide hydrogel: A way to exploit rigidity and flexibility of two-dimensional honeycomb carbon. 2016 , 107, 548-556	17
2041	Multi-scale toughening of fibre composites using carbon nanofibres and z-pins. 2016 , 131, 98-109	57
2040	Role of the polymer phase in the mechanics of nacre-like composites. 2016 , 96, 133-146	62
2039	Heterogeneous silicon mesostructures for lipid-supported bioelectric interfaces. <i>Nature Materials</i> , 2016 , 15, 1023-30	99
2038	Three-dimensional honeycomb-like structured zero-valent iron/chitosan composite foams for effective removal of inorganic arsenic in water. 2016 , 478, 421-9	46
2037	Tuneable cellular-structured 3D graphene aerogel and its effect on electromagnetic interference shielding performance and mechanical properties of epoxy composites. 2016 , 6, 56589-56598	43
2036	Physical Characterization, Microstructural Evaluation, and Condition Assessment of Ancient Ahlat Tombstones in the Seljukian Cemetery of Ahlat (Turkey). 2016 , 10, 1025-1040	2
2035	Assembly of Layered Monetite-Chitosan Nanocomposite and Its Transition to Organized Hydroxyapatite. 2016 , 2, 1049-1058	15
2034	Biomineralization on the wavy substrate: Shape transition of nacreous tablets from pyramids of amorphous nanoparticles to dome-capped prisms of single crystals. 2016 , 36, 277-85	7
2033	Bioinspired high toughness graphene/ZrB2 hybrid composites with hierarchical architectures spanning several length scales. 2016 , 107, 209-216	29
2032	Geometric analysis of porous structures based on Hough Transform and Genetic Algorithms for additive manufacturing. 2016 , 11, 69-76	
2031	Three-dimensional hierarchical cultivation of human skin cells on bio-adaptive hybrid fibers. 2016 , 8, 775-84	13
2030	Understanding Toughness in Bioinspired Cellulose Nanofibril/Polymer Nanocomposites. 2016 , 17, 2417-26	44
2029	Hierarchical alginate biopolymer papers produced via lanthanide ion coordination. 2016 , 6, 63171-63177	13
2028	Engineering the Mechanical Properties of Monolayer Graphene Oxide at the Atomic Level. 2016 , 7, 2702-7	50
2027	Nanoscale Engineering of Designer Cellulosomes. 2016 , 28, 5619-47	35
2026	Nano/Micro-Manufacturing of Bioinspired Materials: a Review of Methods to Mimic Natural Structures. 2016 , 28, 6292-321	239
2025	Chitin Nanofiber Transparent Paper for Flexible Green Electronics. 2016 , 28, 5169-75	171

2024	Formation of Periodically-Ordered Calcium Phosphate Nanostructures by Block Copolymer-Directed Self-Assembly. 2016 , 28, 838-847	10
2023	Dispersion of Hydrophobic Co Supracrystal in Aqueous Solution. 2016 , 10, 2277-86	13
2022	Scalable graphene production: perspectives and challenges of plasma applications. 2016 , 8, 10511-27	77
2021	Additive manufacturing of biologically-inspired materials. 2016 , 45, 359-76	252
2020	Preparation and Exceptional Mechanical Properties of Bone-Mimicking Size-Tuned Graphene Oxide@Carbon Nanotube Hybrid Paper. 2016 , 10, 2184-92	55
2019	Viscoelastic damping behavior of structural bamboo material and its microstructural origins. 2016 , 97, 184-198	32
2018	Engineering oriented hierarchical lamellar structures in SBS/PS blends via a pressure-induced flow field. 2016 , 6, 21546-21554	5
2017	Spider silk as a blueprint for greener materials: a review. 2016 , 61, 127-153	33
2016	Liquid crystalline polymeric wires for selective proton transport, part 1: Wires preparation. 2016 , 92, 50-57	6
2015	Hierarchically roughened microplatelets enhance the strength and ductility of nacre-inspired composites. 2016 , 60, 367-377	27
2014	Nacre-inspired integrated strong and tough reduced graphene oxide-poly(acrylic acid) nanocomposites. 2016 , 8, 5649-56	95
2013	Geometry-based control of instability patterns in cellular soft matter. 2016 , 6, 20431-20436	10
2012	Structure and mechanical behaviors of protective armored pangolin scales and effects of hydration and orientation. 2016 , 56, 165-174	34
2011	Numerical investigation of relationship between water contact angle and drag reduction ratio of superhydrophobic surfaces. 2016 , 11, 1	4
2010	Composite System of Graphene Oxide and Polypeptide Thermogel As an Injectable 3D Scaffold for Adipogenic Differentiation of Tonsil-Derived Mesenchymal Stem Cells. 2016 , 8, 5160-9	63
2009	Fracture and mixed-mode resistance curve behavior of bamboo. 2016 , 78, 79-85	35
2008	Material heterogeneity in cancellous bone promotes deformation recovery after mechanical failure. 2016 , 113, 2892-7	31
2007	Knotted synthetic polymer or carbon nanotube microfibres with enhanced toughness, up to 1400 J/g. 2016 , 102, 116-125	8

Bioactive calcium phosphate cement with excellent injectability, mineralization capacity and drug-delivery properties for dental biomimetic reconstruction and minimum intervention therapy. 2016 , 6, 27349-27359	7
Synergistic action of thermoresponsive and hygroresponsive elements elicits rapid and directional response of a bilayer actuator. 2016 , 52, 5920-3	32
2004 Spider silk inspired materials and sustainability: perspective. 2016 , 1-16	7
Protein Binding Bends the Gold Nanoparticle Capped DNA Sequence: Toward Novel Energy-Transfer-Based Photoelectrochemical Protein Detection. 2016 , 88, 3864-71	51
2002 Reproducibility of ZrO2-based freeze casting for biomaterials. 2016 , 61, 105-12	40
2001 Calcium phosphates in biomedical applications: materials for the future?. 2016 , 19, 69-87	465
2000 Grotthuss mechanisms: from proton transport in proton wires to bioprotonic devices. 2016 , 28, 023001	70
1999 Three-Dimensional-Printing of Bio-Inspired Composites. 2016 , 138, 021006	74
Simulations of inorganic-bioorganic interfaces to discover new materials: insights, comparisons to experiment, challenges, and opportunities. 2016 , 45, 412-48	143
A bridging law and its application to the analysis of toughness of carbon nanotube-reinforced composites and pull-out of fibres grafted with nanotubes. 2016 , 86, 361-373	8
Topological design and additive manufacturing of porous metals for bone scaffolds and orthopaedic implants: A review. 2016 , 83, 127-41	1008
Toughening of aluminum matrix nanocomposites via spatial arrays of boron carbide spherical nanoparticles. 2016 , 103, 128-140	136
Non-local effects by homogenization or 3DID dimension reduction in elastic materials reinforced by stiff fibers. 2016 , 260, 2026-2059	6
Nacrelike-structured multilayered polyelectrolyte/calcium carbonate nanocomposite membrane via Ca-incorporated layer-by-layer-assembly and CO2-induced biomineralization. 2016 , 498, 180-191	29
1992 Three-dimensional multilayered fibrous constructs for wound healing applications. 2016 , 4, 319-30	15
A detailed study of homogeneous agarose/hydroxyapatite nanocomposites for load-bearing bone tissue. 2016 , 82, 134-43	38
Niobium phytate prepared from phytic acid and NbCl5: a highly efficient and heterogeneous acid catalyst. 2016 , 6, 1070-1076	15
1989 Recent progress of abrasion-resistant materials: learning from nature. 2016 , 45, 237-51	31

(2017-2017)

1988	Multifunctional organicIhorganic hybrids based on cellulose acetate and 3-glycidoxypropyltrimethoxysilane. 2017 , 81, 114-126	8
1987	Bioinspired Multifunctional Spindle-Knotted Microfibers from Microfluidics. 2017 , 13, 1600286	76
1986	Biomimetics and its tools. 2017 , 6, 53-66	62
1985	Peptoids and polypeptoids: biomimetic and bioinspired materials for biomedical applications. 2017 , 74, 3455-3466	16
1984	Tuning the hierarchical nanostructure of hematite mesocrystals via collagen-templated biomineralization. 2017 , 5, 1423-1429	9
1983	3D printed components of microbial fuel cells: Towards monolithic microbial fuel cell fabrication using additive layer manufacturing. 2017 , 19, 94-101	41
1982	Mechanical response of common millet (Panicum miliaceum) seeds under quasi-static compression: Experiments and modeling. 2017 , 73, 102-113	18
1981	In situ Formed Fan-Shaped Nanowires in Biomorphic SiO2: A Multidimensional Composite of Hierarchical Porous Material and Organic Pollutant Adsorption Behavior. 2017 , 30, 104-112	2
1980	Developing high toughness and strength Al/TiC composites using ice-templating and pressure infiltration. 2017 , 43, 3831-3838	31
1979	Rotation of hard particles in a soft matrix. 2017 , 101, 285-310	19
1978	StructureBroperty relationships of blended polysaccharide and protein biomaterials in ionic liquid. 2017 , 24, 1775-1789	12
1977	Hierarchical Materials Design by Pattern Transfer Printing of Self-Assembled Binary Nanocrystal Superlattices. 2017 , 17, 1387-1394	37
1976	Energy-Dissipative Matrices Enable Synergistic Toughening in Fiber Reinforced Soft Composites. 2017 , 27, 1605350	84
1975	Raman study of structural transformations in self-assembled diphenylalanine nanotubes at elevated temperatures. 2017 , 48, 1401-1405	27
1974	Superior Fatigue Resistant Bioinspired Graphene-Based Nanocomposite via Synergistic Interfacial Interactions. 2017 , 27, 1605636	66
1973	Solvothermal synthesis of hydroxyapatite with various morphologies using trimethyl phosphate as organic phosphorus source. 2017 , 193, 165-168	9
1972	Flexible method for fabricating protein patterns on superhydrophobic platforms controlled by magnetic field. 2017 , 5, 408-411	7
1971	Properties and Applications of Ice-Templated Materials. 2017 , 439-548	1

1970	Colloidal processing: enabling complex shaped ceramics with unique multiscale structures. 2017 , 100, 458-490	76
1969	Metal Ion Mediated Cellulose Nanofibrils Transient Network in Covalently Cross-linked Hydrogels: Mechanistic Insight into Morphology and Dynamics. 2017 , 18, 1019-1028	64
1968	The Horizon of Materiobiology: A Perspective on Material-Guided Cell Behaviors and Tissue Engineering. 2017 , 117, 4376-4421	296
1967	Advanced Structural Materials by Bioinspiration . 2017 , 19, 1600787	70
1966	Biomineralization: From Material Tactics to Biological Strategy. 2017 , 29, 1605903	140
1965	Nanoparticle decoration with surfactants: Molecular interactions, assembly, and applications. 2017 , 72, 1-58	313
1964	Structure-processing correlations and mechanical properties in freeze-cast Ti-6Al-4V with highly aligned porosity and a lightweight Ti-6Al-4V-PMMA composite with excellent energy absorption capability. 2017 , 132, 182-192	22
1963	Hierarchically Arranged Helical Fiber Actuators Derived from Commercial Cloth. 2017 , 29, 1605103	40
1962	Water-based freeze casting: Adjusting hydrophobic polymethylsiloxane for obtaining hierarchically ordered porous SiOC. 2017 , 100, 1907-1918	16
1961	Nature-inspired design of strong, tough glass-ceramics. 2017 , 42, 220-225	25
1960	In situ observation of self-assembly of sugars and surfactants from nanometres to microns. 2017 , 13, 2421-2425	12
1959	Aligning graphene in bulk copper: Nacre-inspired nanolaminated architecture coupled with in-situ processing for enhanced mechanical properties and high electrical conductivity. 2017 , 117, 65-74	149
1958	When hierarchical structure meets the solar cell. 2017 , 62, 234-235	1
1957	Highly Flexible Hybrid Polymer Aerogels and Xerogels Based on Resorcinol-Formaldehyde with Enhanced Elastic Stiffness and Recoverability: Insights into the Origin of Their Mechanical Properties. 2017 , 29, 2122-2134	53
1956	A General Bioinspired, Metals-Based Synergic Cross-Linking Strategy toward Mechanically Enhanced Materials. 2017 , 11, 2835-2845	33
1955	Nanoporous Polymer-Infiltrated Nanoparticle Films with Uniform or Graded Porosity via Undersaturated Capillary Rise Infiltration. 2017 , 11, 3229-3236	40
1954	Directed assembly of bio-inspired hierarchical materials with controlled nanofibrillar architectures. 2017 , 12, 474-480	111
1953	Cuttlebone-like VO Nanofibre Scaffolds - Advances in Structuring Cellular Solids. 2017 , 7, 42951	13

(2017-2017)

1952	On the role of different annealing heat treatments on mechanical properties and microstructure of selective laser melted and conventional wrought Ti-6Al-4V. 2017 , 23, 295-304	51
1951	Fabrication of hydrothermally reduced graphene oxide/chitosan composite membranes with a lamellar structure on methanol dehydration. 2017 , 117, 112-119	58
1950	Uncovering Nature's Design Strategies through Parametric Modeling, Multi-Material 3D Printing, and Mechanical Testing . 2017 , 19, e201600848	20
1949	The hierarchical structure and mechanical performance of a natural nanocomposite material: The turtle shell. 2017 , 520, 97-104	3
1948	Functional gradients in the pericarp of the green coconut inspire asymmetric fibre-composites with improved impact strength, and preserved flexural and tensile properties. 2017 , 12, 026009	18
1947	Biologically Analogous Calcium Phosphate Tubes from a Chemical Garden. 2017 , 33, 2059-2067	17
1946	Porous Zirconium-Furandicarboxylate Microspheres for Efficient Redox Conversion of Biofuranics. 2017 , 10, 1761-1770	52
1945	Architected cellular ceramics with tailored stiffness via direct foam writing. 2017 , 114, 1832-1837	138
1944	Biomimetic Anisotropic Reinforcement Architectures by Electrically Assisted Nanocomposite 3D Printing. 2017 , 29, 1605750	146
1943	Using graphene networks to build bioinspired self-monitoring ceramics. 2017 , 8, 14425	71
1942	Mechanically Robust and Transparent N-Halamine Grafted PVA-co-PE Films with Renewable Antimicrobial Activity. 2017 , 17, 1600304	29
1941	Three-dimensional microarchitected materials and devices using nanoparticle assembly by pointwise spatial printing. 2017 , 3, e1601986	96
1940	Nacre-inspired polyglutamic acid/layered double hydroxide bionanocomposite film with high mechanical, translucence and UV-blocking properties. 2017 , 35, 631-640	4
1939	Interfacial Polyelectrolyte Complex Spinning of Cellulose Nanofibrils for Advanced Bicomponent Fibers. 2017 , 18, 1293-1301	50
1938	Kinetics of Surface-Driven Self-Assembly and Fatigue-Induced Disassembly of a Virus-Based Nanocoating. 2017 , 112, 663-673	13
1937	Achieving enhanced strength in ultrafine lamellar structured Al2024 alloy via mechanical milling and spark plasma sintering. 2017 , 687, 155-163	17
1936	Properties of 3D-printed fiber-reinforced Portland cement paste. 2017 , 79, 62-70	216
1935	Bioinspired, Mechano-Regulated Interfaces for Rationally Designed, Dynamically Controlled Collection of Oil Spills from Water. 2017 , 1, 1600014	6

1934	Bio-inspired and lanthanide-induced hierarchical sodium alginate/graphene oxide composite paper with enhanced physicochemical properties. 2017 , 145, 62-70	19
1933	Hierarchical Supramolecular Cross-Linking of Polymers for Biomimetic Fracture Energy Dissipating Sacrificial Bonds and Defect Tolerance under Mechanical Loading. 2017 , 6, 210-214	21
1932	Programmable Nano-Bio Interfaces for Functional Biointegrated Devices. 2017 , 29, 1605529	91
1931	From bulk to cellular structures: A review on ceramic/graphene filler composites. 2017 , 37, 3649-3672	103
1930	Micro- and macroscopic design of alumina ceramics by robocasting. 2017 , 37, 3115-3124	30
1929	Structure, mechanical behavior and puncture resistance of grass carp scales. 2017 , 14, 356-368	11
1928	Ice-Assisted Assembly of Liquid Crystalline Cellulose Nanocrystals for Preparing Anisotropic Aerogels with Ordered Structures. 2017 , 29, 3980-3988	52
1927	Cellulose nanofibril nanopapers and bioinspired nanocomposites: a review to understand the mechanical property space. 2017 , 5, 16003-16024	153
1926	Bioinspired fabrication of high strength hydrogels from non-covalent interactions. 2017 , 71, 1-25	269
1925	Multifunctional shape-memory foams with highly tunable properties via organo-phase cryo-polymerization. 2017 , 5, 9793-9800	12
1924	Thermal wave: from nonlocal continuum to molecular dynamics. 2017 , 7, 13623-13636	21
1923	Mimicking the loading adaptation of bone microstructure with aluminum foams. 2017 , 126, 207-218	18
1922	Dentin on the nanoscale: Hierarchical organization, mechanical behavior and bioinspired engineering. 2017 , 33, 637-649	45
1921	Lamellar Ceramic Semicrystalline-Polymer Composite Fabricated by Freeze Casting . 2017 , 19, 1700214	8
1920	Improved Interfacial Floatability of Superhydrophobic/Superhydrophilic Janus Sheet Inspired by Lotus Leaf. 2017 , 27, 1701466	106
1919	Metal Nanoparticle Growth within Clay-Polymer Nacre-Inspired Materials for Improved Catalysis and Plasmonic Detection in Complex Biofluids. 2017 , 33, 8774-8783	12
1918	Bioinspired Diatomite Membrane with Selective Superwettability for Oil/Water Separation. 2017, 7, 1426	28
1917	Micro/Nanoscale Tribological and Mechanical Investigation of the Articular Surfaces of Katydid Leg Joints: Potential for the Novel Bioinspired Lubrication Systems. 2017 , 2, 1117-1123	1

1916	Conformations and Intermolecular Interactions in Cellulose/Silk Fibroin Blend Films: A Solid-State NMR Perspective. 2017 , 121, 6108-6116	38
1915	Meso-Functionalization of Silk Fibroin by Upconversion Fluorescence and Near Infrared In Vivo Biosensing. 2017 , 27, 1700628	39
1914	Perlmutt-Mimetika durch Ice-Templating. 2017 , 129, 954-955	2
1913	Synergy of the mechanical, antifouling and permeation properties of a carbon nanotube nanohybrid membrane for efficient oil/water separation. 2017 , 9, 7508-7518	50
1912	Ultrastrong and Bioactive Nanostructured Bio-Based Composites. 2017, 11, 5148-5159	109
1911	Tuning the Structure and Ionic Interactions in a Thermochemically Stable Hybrid Layered Titanate-Based Nanocomposite for High Temperature Solid Lubrication. 2017 , 4, 1700047	6
1910	Optimisation of functionally graded lattice structures using isostatic lines. 2017 , 127, 215-223	93
1909	Functional gradients and heterogeneities in biological materials: Design principles, functions, and bioinspired applications. 2017 , 88, 467-498	331
1908	Superstretchable Nacre-Mimetic Graphene/Poly(vinyl alcohol) Composite Film Based on Interfacial Architectural Engineering. 2017 , 11, 4777-4784	117
1907	Fracture mechanisms in multilayer phosphorene assemblies: from brittle to ductile. 2017 , 19, 13083-13092	8
1906	Spinning Hierarchical Gold Nanowire Microfibers by Shear Alignment and Intermolecular Self-Assembly. 2017 , 11, 4934-4942	27
1905	Site-specific characterization of beetle horn shell with micromechanical bending test in focused ion beam system. 2017 , 57, 395-403	4
1904	Rational Design of Hyperbranched Nanowire Systems for Tunable Superomniphobic Surfaces Enabled by Atomic Layer Deposition. 2017 , 11, 478-489	45
1903	Learning from nature: constructing high performance graphene-based nanocomposites. 2017 , 20, 210-219	74
1902	Fabrication and nanostructure control of super-hierarchical carbon materials from heterogeneous bottlebrushes. 2017 , 8, 2101-2106	56
1901	Rational Design and Hierarchical Assembly of a Genetically Engineered Resilin-Silk Copolymer Results in Stiff Hydrogels. 2017 , 3, 1576-1585	18
1900	Optimizing the mechanical properties of cellulose nanopaper through surface energy and critical length scale considerations. 2017 , 24, 3289-3299	20
1899	General Approach of Stimuli-Induced Aggregation for Monitoring Tumor Therapy. 2017 , 11, 7301-7311	45

1898	Multiscale structure and damage tolerance of coconut shells. 2017, 76, 76-84	27
1897	Across the Alps in Prehistory. 2017 ,	1
1896	On the relationship between indentation hardness and modulus, and the damage resistance of biological materials. 2017 , 57, 373-383	59
1895	Reliable computational design of biological-inorganic materials to the large nanometer scale using Interface-FF. 2017 , 43, 1394-1405	28
1894	Biomimetic Architectured Graphene Aerogel with Exceptional Strength and Resilience. 2017 , 11, 6817-6824	214
1893	Fatigue Resistant Bioinspired Composite from Synergistic Two-Dimensional Nanocomponents. 2017 , 11, 7074-7083	38
1892	Adaptive and freeze-tolerant heteronetwork organohydrogels with enhanced mechanical stability over a wide temperature range. 2017 , 8, 15911	175
1891	Self-organized microporous cellulose-nylon membranes. 2017 , 120, 255-263	7
1890	Cholesteric liquid crystals in living matter. 2017 , 13, 4176-4209	156
1889	Breathing walls: The design of porous materials for heat exchange and decentralized ventilation. 2017 , 149, 246-259	32
1888	Printing nature: Unraveling the role of nacre's mineral bridges. 2017 , 76, 135-144	84
1887	The mechanical behavior of hierarchical Mg matrix nanocomposite with high volume fraction reinforcement. 2017 , 699, 114-117	11
1886	A light-driven artificial flytrap. 2017 , 8, 15546	328
1885	Direct-write 3D printing of composite materials with magnetically aligned discontinuous reinforcement. 2017 ,	6
1884	Self-Assembled Zinc/Cystine-Based Chloroplast Mimics Capable of Photoenzymatic Reactions for Sustainable Fuel Synthesis. 2017 , 129, 7984-7988	30
1883	Self-Assembled Zinc/Cystine-Based Chloroplast Mimics Capable of Photoenzymatic Reactions for Sustainable Fuel Synthesis. 2017 , 56, 7876-7880	153
1882	Hierarchically Enhanced Impact Resistance of Bioinspired Composites. 2017 , 29, 1700060	159
1881	■ Moward seashells under stress Bioinspired concepts to design tough layered ceramic composites. 2017 , 37, 3823-3839	17

(2017-2017)

	, 76, 69-75	10
1879	Via precise interface engineering towards bioinspired composites with improved 3D printing processability and mechanical properties. 2017 , 5, 5037-5047	22
1878	Hierarchical and Heterogeneous Bioinspired Composites-Merging Molecular Self-Assembly with Additive Manufacturing. 2017 , 13, 1700550	24
1877	Nanostructured raspberry-like gelatin microspheres for local delivery of multiple biomolecules. 2017 , 58, 67-79	10
1876	Synergistically toughening nacre-like graphene nanocomposites via gel-film transformation. 2017 , 5, 16386-16392	32
1875	Smart and Multifunctional Concrete Toward Sustainable Infrastructures. 2017,	53
1874	Thermodynamic Aspects of Molluscan Shell Ultrastructural Morphogenesis. 2017, 27, 1700506	20
1873	Stimuli-responsive polymers: Fundamental considerations and applications. 2017 , 25, 513-527	38
1872	Stiff, porous scaffolds from magnetized alumina particles aligned by magnetic freeze casting. 2017 , 77, 484-492	30
1871	Emerging Biofabrication Strategies for Engineering Complex Tissue Constructs. 2017 , 29, 1606061	209
1870	Tough Nano-Architectured Conductive Textile Made by Capillary Splicing of Carbon Nanotubes . 2017 , 19, 1600845	9
1860		
1869	Textural diversity of hierarchical macroscopic structures of colloidal liquid crystalline nanosheets organized under electric fields. 2017 , 522, 373-381	6
1868		7
	organized under electric fields. 2017 , 522, 373-381 Novel synthesis approaches for new structures in confined space inspired by natural	
1868	organized under electric fields. 2017, 522, 373-381 Novel synthesis approaches for new structures in confined space inspired by natural structure-forming processes. 2017, 3, 83-95 Assembly of Heterogeneous Materials for Biology and Electronics: From Bio-Inspiration to	7
1868	organized under electric fields. 2017, 522, 373-381 Novel synthesis approaches for new structures in confined space inspired by natural structure-forming processes. 2017, 3, 83-95 Assembly of Heterogeneous Materials for Biology and Electronics: From Bio-Inspiration to Bio-Integration. 2017, 139, Bioinspired Layer-by-Layer Microcapsules Based on Cellulose Nanofibers with Switchable	7
1868 1867 1866	Novel synthesis approaches for new structures in confined space inspired by natural structure-forming processes. 2017, 3, 83-95 Assembly of Heterogeneous Materials for Biology and Electronics: From Bio-Inspiration to Bio-Integration. 2017, 139, Bioinspired Layer-by-Layer Microcapsules Based on Cellulose Nanofibers with Switchable Permeability. 2017, 18, 1401-1410 Preliminary Assessment of a Hysteroscopic Fallopian Tube Heat and Biomaterial Technology for Permanent Female Sterilization. 2017, 10066,	7 12 20

1862	Cymbiola nobilis shell: Toughening mechanisms in a crossed-lamellar structure. 2017 , 7, 40043	20
1861	Fracture behaviour of teeth with conventional and mini-invasive access cavity designs. 2017 , 37, 4423-4429	20
1860	Biofabricated soft network composites for cartilage tissue engineering. 2017 , 9, 025014	100
1859	The effect of microstructure, filler load and surface adhesion of marine bio-fillers, in the performance of Hybrid Wood-Polypropylene Particulate Bio-composite. 2017 , 154, 284-294	17
1858	Sustained delivery of calcium and orthophosphate ions from amorphous calcium phosphate and poly(L-lactic acid)-based electrospinning nanofibrous scaffold. 2017 , 7, 45655	24
1857	Engineering bone regeneration with novel cell-laden hydrogel microfiber-injectable calcium phosphate scaffold. 2017 , 75, 895-905	22
1856	Nanomaterial-based bone regeneration. 2017 , 9, 4862-4874	69
1855	Biofunctionalized Plants as Diverse Biomaterials for Human Cell Culture. 2017 , 6, 1601225	46
1854	Towards strengthductility synergy through the design of heterogeneous nanostructures in metals. 2017 , 20, 323-331	425
1853	3D-Printed Ultratough Hydrogel Structures with Titin-like Domains. 2017 , 9, 11363-11367	30
1852	Geologically-inspired strong bulk ceramics made with water at room temperature. 2017, 8, 14655	88
1851	Hierarchical Architectures to Enhance Structural and Functional Properties of Brittle Materials . 2017 , 19, 1600683	10
1850	AFM Identification of Beetle Exocuticle: Bouligand Structure and Nanofiber Anisotropic Elastic Properties. 2017 , 27, 1603993	30
1849	Direct observation of the crystallographic relationship between interlamellar membranes and aragonite tablets in bivalve nacre. 2017 , 197, 308-311	2
1848	3D-printing and mechanics of bio-inspired articulated and multi-material structures. 2017 , 73, 114-126	43
1847	Nacre tablet thickness records formation temperature in modern and fossil shells. 2017 , 460, 281-292	35
1846	Pore structures and mechanical properties of porous titanium scaffolds by bidirectional freeze casting. 2017 , 75, 335-340	28
1845	New Perspectives on Mineral Nucleation and Growth. 2017,	29

1844	Fracture of severely plastically deformed Ta and Nb. 2017 , 64, 143-150	6
1843	Mimicking Nacre by Ice Templating. 2017 , 56, 934-935	20
1842	3D Printing of Lotus Root-Like Biomimetic Materials for Cell Delivery and Tissue Regeneration. 2017 , 4, 1700401	103
1841	Introduction: Bioinspired and Biomimetic Materials. 2017 , 117, 12581-12583	34
1840	Clarity of objectives and working principles enhances the success of biomimetic programs. 2017 , 12, 051001	21
1839	Construction of Bio-Inspired Composites for Bone Tissue Repair. 2017 , 153-167	1
1838	Nacre-mimic Reinforced Ag@reduced Graphene Oxide-Sodium Alginate Composite Film for Wound Healing. 2017 , 7, 13851	17
1837	A Review of In Situ Mechanical Characterization of Polymer Nanocomposites: Prospect and Challenges. 2017 , 69,	9
1836	High damage-tolerance bio-inspired ZL205A/SiC composites with a lamellar-interpenetrated structure. 2017 , 708, 199-207	19
1835	Bioinspired, Graphene/AlO Doubly Reinforced Aluminum Composites with High Strength and Toughness. 2017 , 17, 6907-6915	85
1834	Engineering: Computational design hits record resolution. 2017 , 550, 50-51	2
1833	50 & 100 Years Ago. 2017 , 550, 51-51	O
1832	A nacre-mimetic superstructure of poly(butylene succinate) structured by using an intense shear flow and ramie fiber as a promising strategy for simultaneous reinforcement and toughening. 2017 , 5, 22697-22707	14
1831	Functional and Biomimetic Materials for Engineering of the Three-Dimensional Cell Microenvironment. 2017 , 117, 12764-12850	408
1830	Nature-Inspired Structural Materials for Flexible Electronic Devices. 2017 , 117, 12893-12941	401
1829	Next Generation Tissue Engineering of Orthopedic Soft Tissue-to-Bone Interfaces. 2017 , 7, 289-308	31
1828	Fatigue-Resistant Bioinspired Graphene-Based Nanocomposites. 2017 , 27, 1703459	29
1827	Electric field assisted gradient structure formation of glass microsphere columns in polymer films. 2017 , 153, 62-70	7

1826	Biomimetic, Strong, Tough, and Self-Healing Composites Using Universal Sealant-Loaded, Porous Building Blocks. 2017 , 9, 37055-37063	17
1825	A Millimeter Scale Flexural Testing System for Measuring the Mechanical Properties of Marine Sponge Spicules. 2017 ,	2
1824	Catastrophic failure of nacre under pure shear stresses of torsion. 2017 , 7, 13123	35
1823	Flexible, High-Wettability and Fire-Resistant Separators Based on Hydroxyapatite Nanowires for Advanced Lithium-Ion Batteries. 2017 , 29, 1703548	192
1822	Lignin-derived carbon nanosheets for high-capacitance supercapacitors. 2017 , 7, 48537-48543	30
1821	Morphology and mechanics of fungal mycelium. 2017 , 7, 13070	104
1820	A bioinspired study on the compressive resistance of helicoidal fibre structures. 2017 , 473, 20170538	21
1819	Multiscale-structuring of rapid response shape memory polymers based on self-assembly reverse micelles. 2017 , 121, 1-7	4
1818	Nacre-Inspired Structural Composites: Performance-Enhancement Strategy and Perspective. 2017 , 29, 1702903	39
1817	High-Performance Nanocomposites Inspired by Nature. 2017 , 29, 1702959	81
1816	Bioinspired Nanocomposite Hydrogels with Highly Ordered Structures. 2017 , 29, 1703045	171
1815	Modular Elastomer Photoresins for Digital Light Processing Additive Manufacturing. 2017 , 9, 39708-39716	68
1814	Parrotfish Teeth: Stiff Biominerals Whose Microstructure Makes Them Tough and Abrasion-Resistant To Bite Stony Corals. 2017 , 11, 11856-11865	24
1813	3D Printing Bioinspired Ceramic Composites. 2017 , 7, 13759	83
1812	Mesoscale evolution of non-graphitizing pyrolytic carbon in aligned carbon nanotube carbon matrix nanocomposites. 2017 , 52, 13799-13811	11
1811	Screening Platform for Cell Contact Guidance Based on Inorganic Biomaterial Micro/nanotopographical Gradients. 2017 , 9, 31433-31445	55
1810	Freeze Casting for Assembling Bioinspired Structural Materials. 2017 , 29, 1703155	84
1809	Gas-switchable carbon nanotube/polymer hybrid membrane for separation of oil-in-water emulsions. 2017 , 7, 39465-39470	12

1808	Mechanical properties and wear resistance of ZrO2 particulate-reinforced composite layer on compacted graphite cast iron processed by selective laser alloying. 2017 , 29, 032003	1
1807	Preparation of functionalized kaolinite/epoxy resin nanocomposites with enhanced thermal properties. 2017 , 148, 103-108	35
1806	Setting Directions: Anisotropy in Hierarchically Organized Porous Silica. 2017 , 29, 7969-7975	11
1805	Production of tunable nanomaterials using hierarchically assembled bacteriophages. 2017 , 12, 1999-2013	28
1804	Active Mixing Nozzle for Multimaterial and Multiscale Three-Dimensional Printing. 2017, 5,	3
1803	Ultra-light hierarchical meta-materials on a body-centred cubic lattice. 2017 , 119, 14001	6
1802	Strongly scale-dependent charge transport from interconnections of silicon quantum dots and nanowires. 2017 , 7, 621-625	
1801	Highly Anisotropic Conductors. 2017 , 29, 1703331	57
1800	Additive Speciation and Phase Behavior Modulating Mineralization. 2017, 121, 21641-21649	4
1799	3D calcite heterostructures for dynamic and deformable mineralized matrices. 2017 , 8, 509	6
1798	Grotthuss Mechanism: From Proton Transport in Ion Channels to Bioprotonic Devices. 2017 , 235-253	1
1797	Aligning cellulose nanofibril dispersions for tougher fibers. 2017 , 7, 11860	52
1796	On the surface effects of citrates on nano-apatites: evidence of a decreased hydrophilicity. 2017 , 7, 8901	15
1795	Deformation mechanics of non-planar topologically interlocked assemblies with structural hierarchy and varying geometry. 2017 , 7, 11844	22
1794	Mass production of bulk artificial nacre with excellent mechanical properties. 2017, 8, 287	187
1793	New insights and perspectives into biological materials for flexible electronics. 2017 , 46, 6764-6815	245
1792	Biomimicry, Biofabrication, and Biohybrid Systems: The Emergence and Evolution of Biological Design. 2017 , 6, 1700496	30
1791	Achieving high strength and high ductility in metal matrix composites reinforced with a discontinuous three-dimensional graphene-like network. 2017 , 9, 11929-11938	85

1790	Correlations between axial stiffness and microstructure of a species of bamboo. 2017 , 4, 160412	39
1789	Progress in membrane distillation crystallization: Process models, crystallization control and innovative applications. 2017 , 11, 647-662	25
1788	Biomimetic Hybridization of Kevlar into Silk Fibroin: Nanofibrous Strategy for Improved Mechanic Properties of Flexible Composites and Filtration Membranes. 2017 , 11, 8178-8184	97
1787	From molecules to macrostructures: recent development of bioinspired hard tissue repair. 2017 , 5, 1435-144	9 25
1786	Biopolymers Modification and Their Utilization in Biomimetic Composites for Osteochondral Tissue Engineering. 2017 , 253-285	О
1785	Algorithm-driven design of fracture resistant composite materials realized through additive manufacturing. 2017 , 17, 47-54	33
1784	Learning from nacre: Constructing polymer nanocomposites. 2017 , 150, 141-166	52
1783	Role of Polymerized Micelles on the Calcium Carbonate Mineralization of Nanofibers. 2017 , 56, 8241-8250	7
1782	Artificial enamel induced by phase transformation of amorphous nanoparticles. 2017 , 7, 2711	25
1781	Active Mixing Nozzle for Multi-Material and Multi-Scale 3D Printing. 2017 ,	1
1780	A corkBilica xerogel nanocomposite with unique properties. 2017 , 83, 567-573	5
1779	3D-printing a 'family' of biomimetic models to explain armored grasping in syngnathid fishes. 2017 , 12, 066007	6
1778	Lotus-on-chip: computer-aided design and 3D direct laser writing of bioinspired surfaces for controlling the wettability of materials and devices. 2017 , 12, 066004	13
1777	Criticality and mechanical enhancement in composite fiber networks. 2017 , 95, 042503	11
1776	Introduction to Biomaterials. 2017 , 189-207	1
1775	Properties of Biomaterials. 2017 , 209-238	
1774	Nanoporous Metals with Structural Hierarchy: A Review. 2017 , 19, 1700389	75
1773	Bioinspired Energy Conversion in Nanofluidics: A Paradigm of Material Evolution. 2017 , 29, 1702773	78

1772	Orientational Mapping Augmented Sub-Wavelength Hyper-Spectral Imaging of Silk. 2017, 7, 7419	28
1771	Sequential Release of Proteins from Structured Multishell Microcapsules. 2017 , 18, 3052-3059	10
1770	Laser Direct Writing of Tree-Shaped Hierarchical Cones on a Superhydrophobic Film for High-Efficiency Water Collection. 2017 , 9, 29248-29254	84
1769	Three-Dimensional-Moldable Nanofiber-Reinforced Transparent Composites with a Hierarchically Self-Assembled "Reverse" Nacre-like Architecture. 2017 , 9, 30177-30184	28
1768	Ferromagnetic resonance of biogenic nanoparticle-chains. 2017 , 122, 063903	6
1767	Cellular interfaces with hydrogen-bonded organic semiconductor hierarchical nanocrystals. 2017 , 8, 91	37
1766	Leucine zipper motif inspiration: a two-dimensional leucine Velcro-like array in peptide coordination polymers generates hydrophobicity. 2017 , 46, 11166-11170	2
1765	Low-order statistics of effective permittivity and electric field fluctuations in two-phase heterostructures. 2017 , 122, 044106	2
1764	Atomic-Scale Quantification of Interfacial Binding between Peptides and Inorganic Crystals: The Case of Calcium Carbonate Binding Peptide on Aragonite. 2017 , 121, 28354-28363	16
1763	Computational Framework to Predict Failure and Performance of Bone-Inspired Materials. 2017 , 3, 3236-3243	11
1762	Template-Guided Assembly of Silk Fibroin on Cellulose Nanofibers for Robust Nanostructures with Ultrafast Water Transport. 2017 , 11, 12008-12019	91
1761	Total morphosynthesis of biomimetic prismatic-type CaCO thin films. 2017 , 8, 1398	38
1760	Nonlinear Dynamics of a Slender Axially Graded Beam Embedded in a Viscoelastic Medium. 2017,	1
1759	Hybrid membranes for pervaporation separations. 2017 , 541, 329-346	117
1758	Synergistic Reinforcing Mechanisms in Cellulose Nanofibrils Composite Hydrogels: Interfacial Dynamics, Energy Dissipation, and Damage Resistance. 2017 , 18, 2623-2632	47
1757	Ultra strong pyroprotein fibres with long-range ordering. 2017 , 8, 74	37
1756	Functional Prioritization and Hydrogel Regulation Phenomena Created by a Combinatorial Pearl-Associated Two-Protein Biomineralization Model System. 2017 , 56, 3607-3618	12

1754	Powder Consolidation Using Cold Spray. 2017 ,	1
1753	Recent Advances in Analytical Chemistry by 3D Printing. 2017 , 89, 57-70	200
1752	Bioinspired Multifunctional Ceramic Platelet-Reinforced Piezoelectric Polymer Composite . 2017 , 19, 1600570	9
1751	Damage tolerance of bio-inspired helicoidal composites under low velocity impact. 2017 , 161, 187-203	72
1750	The processing of optically active functional hierarchical nanoparticles. 2017 , 28, 3-22	9
1749	Prolonged fluorescence lifetime of carbon quantum dots by combining with hydroxyapatite nanorods for bio-applications. 2017 , 9, 2162-2171	30
1748	Transmission electron microscopical study of teenage crown dentin on the nanometer scale. 2017 , 71, 994-998	4
1747	Peptide P olymer Conjugates for Bioinspired Compatibilization of Internal Composite Interfaces: via Specific Interactions toward Stiffer and Tougher Materials. 2017 , 4, 1600501	19
1746	Bio-Inspired Design and Fabrication of Micro/Nano-Brush Dual Structural Surfaces for Switchable Oil Adhesion and Antifouling. 2017 , 13, 1602020	49
1745	Deformation and fracture of echinoderm collagen networks. 2017 , 65, 42-52	18
1744	Grain boundary design of thin films: Using tilted brittle interfaces for multiple crack deflection toughening. 2017 , 122, 130-137	48
1743	A comparative study of piscine defense: The scales of Arapaima gigas, Latimeria chalumnae and Atractosteus spatula. 2017 , 73, 1-16	34
1742	Modeling of a biological material nacre: Waviness stiffness model. 2017 , 70, 772-776	20
1741	Macroscopic bioinspired graphene sponge modified with in-situ grown carbon nanowires and its electromagnetic properties. 2017 , 111, 94-102	144
1740	Precisely controlled growth of poly(ethyl acrylate) chains on graphene oxide and the formation of layered structure with improved mechanical properties. 2017 , 93, 100-106	14
1739	Use of Amorphous Calcium Carbonate for the Design of New Materials. 2017 , 82, 107-120	50
1738	A Novel Design Approach for Self-Crack-Healing Structural Ceramics with 3D Networks of Healing Activator. 2017 , 7, 17853	39
1737	Instabilities in rapid directional solidification under weak flow. 2017 , 96, 062802	3

1736	Ceramic devices for bone regeneration. 2017 , 279-311	4
1735	Simultaneous reinforcement and toughening of polymer/hydroxyapatite composites by constructing bone-like structure. 2017 , 151, 234-242	24
1734	Thermal-induced three-dimensional shape transformations of hydrogel sheets. 2017,	
1733	Research on anti crack mechanism of bionic coupling brake disc. 2017 , 231, 012170	1
1732	Chimeric biomolecules. 2017 , 285-324	1
1731	Preparation and Application of Cell Membrane-Camouflaged Nanoparticles for Cancer Therapy. 2017 , 7, 2575-2592	138
1730	Design for Additive Bio-Manufacturing: From Patient-Specific Medical Devices to Rationally Designed Meta-Biomaterials. 2017 , 18,	60
1729	Calcium Phosphate Bioceramics: A Review of Their History, Structure, Properties, Coating Technologies and Biomedical Applications. 2017 , 10,	429
1728	Fabrication of Graphene Aerogels with Heavily Loaded Metallic Nanoparticles. 2017, 8, 47	10
1727	Friction Reduction for a Rotational Gyroscope with Mechanical Support by Fabrication of a Biomimetic Superhydrophobic Surface on a Ball-Disk Shaped Rotor and the Application of a Water Film Bearing. 2017 , 8,	6
1726	Polymorphs, Proteins, and Nucleation Theory: A Critical Analysis. 2017 , 7, 62	13
1725	The Boom in 3D-Printed Sensor Technology. 2017 , 17,	161
1724	In Situ Atomic Force Microscopy Studies on Nucleation and Self-Assembly of Biogenic and Bio-Inspired Materials. 2017 , 7, 158	7
1723	Adhesive Through-Reinforcement Improves the Fracture Toughness of a Laminated Birch Wood Composite. 2017 , 2017, 1-11	
1722	Functionalized biomimetic calcium phosphates for bone tissue repair. 2017 , 15, e313-e325	29
1721	Human cytotoxic T-lymphocyte membrane-camouflaged nanoparticles combined with low-dose irradiation: a new approach to enhance drug targeting in gastric cancer. 2017 , 12, 2129-2142	57
1720	Design and Production of Continuously Gradient Macro/Microporous Calcium Phosphate (CaP) Scaffolds Using Ceramic/Camphene-Based 3D Extrusion. 2017 , 10,	9
1719	Hybrid polysaccharide-based systems for biomedical applications. 2017 , 107-149	2

1718	Hierarchical Materials. 2017 , 545-574	1
1717	Current Progress of Virus-mimicking Nanocarriers for Drug Delivery. 2017 , 1, 415-429	27
1716	High-stress study of bioinspired multifunctional PEDOT:PSS/nanoclay nanocomposites using AFM, SEM and numerical simulation. 2017 , 8, 2069-2082	6
1715	Mechanical Performance of Graphene-Based Artificial Nacres under Impact Loads: A Coarse-Grained Molecular Dynamic Study. 2017 , 9,	9
1714	Promoting biomimetic materials for a sustainable construction industry. 2017 , 6, 122-130	2
1713	Bio-Inspired Synthesis and Application of Functional Inorganic Materials by Polymer-Controlled Crystallization. 2017 , 233-274	
1712	Naturally-derived biopolymer nanocomposites: Interfacial design, properties and emerging applications. 2018 , 125, 1-41	130
1711	Bioinspired Wood Nanotechnology for Functional Materials. 2018 , 30, e1704285	199
1710	Freeze-cast Porous Chitosan Conduit for Peripheral Nerve Repair. 2018 , 3, 1677-1683	32
1709	Indentation size effect and energy balance issues in nanomechanical behavior of ZTA ceramics. 2018 , 44, 9753-9772	18
1708	Intermittent beading in fiber composites. 2018 , 160, 21-31	15
1707	Revisiting the problem of a 2D infinite elastic isotropic medium with a rigid inclusion or a cavity. 2018 , 126, 68-96	7
1706	Preparation of a Super-Hydrophobic Zinc Coating with a Hierarchical Structure Inherited from the Indicalamus Leaf through Electroplating. 2018 , 5, 1701327	3
1705	Talking to cells: semiconductor nanomaterials at the cellular interface. 2018 , 2, 1700242	12
1704	Multiple Synergistic Toughening Graphene Nanocomposites through Cadmium Ions and Cellulose Nanocrystals. 2018 , 5, 1800145	19
1703	Nano-engineering of construction materials using molecular dynamics simulations: Prospects and challenges. 2018 , 143, 282-291	61
1702	Broadband locally resonant metamaterials with graded hierarchical architecture. 2018, 123, 095108	29
1701	Imaging Inelastic Fracture Processes in Biomimetic Nanocomposites and Nacre by Laser Speckle for Better Toughness. 2018 , 5, 1700635	23

1700	Protein cage assembly across multiple length scales. 2018 , 47, 3433-3469	92
1699	Concurrent lattice infill with feature evolution optimization for additive manufactured heat conduction design. 2018 , 58, 511-535	31
1698	Aligning flaky FeSiAl particles with a two-dimensional rotating magnetic field to improve microwave-absorbing and shielding properties of composites. 2018 , 458, 116-122	24
1697	Peptide-Based Bioinspired Approach to Regrowing Multilayered Aprismatic Enamel. 2018 , 3, 2546-2557	29
1696	Advanced Materials through Assembly of Nanocelluloses. 2018 , 30, e1703779	340
1695	Charged Nanowire-Directed Growth of Amorphous Calcium Carbonate Nanosheets in a Mixed Solvent for Biomimetic Composite Films. 2018 , 34, 5813-5820	2
1694	Composite bending-dominated hollow nanolattices: A stiff, cyclable mechanical metamaterial. 2018 , 21, 467-474	15
1693	Bioinspired Synthesis of Monolithic and Layered Aerogels. 2018 , 30, e1706294	19
1692	Composite Reinforcement by Magnetic Control of Fiber Density and Orientation. 2018, 10, 16802-16811	5
1691	Strong and super tough: Layered ceramic-polymer composites with bio-inspired morphology. 2018 , 101, 4732-4742	7
1690	In Situ Formation of Slippery-Liquid-Infused Nanofibrous Surface for a Transparent Antifouling Endoscope Lens. 2018 , 4, 1871-1879	18
1689	Decoration of 1-D nano bioactive glass on reduced graphene oxide sheets: Strategies and in vitro bioactivity studies. 2018 , 90, 85-94	13
1688	A living foundry for Synthetic Biological Materials: A synthetic biology roadmap to new advanced materials. 2018 , 3, 105-112	44
1687	Coding cell micropatterns through peptide inkjet printing for arbitrary biomineralized architectures. 2018 , 28, 1800228	28
1686	Low-temperature nanowelding ultrathin silver nanowire sandwiched between polydopamine-functionalized graphene and conjugated polymer for highly stable and flexible transparent electrodes. 2018 , 345, 260-270	42
1685	Smart Nacre-inspired Nanocomposites. 2018 , 19, 1980-1986	6
1684	Electrochemical surface engineering of titanium-based alloys for biomedical application. 2018 , 271, 699-718	126
1683	Selective Synergism Created by Interactive Nacre Framework-Associated Proteins Possessing EGF and vWA Motifs: Implications for Mollusk Shell Formation. 2018 , 57, 2657-2666	10

1682	Encapsulation of Plant Viral Particles in Calcite Crystals. 2018 , 2, e1700176	5
1681	Nacre-inspired composites with different macroscopic dimensions: strategies for improved mechanical performance and applications. 2018 , 10, 1-22	93
1680	Effect of spatial arrangement and structure of hierarchically patterned fibrous scaffolds generated by a femtosecond laser on cardiomyoblast behavior. 2018 , 106, 1732-1742	4
1679	Nanostructure and Microstructure Fabrication: From Desired Properties to Suitable Processes. 2018 , 14, e1703401	40
1678	Hybrid materials of 1D and 2D carbon allotropes and synthetic ⊞ystems. 2018 , 10, 107-126	32
1677	Multifaceted polymeric materials in three-dimensional processing (3DP) technologies: Current progress and prospects. 2018 , 29, 1586-1602	5
1676	Two-dimensional materials in functional three-dimensional architectures with applications in photodetection and imaging. 2018 , 9, 1417	136
1675	Nacre-inspired composite design approaches for large-scale cementitious members and structures. 2018 , 88, 172-186	9
1674	Fabrication and performance of calcium phosphate cement/small intestinal submucosa composite bionic bone scaffolds with different microstructures. 2018 , 44, 9181-9187	5
1673	Strain-rate dependent deformation mechanism of graphene-Al nanolaminated composites studied using micro-pillar compression. 2018 , 105, 128-140	63
1672	3D printed two-dimensional periodic structures with tailored in-plane dynamic responses and fracture behaviors. 2018 , 159, 189-198	23
1671	Controllable and reversible tuning of material rigidity for robot applications. 2018 , 21, 563-576	101
1670	A study of size effects in bioinspired, Bacre-like[Imetal-compliant-phase (nickel-alumina) coextruded ceramics. 2018 , 148, 147-155	30
1669	Improving long-term subcutaneous drug delivery by regulating material-bioenvironment interaction. 2018 , 127, 20-34	24
1668	Significant effect of rice husk and sugarcane bagasse pore formers on the microstructure and mechanical properties of porous Al2O3/Ni composites. 2018 , 743, 323-331	10
1667	Multi-material continuum topology optimization with arbitrary volume and mass constraints. 2018 , 340, 798-823	36
1666	Effects of polymer-nanoparticle interactions on the viscosity of unentangled polymers under extreme nanoconfinement during capillary rise infiltration. 2018 , 14, 2438-2446	30
1665	The enabling role of dealloying in the creation of specific hierarchical porous metal structures Areview. 2018 , 134, 78-98	68

1664	Chemical Approach to Ultrastiff, Strong, and Environmentally Stable Graphene Films. 2018, 10, 5812-5818	12
1663	Bioactive sol-gel glasses: Processing, properties, and applications. 2018 , 15, 841-860	80
1662	Fabrication and Deformation of 3D Multilayered Kirigami Microstructures. 2018 , 14, e1703852	21
1661	Design, Manufacture, and Testing of a Tissue Scaffold for Permanent Female Sterilization by Tubal Occlusion. 2018 , 3, 1685-1690	9
1660	Metal-Tunable Self-Assembly of Hierarchical Structure in Mussel-Inspired Peptide Films. 2018 , 12, 2160-2168	31
1659	Morphogenesis of Metal-Organic Mesocrystals Mediated by Double Hydrophilic Block Copolymers. 2018 , 140, 2947-2956	52
1658	A framework for implementation of RVE-based multiscale models in computational homogenization using isogeometric analysis. 2018 , 114, 1018-1051	19
1657	3D Printing of Materials with Tunable Failure via Bioinspired Mechanical Gradients. 2018 , 30, e1705808	98
1656	Biotemplated Morpho Butterfly Wings for Tunable Structurally Colored Photocatalysts. 2018 , 10, 4614-4621	38
1655	Structural Comparison of Various Silkworm Silks: An Insight into the Structure-Property Relationship. 2018 , 19, 906-917	68
1654	Stimuli-responsive hydroxyapatite liquid crystal with macroscopically controllable ordering and magneto-optical functions. 2018 , 9, 568	53
1653	Architected Lattices with High Stiffness and Toughness via Multicore-Shell 3D Printing. 2018 , 30, e1705001	81
1652	Disposable Morpho menelaus Based Flexible Microfluidic and Electronic Sensor for the Diagnosis of Neurodegenerative Disease. 2018 , 7, 1701306	22
1651	Hierarchical Design of Tissue Regenerative Constructs. 2018 , 7, e1701067	52
1650	Insights into Mollusk Shell Formation: Interlamellar and Lamellar-Specific Nacre Protein Hydrogels Differ in Ion Interaction Signatures. 2018 , 122, 1161-1168	8
1649	Bioinspired Nacre-Like Ceramic with Nickel Inclusions Fabricated by Electroless Plating and Spark Plasma Sintering. 2018 , 20, 1700782	17
1648	Microcrack patterns control the mechanical strength in thelbiocomposites. 2018 , 140, 505-515	8
1647	Engineering Elastin-Like Polypeptide-Poly(ethylene glycol) Multiblock Physical Networks. 2018 , 19, 329-339	10

1646	The effect of ordered and partially ordered surface topography on bone cell responses: a review. 2018 , 6, 250-264	58
1645	Composites of Proteins and 2D Nanomaterials. 2018 , 28, 1704990	31
1644	Facile construction of mechanically tough collagen fibers reinforced by chitin nanofibers as cell alignment templates. 2018 , 6, 918-929	13
1643	High stiffness polymer composite with tunable transparency. 2018 , 21, 475-482	20
1642	Freeze casting IA review of processing, microstructure and properties via the open data repository, FreezeCasting.net. 2018 , 94, 243-305	171
1641	Three-Dimensional Printing Hollow Polymer Template-Mediated Graphene Lattices with Tailorable Architectures and Multifunctional Properties. 2018 , 12, 1096-1106	51
1640	Interfacial Mineral Fusion and Tubule Entanglement as a Means to Harden a Bone Augmentation Material. 2018 , 7, e1701166	12
1639	Multiscale and luminescent, hollow microspheres for gas phase thermometry. 2018 , 8, 602	5
1638	Mussel-Inspired Conductive Polymer Binder for Si-Alloy Anode in Lithium-Ion Batteries. 2018 , 10, 5440-5446	62
1637	Squid pen-inspired chitinous functional materials: Hierarchical chitin fibers by centrifugal jet-spinning and transparent chitin fiber-reinforced composite. 2018 , 6, 016102	7
1636	Beyond the dimensional limitation in bio-inspired composite: Insertion of carbon nanotubes induced laminated Cu composite and the simultaneously enhanced strength and toughness. 2018 , 130, 222-232	38
1635	A multiscale XFEM approach to investigate the fracture behavior of bio-inspired composite materials. 2018 , 141, 258-264	8
1634	Tunable seat belt behavior in nanocomposite interfaces inspired from bacterial adhesion pili. 2018 , 14, 1530-1539	6
1633	Macroscopic Properties of Biomimetic Ceramics Are Governed by the Molecular Recognition at the BioorganicIhorganic Interface. 2018 , 28, 1705842	14
1632	Outstanding Toughness of Cherry Bark Achieved by Helical Spring Structure of Rigid Cellulose Fiber Combined with Flexible Layers of Lipid Polymers. 2018 , 30, 1705315	7
1631	Unraveling crack stability and strain localization in staggered composites by fracture analysis on the shear-lag model. 2018 , 156, 262-268	10
1630	Reversible Semicrystalline Polymer as Actuators Driven by Organic Solvent Vapor. 2018, 39, e1700716	11
1629	Near-infrared laser mediated modulation of ice crystallization by two-dimensional nanosheets enables high-survival recovery of biological cells from cryogenic temperatures. 2018 , 10, 11760-11774	16

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Termite Mounds: Bioinspired Examination of the Role of Material and Environment Multifunctional Structural Forms. 2018 , 144, 02518001	in 7
1626 Role of Interface Interactions in the Construction of GO-Based Artificial Nacres. 201	18 , 5, 1800107 15
Bioinspired Interfacial Chelating-like Reinforcement Strategy toward Mechanically I Lamellar Materials. 2018 , 12, 4269-4279	Enhanced 24
In situ generation of 3D graphene-like networks from cellulose nanofibres in sintere 2018 , 10, 10488-10497	ed ceramics.
Numerical analysis of mineral crystals on mechanical properties of mineralized colla 2018 , 15, 980-990	ngen fibers. 4
1622 Antibacterial and hemostatic hydrogel via nanocomposite from cellulose nanofibers	s. 2018 , 195, 63-70 106
$_{1621}$ Stiffness and toughness gradation of bamboo from a damage tolerance perspective	e. 2018 , 143, 274-286 11
Significantly improved mechanical properties of the self-assembled layered lignoce via grinding and hot pressing. 2018 , 213, 502-507	lluloses material O
1619 Cellulose nanocrystals with different morphologies and chiral properties. 2018 , 145	5, 334-347 47
Nucleation and phase transformation pathways in electrolyte solutions investigated microscopy techniques. 2018 , 34, 74-88	d by in situ
Enhanced surface and mechanical properties of bioinspired nanolaminate graphene nanocomposites through laser shock processing for engineering applications. 2018 ,	
Three-dimensional polylactic acid@graphene oxide/chitosan sponge bionic filter: Hi adsorption of crystal violet dye. 2018 , 113, 792-803	ighly efficient 43
Magnetic wood by in situ synthesis of iron oxide nanoparticles via a microwave-assistable 1615 , 6, 3395-3402	sted route. 2018 16
1614 Material extrusion of plant biopolymers: Opportunities & challenges for 3D printing	g. 2018 , 21, 220-233 36
1613 Bioinspired Adaptive Gel Materials with Synergistic Heterostructures. 2018 , 36, 683	3-696 21
1612 Bio-inspired graphene-derived membranes with strain-controlled interlayer spacing	j. 2018 , 10, 8585-8590 <i>7</i>
Three-Dimensional Orientation of Nanofibrils in Axially Symmetric Systems Using Sr Scattering. 2018 , 122, 6889-6899	mall-Angle X-ray

1610	Directed nucleation and growth by balancing local supersaturation and substrate/nucleus lattice mismatch. 2018 , 115, 3575-3580	16
1609	Nanocellulose: a promising nanomaterial for advanced electrochemical energy storage. 2018 , 47, 2837-2872	401
1608	Helical flow-driven alignment of off-axial silver-functionalized titanium dioxide fibers in polypropylene tube suitable for medical applications. 2018 , 158, 121-127	9
1607	Nature-Inspired Hierarchical Steels. 2018 , 8, 5088	30
1606	Liquid nitrogen driven assembly of nanomaterials into spongy millispheres for various applications. 2018 , 6, 5984-5992	10
1605	3D printing: prospects and challenges. 2018 , 299-379	6
1604	Grafting carbon nanotubes onto carbon fibres doubles their effective strength and the toughness of the composite. 2018 , 166, 140-149	22
1603	Creating Stiff, Tough, and Functional Hydrogel Composites with Low-Melting-Point Alloys. 2018 , 30, e1706885	63
1602	Fire Alarm Wallpaper Based on Fire-Resistant Hydroxyapatite Nanowire Inorganic Paper and Graphene Oxide Thermosensitive Sensor. 2018 , 12, 3159-3171	97
1601	A novel method for imitating nacre by utilizing magnetic graphene oxide and its magnetic field alignment in polymer nanocomposites. 2018 , 5, 025021	1
1600	Biomimetic Design of Artificial Materials Inspired by Iridescent Nacre Structure and Its Growth Mechanism. 2018 , 57, 1592-1606	14
1599	Infill Optimization for Additive Manufacturing-Approaching Bone-Like Porous Structures. 2018 , 24, 1127-1140) 212
1598	New paradigm in advanced composite and nanocomposite design. 2018 , 62, 263-265	2
1597	Progress and Opportunities in Soft Photonics and Biologically Inspired Optics. 2018 , 30, 1702669	71
1596	Biomineral Amorphous Lasers through Light-Scattering Surfaces Assembled by Electrospun Fiber Templates. 2018 , 12, 1700224	4
1595	Dual-Fiber Approach toward Flexible Multifunctional Hybrid Materials. 2018 , 28, 1704274	20
1594	Amino Acid Coordinated Self-Assembly. 2018 , 24, 755-761	45
1593	Nacre-like ceramic refractories for high temperature applications. 2018 , 38, 2186-2193	16

1592	Low-Cost and Scaled-Up Production of Fluorine-Free, Substrate-Independent, Large-Area Superhydrophobic Coatings Based on Hydroxyapatite Nanowire Bundles. 2018 , 24, 416-424	11
1591	Accelerating Biodegradation of Calcium Phosphate Cement. 2018 , 227-255	3
1590	Advances in Multiscale Characterization Techniques of Bone and Biomaterials Interfaces. 2018 , 4, 3678-3690	9
1589	Enhanced formation of hydroxyapatites in gelatin/imogolite macroporous hydrogels. 2018, 511, 145-154	17
1588	Tough salami-inspired Cf/ZrB2 UHTCMCs produced by electrophoretic deposition. 2018 , 38, 403-409	27
1587	In situ preparation of film and hydrogel bio-nanocomposites of chitosan/fluorescein-copper with catalytic activity. 2018 , 180, 200-208	18
1586	Water effects on the deformation and fracture behaviors of the multi-scaled cellular fibrous bamboo. 2018 , 65, 203-215	39
1585	Synthesis and characterization of mechanically strong carboxymethyl cellulosegelatinflydroxyapatite nanocomposite for load-bearing orthopedic application. 2018 , 53, 230-246	20
1584	Transparent and Flexible Nacre-Like Hybrid Films of Aminoclays and Carboxylated Cellulose Nanofibrils. 2018 , 28, 1703277	41
1583	Mesoscale design of heterogeneous material systems in multi-material additive manufacturing. 2018 , 33, 58-67	11
1582	Carbons from biomass precursors as anode materials for lithium ion batteries: New insights into carbonization and graphitization behavior and into their correlation to electrochemical performance. 2018 , 128, 147-163	113
1581	Polyampholyte-doped aligned polymer hydrogels as anisotropic electrolytes for ultrahigh-capacity supercapacitors. 2018 , 6, 58-64	22
1580	Thermal properties of graphene/metal composites with aligned graphene. 2018 , 140, 85-94	164
1579	Phase-Transited Lysozyme as a Universal Route to Bioactive Hydroxyapatite Crystalline Film. 2018 , 28, 1704476	68
1578	The Role of Nanomechanics in Healthcare. 2018 , 7, 1700793	12
1577	2D Enzyme Cascade Network with Efficient Substrate Channeling by Swinging Arms. 2018 , 19, 212-216	19
1576	Bio-Inspired Photonic Materials: Prototypes and Structural Effect Designs for Applications in Solar Energy Manipulation. 2018 , 28, 1705309	82
1575	Peptide Integrated Optics. 2018 , 30, 1705776	23

1574	A Precisely Assembled Carbon Source to Synthesize Fluorescent Carbon Quantum Dots for Sensing Probes and Bioimaging Agents. 2018 , 24, 2257-2263	8
1573	A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks. 2018 , 30, 1704028	137
1572	Laser Surface Engineering of Hierarchy Hydroxyapatite Aerogel for Bone Tissue Engineering. 2018 , 6,	1
1571	Biomimetic Structural Materials: Inspiration from Design and Assembly. 2018 , 69, 23-57	48
1570	Trabecular health of vertebrae based on anisotropy in trabecular architecture and collagen/apatite micro-arrangement after implantation of intervertebral fusion cages in the sheep spine. 2018 , 108, 25-33	15
1569	Protein-mimetic peptide nanofibers: Motif design, self-assembly synthesis, and sequence-specific biomedical applications. 2018 , 80, 94-124	106
1568	Engineering Fractal MTW Zeolite Mesocrystal: Particle-Based Dendritic Growth via Twinning-Plane Induced Crystallization. 2018 , 18, 1101-1108	12
1567	Clinkering-free cementation by fly ash carbonation. 2018 , 23, 117-127	38
1566	Biomimetic ChitinBilk Hybrids: An Optically Transparent Structural Platform for Wearable Devices and Advanced Electronics. 2018 , 28, 1705480	53
1565	Phase change materials (PCM) based cold source for selective freezing 3D printing of porous materials. 2018 , 95, 2145-2155	7
1564	From Fragility to Flexibility: Construction of Hydrogel Bridges toward a Flexible Multifunctional Free-Standing CaCO3 Film. 2018 , 28, 1704956	35
1563	Wood-Based Nanotechnologies toward Sustainability. 2018 , 30, 1703453	229
1562	Design Redox-Sensitive Drug-Loaded Nanofibers for Bone Reconstruction. 2018 , 4, 240-247	22
1561	Preparation mechanism of hierarchical layered structure of graphene/copper composite with ultrahigh tensile strength. 2018 , 127, 329-339	53
1560	Water-Rich Biomimetic Composites with Abiotic Self-Organizing Nanofiber Network. 2018 , 30, 1703343	94
1559	Understanding hydration effects on mechanical and impacting properties of turtle shell. 2018 , 78, 116-123	5
1558	Hierarchical Assembly of DNA Filaments with Designer Elastic Properties. 2018, 12, 44-55	28
1557	Phase-Field Modeling of Microstructural Evolution by Freeze-Casting. 2018 , 20, 1700343	11

	. 2018,	7
1555	High-Resolution Electric-Field-Driven Jet 3D Printing and Applications. 2018,	1
1554	Design of naturally derived lead phytate as an electrocatalyst for highly efficient CO2 reduction to formic acid. 2018 , 20, 4602-4606	10
1553	Bioinspired reinforcement of cyclosiloxane hybrid polymer. 2018 , 54, 13415-13418	7
1552	Infiltration of biomineral templates for nanostructured polypyrrole 2018, 8, 33748-33752	7
1551	A trypsintalcium carbonate hybrid nanosphere based enzyme reactor with good stability and reusability. 2018 , 42, 18388-18394	4
1550	Additive Manufacturing with Bioinspired Sustainable Product Design: A Conceptual Model. 2018 , 26, 880-891	18
1549	The determining influence of the competition between pore volume change and fluid filtration on the strength of permeable brittle solids. 2018 , 13, 1508-1513	7
1548	. 2018,	17
1547	Enzymatic Reaction Generates Biomimic Nanominerals with Superior Bioactivity. 2018 , 14, e1804321	8
1546	Quantifying the role of mineral bridges on the fracture resistance of nacre-like composites. 2018 , 115, 12698-12703	24
1545	Bioinspired Macroscopic Ribbon Fibers with a Nacre-Mimetic Architecture Based on Highly Ordered Alignment of Ultralong Hydroxyapatite Nanowires. 2018 , 12, 12284-12295	23
1545 1544		23 96
	Alignment of Ultralong Hydroxyapatite Nanowires. 2018 , 12, 12284-12295	
1544	Alignment of Ultralong Hydroxyapatite Nanowires. 2018, 12, 12284-12295 Zwitterionic Skins with a Wide Scope of Customizable Functionalities. 2018, 12, 12860-12868 Ultratough Bioinspired Graphene Fiber via Sequential Toughening of Hydrogen and Ionic Bonding.	96
1544 1543	Alignment of Ultralong Hydroxyapatite Nanowires. 2018, 12, 12284-12295 Zwitterionic Skins with a Wide Scope of Customizable Functionalities. 2018, 12, 12860-12868 Ultratough Bioinspired Graphene Fiber via Sequential Toughening of Hydrogen and Ionic Bonding. 2018, 12, 12638-12645 Bone-like Polymeric Composites with a Combination of Bioactive Glass and Hydroxyapatite:	96 36
1544 1543 1542	Alignment of Ultralong Hydroxyapatite Nanowires. 2018, 12, 12284-12295 Zwitterionic Skins with a Wide Scope of Customizable Functionalities. 2018, 12, 12860-12868 Ultratough Bioinspired Graphene Fiber via Sequential Toughening of Hydrogen and Ionic Bonding. 2018, 12, 12638-12645 Bone-like Polymeric Composites with a Combination of Bioactive Glass and Hydroxyapatite: Simultaneous Enhancement of Mechanical Performance and Bioactivity. 2018, 4, 4434-4442 Anionic Surfactant-Triggered Steiner Geometrical Poly(vinylidene fluoride) Nanofiber/Nanonet Air	96 36 5

1538	3D Printing of Scaffolds for Tissue Engineering. 2018 ,	4
1537	Toughening Nanoparticle Films via Polymer Infiltration and Confinement. 2018, 10, 44011-44017	17
1536	Thermal assisted self-organization of calcium carbonate. 2018 , 9, 5221	26
1535	Field responsive mechanical metamaterials. 2018 , 4, eaau6419	85
1534	In Situ Gluten-Chitosan Interlocked Self-Assembled Supramolecular Architecture Reduces T-Cell-Mediated Immune Response to Gluten in Celiac Disease. 2018 , 62, e1800646	8
1533	Toughening of PMMA by short poly(p-phenylene-2,6-benzobisoxazole) fibers. 2018 , 12, 753-766	3
1532	Mechanical Properties Obtained by Indentation of Hollow Pd Nanoparticles. 2018, 122, 25035-25042	14
1531	Self-healing Polymers: From Biological Systems to Highly Functional Polymers. 2018 , 1-53	1
1530	Biomineralization-Inspired Material Design for Bone Regeneration. 2018 , 7, e1800700	38
1529	Additive Manufacturing as a Method to Design and Optimize Bioinspired Structures. 2018, 30, e1800940	98
1528	Thermocapillary instabilities in a horizontal liquid layer under partial basal slip. 2018 , 855, 839-859	10
1527	Emerging artificial Bouligand-type structural materials. 2018 , 5, 786-787	2
1526	Micro-CT - a digital 3D microstructural voyage into scaffolds: a systematic review of the reported methods and results. 2018 , 22, 26	39
1525	Plant-Based Modular Building Blocks for GreenElectronic Skins. 2018 , 28, 1804510	73
1524	Preparation of Copper Phosphate from Naturally Occurring Phytic Acid as an Advanced Catalyst for Oxidation of Aromatic Benzyl Compounds. 2018 , 6, 13670-13675	10
1523	Additive manufacturing: state of the art and potential for insect science. 2018, 30, 79-85	6
1522	Transformation of amorphous calcium phosphate to bone-like apatite. 2018 , 9, 4170	138
1521	Optimal Design of a Dragonfly-Inspired Compliant Joint for Camera Positioning System of Nanoindentation Tester Based on a Hybrid Integration of Jaya-ANFIS. 2018 , 2018, 1-16	16

1520	Polymer@MOFs capsules prepared through controlled interfacial mineralization for switching on/off enzymatic reactions. 2018 , 13, 320-328	11
1519	Multidimensional mechanics: Performance mapping of natural biological systems using permutated radar charts. 2018 , 13, e0204309	14
1518	Nanohybrid hydrogels designed for transbuccal anesthesia. 2018 , 13, 6453-6463	20
1517	Biomimetic Artificial Nacre: Boron Nitride Nanosheets/Gelatin Nanocomposites for Biomedical Applications. 2018 , 28, 1805948	23
1516	Microstructure characteristics and mechanical properties of Meretrix lusoria shell. 2018, 81, 1154-1161	3
1515	Tailored disorder in calcite organization in tergite cuticle of the supralittoral isopod Tylos europaeus Arcangeli, 1938. 2018 , 204, 464-480	7
1514	Ionically Cross-Linked Silk Microfibers/Alginate Tough Composite Hydrogels with Hierarchical Structures. 2018 , 6, 16788-16796	19
1513	Paving Metal-Organic Frameworks with Upconversion Nanoparticles via Self-Assembly. 2018 , 140, 15507-155	15 9
1512	Crack arrest in thin metallic film stacks due to material- and residual stress inhomogeneities. 2018 , 668, 14-22	10
1511	A Geologic Architecture System-Inspired Micro-/Nano-Heterostructure Design for High-Performance Energy Storage. 2018 , 8, 1802388	47
1510	Mechanical behavior of 3D printed biomimetic Koch fractal contact and interlocking. 2018 , 24, 58-65	17
1509	Polymorph selection during crystallization of a model colloidal fluid with a free energy landscape containing a metastable solid. 2018 , 98,	9
1508	Recent Progress in Biomimetic Additive Manufacturing Technology: From Materials to Functional Structures. 2018 , 30, e1706539	194
1507	Artificial Bicontinuous Laminate Synergistically Reinforces and Toughens Dilute Graphene Composites. 2018 , 12, 11236-11243	19
1506	Biomimetic gold nanoparticles. 2018 , 10, 209-216	10
1505	Interconnecting Bone Nanoparticles by Ovalbumin Molecules to Build a Three-Dimensional Low-Density and Tough Material. 2018 , 10, 41757-41762	6
1504	Biological composites-complex structures for functional diversity. 2018 , 362, 543-547	179
1503	Light Scattering by Structurally Anisotropic Media: A Benchmark with Transparent Wood. 2018 , 6, 1800999	25

1502	Atomistic Simulations of Length-Scale Effect of Bioinspired Brittle-Matrix Nanocomposite Models. 2018 , 144, 04018104	3
1501	Porous Calcium Phosphate Ceramic Scaffolds with Tailored Pore Orientations and Mechanical Properties Using Lithography-Based Ceramic 3D Printing Technique. 2018 , 11,	24
1500	3D-printed bioceramic scaffolds: From bone tissue engineering to tumor therapy. 2018 , 79, 37-59	211
1499	X-ray Linear Dichroism in Apatite. 2018 , 140, 11698-11704	14
1498	Ionic Liquid-Assisted Synthesis of Mesoporous Silk Fibroin/Silica Hybrids for Biomedical Applications. 2018 , 3, 10811-10822	14
1497	The potential of biomimetic nanoparticles for tumor-targeted drug delivery. 2018 , 13, 2099-2118	34
1496	3D Plate-Lattices: An Emerging Class of Low-Density Metamaterial Exhibiting Optimal Isotropic Stiffness. 2018 , 30, e1803334	84
1495	The role of water in the initial sliding of nacreous tablets: Findings from the torsional fracture of dry and hydrated nacre. 2018 , 88, 322-329	28
1494	Directional freeze-cast hybrid-backbone meso-macroporous bodies as micromonolith catalysts for gas-to-liquid processes. 2018 , 6, 21978-21989	8
1493	Towards additive manufacturing oriented geometric modeling using implicit functions. 2018, 1, 9	11
1492	Three-dimensional printing of hierarchical liquid-crystal-polymer structures. 2018 , 561, 226-230	170
1491	Marine Biominerals with a Biotechnological Future. 2018 , 855-912	1
1490	Patterning Porosity in Hydrogels by Arresting Phase Separation. 2018 , 10, 34604-34610	5
1489	Biomimetic dendrimers for mineralization: rare fibrous amorphous calcium carbonate (ACC) and branch-and-bud ACCDaterite polymorphs. 2018 , 2, 2081-2090	4
1488	Review on Electromechanical Coupling Properties of Biomaterials 2018, 1, 936-953	56
1487	Combining In Silico Design and Biomimetic Assembly: A New Approach for Developing High-Performance Dynamic Responsive Bio-Nanomaterials. 2018 , 30, e1802306	23
1486	Mechanical behavior of mycelium-based particulate composites. 2018 , 53, 16371-16382	37
1485	Effects of Different Graphite Types on the Thermal Fatigue Behavior of Bionic Laser-Processed Gray Cast Iron. 2018 , 49, 5848-5857	6

1484	Additive Manufacturing and Performance of Architectured Cement-Based Materials. 2018, 30, e1802123	41
1483	Synergistic Effect of Granular Seed Substrates and Soluble Additives in Structural Control of Prismatic CaCO Thin Films. 2018 , 34, 11126-11138	3
1482	Trans-Scale 2D Synthesis of Millimeter-Large Au Single Crystals via Silk Fibroin Templates. 2018 , 6, 12419-124	1 25 0
1481	Morphokinematics of the Hygroactuation of Feather Grass Awns. 2018 , 2, 1800007	2
1480	Multi-functional flexible carbon fiber composites with controlled fiber alignment using additive manufacturing. 2018 , 22, 360-367	16
1479	An atomistic study on the mechanical behavior of bamboo cell wall constituents. 2018 , 151, 222-231	27
1478	A Hydrogel-Film Casting to Fabricate Platelet-Reinforced Polymer Composite Films Exhibiting Superior Mechanical Properties. 2018 , 14, e1801042	14
1477	Inorganic Crystallization Engineered by the Dynamic Adsorption of Linear and Particulate Polyelectrolytes. 2018 , 30, 4048-4055	3
1476	Tailoring the mechanical properties of 2D materials and heterostructures. 2018 , 5, 032005	76
1475	Residual Strain and Stress in Biocrystals. 2018 , 30, e1707263	22
1474	Biomineralization at Titanium Revealed by Correlative 4D Tomographic and Spectroscopic Methods. 2018 , 5, 1800262	6
1473	3D-Structured Stretchable Strain Sensors for Out-of-Plane Force Detection. 2018 , 30, e1707285	62
1472	Bioinspired LDH-Based Hierarchical Structural Hybrid Materials with Adjustable Mechanical Performance. 2018 , 28, 1801614	9
1471	3D Printing of Hierarchical Porous Silica and EQuartz. 2018 , 3, 1800060	21
1470	All-round utilization of biomass derived all-solid-state asymmetric carbon-based supercapacitor. 2018 , 528, 349-359	45
1469	Facile and On-Demand Cross-Linking of Nacre-Mimetic Nanocomposites Using Tailor-Made Polymers with Latent Reactivity. 2018 , 10, 20250-20255	13
1468	Protein disorder-order interplay to guide the growth of hierarchical mineralized structures. 2018 , 9, 2145	76
1467	Molecular influence in the glass/polymer interface design: The role of segmental dynamics. 2018 , 146, 222-229	9

1466	The role of TiO2 incorporation in the preparation of B4C/Al laminated composites with high strength and toughness. 2018 , 44, 15219-15227	12
1465	Versatile mechanical properties of novel g-SiC monolayers from graphene to silicene: a first-principles study. 2018 , 29, 315701	16
1464	Controllable exfoliation of natural silk fibers into nanofibrils by protein denaturant deep eutectic solvent: nanofibrous strategy for multifunctional membranes. 2018 , 20, 3625-3633	72
1463	Hierarchical Biomineralization: from Nature's Designs to Synthetic Materials for Regenerative Medicine and Dentistry. 2018 , 7, e1800178	41
1462	Biological Self-Assembly and Recognition Used to Synthesize and Surface Guide Next Generation of Hybrid Materials. 2018 , 10, 28372-28381	9
1461	Revealing the Mechanics of Helicoidal Composites through Additive Manufacturing and Beetle Developmental Stage Analysis. 2018 , 28, 1803073	32
1460	Cell Alignment on GrapheneAmyloid Composites. 2018 , 5, 1800621	7
1459	Clay Nanopapers. 2018 , 59-86	4
1458	Biopolymer nanofibrils: structure, modeling, preparation, and applications. 2018 , 85, 1-56	183
1457	Assembly Preparation of Multilayered Biomaterials with High Mechanical Strength and Bone-Forming Bioactivity. 2018 , 30, 4646-4657	19
1456	Microstructure and mechanical properties of hard Acrocomia mexicana fruit shell. 2018, 8, 9668	19
1455	6.4 Bioinspired Composite Materials: Processing Strategies Across Length Scales. 2018 , 73-96	
1454	A new recyclable crosslinked polymer combined polyurethane and epoxy resin. 2018, 149, 154-163	18
1453	Bioinspired hierarchical composite design using machine learning: simulation, additive manufacturing, and experiment. 2018 , 5, 939-945	186
1452	Effects of soft phase on the mechanical behaviors of hierarchical Mg nanocomposites. 2018 , 768, 618-624	12
1451	Biomimetic twisted plywood structural materials. 2018 , 5, 703-714	44
1450	Porous Ceramics and Metals by Ice Templating. 2018 , 141-176	
1449	Strong and Tough Ceramic Composites via Ice Templating. 2018 , 177-227	

1448	Bioinspired enhancement of chitosan nanocomposite films via Mg-ACC crystallization, their robust, hydrophobic and biocompatible. 2018 , 459, 129-137	28
1447	Biomimicking of Hierarchal Molluscan Shell Structure Via Layer by Layer 3D Printing. 2018 , 57, 10832-10840	37
1446	Bioceramics and bone healing. 2018, 3, 173-183	69
1445	A Computational Model of Bio-Inspired Soft Network Materials for Analyzing Their Anisotropic Mechanical Properties. 2018 , 85,	13
1444	Engineering the Future of Silk Materials through Advanced Manufacturing. 2018, 30, e1706983	81
1443	Multi-scale toughening of epoxy composites via electric field alignment of carbon nanofibres and short carbon fibres. 2018 , 167, 115-125	40
1442	Hierarchical structures on nickel-titanium fabricated by ultrasonic nanocrystal surface modification. 2018 , 93, 12-20	15
1441	Bioinspired Structural Hierarchy within Macroscopic Volumes of Synthetic Composites. 2018 , 7, e1800466	3
1440	Enhanced energy harvesting through nanowire based functionally graded interfaces. 2018, 52, 171-182	16
1439	Synergic Strategies for the Enhanced Self-Assembly of Biomineralization Peptides for the Synthesis of Functional Nanomaterials. 2018 , 25, 4-14	5
1438	Bioinspired Materials and Structures. 2018 , 251-266	1
1437	Tuning Mechanical Properties of Protein Hydrogels. 2018, 295-309	
1436	Physical Crosslinked Poly(N-isopropylacrylamide)/Nano-Hydroxyapatite Thermosensitive Composite Hydrogels. 2018 , 28, 2069-2079	12
1435	Characterization of Wood Derived Hierarchical Cellulose Scaffolds for Multifunctional Applications. 2018 , 11,	17
1434	A Novel Multiscale Mathematical Model for Building Bone Substitute Materials for Children. 2018 , 11,	2
1433	Complex silica composite nanomaterials templated with DNA origami. 2018 , 559, 593-598	233
1432	Controls on microstructural features during solidification of colloidal suspensions. 2018 , 157, 288-297	12
1431	Nacre-Inspired Graphene/Metal Hybrid by In Situ Cementation Reaction and Joule Heating. 2018 , 20, 1800518	8

1430	Strong, Conductive, Foldable Graphene Sheets by Sequential Ionic and Bridging. 2018, 30, e1802733	53
1429	Ultrasound Promoted Step-Growth Polymerization and Polymer Crosslinking Via Copper Catalyzed AzideAlkyne Click Reaction. 2018 , 130, 11378-11382	9
1428	Ultrasound Promoted Step-Growth Polymerization and Polymer Crosslinking Via Copper Catalyzed Azide-Alkyne "Click" Reaction. 2018 , 57, 11208-11212	30
1427	Bioinspired Supertough Graphene Fiber through Sequential Interfacial Interactions. 2018 , 12, 8901-8908	48
1426	3D magnetic printing of bio-inspired composites with tunable mechanical properties. 2018 , 53, 14274-14286	17
1425	Optimization of Damping Properties of Staggered Composites Through Microstructure Design. 2018 , 85,	5
1424	Natural Frequency Optimization of Variable-Density Additive Manufactured Lattice Structure: Theory and Experimental Validation. 2018 , 140,	39
1423	A review on the very high nanofiller-content nanocomposites: Their preparation methods and properties with high aspect ratio fillers. 2018 , 86, 1-39	62
1422	Directing Mesenchymal Stem Cells with Gold Nanowire Arrays. 2018, 5, 1800334	24
1421	From nano- to micrometer scale: the role of microwave-assisted acid and alkali pretreatments in the sugarcane biomass structure. 2018 , 11, 73	19
1420	Optically Transparent Wood: Recent Progress, Opportunities, and Challenges. 2018 , 6, 1800059	81
1419	3D Hybrid Small Scale Devices. 2018 , 14, e1702497	4
1418	Sequentially bridged graphene sheets with high strength, toughness, and electrical conductivity. 2018 , 115, 5359-5364	77
1417	Multiscale Control of Nanocellulose Assembly: Transferring Remarkable Nanoscale Fibril Mechanics to Macroscale Fibers. 2018 , 12, 6378-6388	230
1416	Bringing nanomagnetism to the mesoscale with artificial amorphous structures. 2018 , 97,	5
1415	Enhanced fracture toughness in architected interpenetrating phase composites by 3D printing. 2018 , 167, 251-259	33
1414	Spatial distribution and orientation of nanotubes for suppression of stress concentrations optimized using genetic algorithm and finite element analysis. 2018 , 158, 136-146	10
1413	Control of ice nucleation: freezing and antifreeze strategies. 2018 , 47, 7116-7139	113

1412	A diffusion-driven fabrication technique for anisotropic tubular hydrogels. 2018, 14, 7706-7713	17
1411	Simultaneous improvements of strength and toughness in topologically interlocked ceramics. 2018 , 115, 9128-9133	43
1410	Tailoring water stability of cellulose nanopaper by surface functionalization. 2018, 14, 7390-7400	20
1409	Length-scale dependency of biomimetic hard-soft composites. 2018 , 8, 12052	17
1408	Achieving Self-Stiffening and Laser Healing by Interconnecting Graphene Oxide Sheets with Amine-Functionalized Ovalbumin. 2018 , 5, 1800932	4
1407	Bioinspired, Multiscale Reinforced Composites with Exceptionally High Strength and Toughness. 2018 , 18, 5812-5820	17
1406	Bioinspired polymeric woods. 2018 , 4, eaat7223	135
1405	Microvoids in Solids: Synchrotron Radiation Phase Contrast Imaging and Simulations. 2018 , 255, 1800209	3
1404	Additive Manufacturing of Orthopedic Implants. 2018, 21-55	9
1403	Poly-albumen: Bio-derived structural polymer from polymerized egg white. 2018 , 9, 73-79	6
1402	Formation of Hierarchical Structures of l-Glutamic Acid with an l-Arginine Additive. 2018, 18, 4054-4059	5
1401	Shape-preserving transformation of carbonate minerals into lead halide perovskite semiconductors based on ion exchange/insertion reactions. 2018 , 10, 740-745	37
1400	On the Materials Science of Nature's Arms Race. 2018 , 30, e1705220	44
1399	Tough and deformable glasses with bioinspired cross-ply architectures. 2018 , 75, 439-450	27
1398	Two Methods for Decellularization of Plant Tissues for Tissue Engineering Applications. 2018,	16
1397	Developing High-Performance Lithium Metal Anode in Liquid Electrolytes: Challenges and Progress. 2018 , 30, e1706375	241
1396	Plant Biomechanics. 2018,	11
1395	Structural optimization and amorphous calcium phosphate mineralization in sensory setae of a terrestrial crustacean (Isopoda: Oniscidea). 2018 , 112, 26-34	5

1394	A bioinspired strategy for assembling graphene oxide sheets into high-performance graphene films. 2018 , 61, 1475-1476	1
1393	Synthesis of NH4TiOF3 Crystals in the Presence of Polyoxyethylene Ethers. 2018, 63, 567-573	3
1392	Biomechanics and Functional Morphology of PlantsInspiration for Biomimetic Materials and Structures. 2018 , 399-433	8
1391	Artificial Nacre from Supramolecular Assembly of Graphene Oxide. 2018 , 12, 6228-6235	57
1390	High-speed microjets issue from bursting oil gland reservoirs of citrus fruit. 2018 , 115, E5887-E5895	4
1389	Bio-Mimicked Silica Architectures Capture Geometry, Microstructure, and Mechanical Properties of Marine Diatoms. 2018 , 20, 1800301	9
1388	Biomechano-Interactive Materials and Interfaces. 2018 , 30, e1800572	75
1387	Bouncing and 3D printable hybrids with self-healing properties. 2018 , 5, 849-860	28
1386	Chitin Nanopapers. 2018 , 175-200	3
1385	The Vertebral Bone. 2018 , 71-87	
1385	The Vertebral Bone. 2018 , 71-87 Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018 , 233-251	
		25
1384	Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018 , 233-251 Mechanical contribution of secondary phloem to postural control in trees: the bark side of the	
1384	Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018 , 233-251 Mechanical contribution of secondary phloem to postural control in trees: the bark side of the force. 2019 , 221, 209-217	
1384 1383 1382	Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018, 233-251 Mechanical contribution of secondary phloem to postural control in trees: the bark side of the force. 2019, 221, 209-217 High fracture toughness of HfC through nano-scale templating and novel sintering aids. 2019, 102, 997-1009 Applications of Nanotechnology for Regenerative Medicine; Healing Tissues at the Nanoscale. 2019	5
1384 1383 1382	Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018, 233-251 Mechanical contribution of secondary phloem to postural control in trees: the bark side of the force. 2019, 221, 209-217 High fracture toughness of HfC through nano-scale templating and novel sintering aids. 2019, 102, 997-1009 Applications of Nanotechnology for Regenerative Medicine; Healing Tissues at the Nanoscale. 2019, 485-504 Elevated Pervaporative Desulfurization Performance of Pebax-Ag+@MOFs Hybrid Membranes by	5
1384 1383 1382 1381 1380	Mechanical Properties of Nanolaminates Based on Graphene Nanoplatelets. 2018, 233-251 Mechanical contribution of secondary phloem to postural control in trees: the bark side of the force. 2019, 221, 209-217 High fracture toughness of HfC through nano-scale templating and novel sintering aids. 2019, 102, 997-1009 Applications of Nanotechnology for Regenerative Medicine; Healing Tissues at the Nanoscale. 2019, 485-504 Elevated Pervaporative Desulfurization Performance of Pebax-Ag+@MOFs Hybrid Membranes by Integrating Multiple Transport Mechanisms. 2019, 58, 16911-16921 Mechanically interlocked architecture aids an ultra-stiff and ultra-hard elastically bendable	5 11 7

Experimental and numerical investigation of the toughening mechanisms in bioinspired composite prepared by freeze casting. 2019 , 182, 107768	es 8
3D Printing of Hot Dog-Like Biomaterials with Hierarchical Architecture and Distinct Bioactivity. 2019 , 6, 1901146	30
Contrast enhanced ultrasound imaging by nature-inspired ultrastable echogenic nanobubbles. 20 1 , 11, 15647-15658	38
Influence of Surface Treatment on the Interfacial and Mechanical Properties of Short S-Glass Fiber-Reinforced Dental Composites. 2019 , 11, 32328-32338	20
1372 Surface deformations in dynamic thermocapillary convection under partial slip. 2019 , 100, 022802	О
1371 Aerosol-based synthesis of pure and stable amorphous calcium carbonate. 2019 , 55, 10725-10728	8
Emulsion Lyophilization as a Facile Pathway to Fabricate Stretchable Polymer Foams Enabling Multishape Memory Effect and Clip Application. 2019 , 11, 32423-32430	7
Mapping the Tooth Enamel Proteome and Amelogenin Phosphorylation Onto Mineralizing Porcine Tooth Crowns. 2019 , 10, 925	11
1368 Biomaterials for bone tissue engineering scaffolds: a review 2019 , 9, 26252-26262	232
Superior Biomimetic Nacreous Bulk Nanocomposites by a Multiscale Soft-Rigid Dual-Network Interfacial Design Strategy. 2019 , 1, 412-427	38
1366 Bioinspired Design Provides High-Strength Benzoxazine Structural Adhesives. 2019 , 131, 12399-12	2407 8
Three-dimensional reconstruction of internal fascicles and microvascular structures of human peripheral nerves. 2019 , 35, e3245	2
1364 Preparation and anisotropic properties of textured structural ceramics: A review. 2019 , 8, 289-332	51
Bio-inspiration as a Concept for Sustainable Constructions Illustrated on Graded Concrete. 2019 , 16, 742-753	5
Nano-hydroxyapatite mineralized silk fibroin porous scaffold for tooth extraction site preservation 2019 , 35, 1397-1407	n. 16
1361 Print Me An Organ! Why We Are Not There Yet. 2019 , 97, 101145	109
New insights into the predicament of DFT assisted optimized energy, stability and distortions of optimized topologies of some novel complexes of Zirconium (IV) and enhancement of antimicrobin potential. 2019 , 33, e5080	al 3
1359 Oxidizing and Nano-dispersing the Natural Silk Fibers. 2019 , 14, 250	3

1358	Advanced Compressible and Elastic 3D Monoliths beyond Hydrogels. 2019 , 29, 1904472	40
1357	Fabrication and characterization of two-phase syntactic foam using vacuum assisted mould filling technique. 2019 , 8, 3843-3851	7
1356	Reprogrammable Three-Dimensional Configurations Using Ionomer Bilayers. 2019 , 1, 2760-2767	2
1355	Heterogeneous Catalytic Upgrading of Biofuranic Aldehydes to Alcohols. 2019 , 7, 529	18
1354	Bioinspired Materials: From Living Systems to New Concepts in Materials Chemistry. 2019 , 12,	4
1353	Tuning the Incorporation of Magnesium into Calcite during Its Crystallization from Additive-Free Aqueous Solution. 2019 , 19, 4385-4394	6
1352	3D printed continuous fibre-reinforced composites: Bio-inspired microstructures for improving the translaminar fracture toughness. 2019 , 182, 107731	13
1351	Cobalt, nickel and copper complexes with glycinamide: structural insights and magnetic properties 2019 , 9, 21637-21645	3
1350	Bioinspired surface modification of orthopedic implants for bone tissue engineering. 2019 , 219, 119366	113
1349	Silk-Fibroin-Assisted Cathodic Electrolytic Deposition of Calcium Phosphate for Biomedical Applications. 2019 , 5, 4302-4310	4
1348	Novel additive manufacturing of photocurable ceramic slurry containing freezing vehicle as porogen for hierarchical porous structure. 2019 , 45, 21321-21327	12
1347	Scalable Synthesis of Multifunctional Epidermis-Like Smart Coatings. 2019 , 29, 1903984	11
1346	Super Elastic and Thermally Insulating Carbon Aerogel: Go Tubular Like Polar Bear Hair. 2019, 1, 36-38	7
1345	Bio-inspired assembly of reduced graphene oxide by fibrin fiber to prepare multi-functional conductive bio-nanocomposites as versatile electrochemical platforms. 2019 , 153, 504-512	10
1344	Numerical Integration Over Implicitly Defined Domains with Topological Guarantee. 2019 , 7, 459-474	3
1343	Genipin-enhanced nacre-inspired montmorillonite-chitosan film with superior mechanical and UV-blocking properties. 2019 , 182, 107747	16
1342	A strategy of tailoring polymorphs and nanostructures to construct self-reinforced nonswelling high-strength bacterial cellulose hydrogels. 2019 , 11, 15347-15358	17
1341	Effect of interlocking structure on mechanical properties of bio-inspired nacreous composites. 2019 , 226, 111260	11

1340	Bioinspired Unidirectional Silk Fibroin-Silver Compound Nanowire Composite Scaffold via Interface-Mediated In Situ Synthesis. 2019 , 58, 14152-14156	10
1339	Bioinspired Unidirectional Silk FibroinBilver Compound Nanowire Composite Scaffold via Interface-Mediated In Situ Synthesis. 2019 , 131, 14290-14294	5
1338	Bioinspired improvement of laminated glass. 2019 , 364, 1232-1233	5
1337	Multiscale Toughening Mechanisms in Biological Materials and Bioinspired Designs. 2019 , 31, e1901561	160
1336	3D Printing of Ultralight Biomimetic Hierarchical Graphene Materials with Exceptional Stiffness and Resilience. 2019 , 31, e1902930	73
1335	Hierarchically designed bone scaffolds: From internal cues to external stimuli. 2019 , 218, 119334	109
1334	Bioinspired Design Provides High-Strength Benzoxazine Structural Adhesives. 2019 , 58, 12271-12279	47
1333	Preparation of and research on bioinspired graphene oxide/nanocellulose/polydopamine ternary artificial nacre. 2019 , 181, 107961	16
1332	Biomass derived metal carbide catalysts formed using a salt flux synthesis. 2019 , 6, 115519	2
1331	Bone Biomineral Properties Vary across Human Osteonal Bone. 2019 , 13, 12949-12956	18
1330	Biological design of materials. 2019 , 27-97	3
1329	MXene-Reinforced Cellulose Nanofibril Inks for 3D-Printed Smart Fibres and Textiles. 2019 , 29, 1905898	107
1328	An Effective Osteogenesis Porous CaP/Collagen Interface Compatible with Various Substrates Fabricated by Controlled Mineralization in a Delicately Adjustable Organic Matrix. 2019 , 25, 16366-16376	5
1327	Arapaima Fish Scale: One of the Toughest Flexible Biological Materials. 2019 , 1, 1557-1566	17
1326	Ballistic performance of bioinspired nacre-like aluminium composite plates. 2019 , 177, 107382	13
1325	Engineering tensile behavior of hybrid carbon fiber/self-reinforced polypropylene composites by bio-inspired fiber discontinuities. 2019 , 178, 107502	6
1324	Bioinspired Synthesis of Quasi-Two-Dimensional Monocrystalline Oxides. 2019 , 31, 9040-9048	8
1323	Twist-Turn-Twist Motif Chaperoned Inside Molecular Baskets. 2019 , 141, 16600-16604	11

1322	Structure and Properties of Poly(Oxypropylene) Diamine Intercalated Montmorillonite/Epoxy Composites. 2019 , 58, 877-889	2
1321	Devices for promising applications. 2019 , 247-314	
1320	Bioinspired multifunctional biomaterials with hierarchical microstructure for wound dressing. 2019 , 100, 270-279	38
1319	Amorphous Alumina Nanosheets/Polylactic Acid Artificial Nacre. 2019 , 1, 1385-1398	10
1318	Fiber with Butterfly Wings: Creating Colored Carbon Fibers with Increased Strength, Adhesion, and Reversible Malleability. 2019 , 11, 41617-41625	26
1317	Non-rubber components tuning mechanical properties of natural rubber from vulcanization kinetics. 2019 , 183, 121911	30
1316	Nanoscale deformation mechanics reveal resilience in nacre of Pinna nobilis shell. 2019 , 10, 4822	35
1315	Competitive self-assembly driven as a route to control the morphology of poly(tannic acid) assemblies. 2019 , 11, 4751-4758	11
1314	A self-hydrosilylation of phosphanylhydrosilylalkynes promoted by B(CF)? An experimental and mechanistic study. 2019 , 55, 1494-1497	3
1313	Crystalline organization of nacre and crossed lamellar architecture of seashells and their influences in mechanical properties. 2019 , 8, 100476	2
1312	Biomimetic Mineralization of Protein Nanogels for Enzyme Protection. 2019 , 25, 16712	3
1311	Nature-Inspired Nacre-Like Composites Combining Human Tooth-Matching Elasticity and Hardness with Exceptional Damage Tolerance. 2019 , 31, e1904603	34
1310	Ion-Specific Assembly of Strong, Tough, and Stiff Biofibers. 2019 , 131, 18735-18742	5
1309	Biomimetic triphase composite scaffolds with antibacterial and anti-tumor potentials for bone repair. 2019 , 256, 126590	3
1308	Recent advance of erythrocyte-mimicking nanovehicles: From bench to bedside. 2019 , 314, 81-91	13
1307	Interplay of various fracture mechanisms in bio-inspired staggered structure. 2019 , 139, 103215	9
1306	Multifunctional Wet-Spun Filaments through Robust Nanocellulose Networks Wrapping to Single-Walled Carbon Nanotubes. 2019 , 11, 42808-42817	23
1305	Graphene-based hierarchical sandwich-type hybrid nanostructures for optical limiters. 2019 , 98, 109453	9

1304	From spinodal decomposition to alternating layered structure within single crystals of biogenic magnesium calcite. 2019 , 10, 4559	22
1303	Plants and architecture: the role of biology and biomimetics in materials development for buildings. 2019 , 11, 178-211	9
1302	Characterization of fracture in topology-optimized bioinspired networks. 2019 , 100, 042402	4
1301	3D Solar-Blind Ga2O3 Photodetector Array Realized Via Origami Method. 2019 , 29, 1906040	67
1300	Defect-Rich Adhesive Nanozymes as Efficient Antibiotics for Enhanced Bacterial Inhibition. 2019 , 131, 16382-16388	6
1299	Ion-Specific Assembly of Strong, Tough, and Stiff Biofibers. 2019 , 58, 18562-18569	27
1298	Defect-Rich Adhesive Nanozymes as Efficient Antibiotics for Enhanced Bacterial Inhibition. 2019 , 58, 16236-16242	129
1297	Plant-Derived Nanocellulose as Structural and Mechanical Reinforcement of Freeze-Cast Chitosan Scaffolds for Biomedical Applications. 2019 , 20, 3733-3745	24
1296	Fracture Behavior of Bio-Inspired Functionally Graded Soft-Hard Composites Made by Multi-Material 3D Printing: The Case of Colinear Cracks. 2019 , 12,	21
1295	Silk: A Promising Biomaterial Opening New Vistas Towards Affordable Healthcare Solutions. 2019 , 99, 445-487	28
1294	Bioinspired designs for shock absorption, based upon nacre and Bouligand structures. 2019 , 1, 1	1
1293	Selenium-doped hydroxyapatite biopapers with an anti-bone tumor effect by inducing apoptosis. 2019 , 7, 5044-5053	11
1292	Repair of tooth enamel by a biomimetic mineralization frontier ensuring epitaxial growth. 2019 , 5, eaaw9569	81
1291	Macroscale Double Networks: Design Criteria for Optimizing Strength and Toughness. 2019 , 11, 35343-35353	33
1290	Synergistic effects of tung oil and heat treatment on physicochemical properties of bamboo materials. 2019 , 9, 12824	25
1289	Promotion of the osteogenic activity of an antibacterial polyaniline coating by electrical stimulation. 2019 , 7, 4730-4737	14
1288	Multiscale optimal design and fabrication of laminated composites. 2019 , 228, 111366	6
1287	Supramolecular Hexagonal Platelet Assemblies with Uniform and Precisely-Controlled Dimensions. 2019 , 141, 15498-15503	17

1286	Digital Light Processing of Freeze-cast Ceramic Layers for Macroporous Calcium Phosphate Scaffolds with Tailored Microporous Frameworks. 2019 , 12,	9
1285	A Polyurethane Based Composite with Mechanically Enhanced Performance for Bone repair. 2019 , 16, 1399-1404	2
1284	Biomimetic tough helicoidally structured material through novel electrospinning based additive manufacturing. 2019 , 4, 2345-2354	4
1283	Biomimetic composites with enhanced toughening using silk-inspired triblock proteins and aligned nanocellulose reinforcements. 2019 , 5, eaaw2541	37
1282	The analogies between human development and additive manufacture: Expanding the definition of design. 2019 , 6, 1662631	3
1281	Crystal growth kinetics as an architectural constraint on the evolution of molluscan shells. 2019 , 116, 20388-20397	24
1280	Embedding topography enables fracture guidance in soft solids. 2019 , 9, 13493	O
1279	The hidden structure of human enamel. 2019 , 10, 4383	51
1278	Coralline algal calcification: A morphological and process-based understanding. 2019 , 14, e0221396	22
1277	Anisotropic Cryostructured Collagen Scaffolds for Efficient Delivery of RhBMP-2 and Enhanced Bone Regeneration. 2019 , 12,	5
1276	Decoding Biomineralization: Interaction of a Mad10-Derived Peptide with Magnetite Thin Films. 2019 , 19, 8207-8215	5
1275	Tunable Energy Absorption Characteristics of Architected Honeycombs Enabled via Additive Manufacturing. 2019 , 11, 42549-42560	34
1274	When polymers meet carbon nanostructures: expanding horizons in cancer therapy. 2019 , 11, 2205-2231	6
1273	Multi-graded foams upon time-dependent exposition to blowing agent. 2019 , 362, 812-817	12
1272	Impact resistance of nanocellulose films with bioinspired Bouligand microstructures. 2019, 1, 1351-1361	11
1271	Strong, Fracture-Resistant Biomimetic Silicon Carbide Composites with Laminated Interwoven Nanoarchitectures Inspired by the Crustacean Exoskeleton. 2019 , 2, 1111-1119	16
1270	3D Printing of Bioinspired Structural Materials with Fibers Induced by Doctor Blading Process. 2019 , 6, 89-99	4
1269	Mechanically Robust Shape Memory Polyurethane Nanocomposites for Minimally Invasive Bone Repair 2019 , 2, 1056-1065	28

1268	Calcite fibre formation in modern brachiopod shells. 2019 , 9, 598	19
1267	Fabrication of high-strength porous SiC-based composites with unidirectional channels. 2019 , 102, 4888-4898	3
1266	Strategic Design of Clay-Based Multifunctional Materials: From Natural Minerals to Nanostructured Membranes. 2019 , 29, 1807611	39
1265	Biological and Engineered Topological Droplet Rectifiers. 2019 , 31, e1806501	71
1264	Multi-objective optimization design for a sand crab-inspired compliant microgripper. 2019 , 25, 3991-4009	12
1263	Flexible cellulose nanofibril/pristine graphene nanocomposite films with high electrical conductivity. 2019 , 119, 119-126	20
1262	Bioinspired Design and Fabrication of Polymer Composite Films Consisting of a Strong and Stiff Organic Matrix and Microsized Inorganic Platelets. 2019 , 13, 2773-2785	11
1261	Intrinsic and extrinsic control of freeze casting. 2019 , 8, 2372-2385	45
1260	3D printing of sacrificial templates into hierarchical porous materials. 2019 , 9, 409	51
1259	Additive manufacturing of self-healing elastomers. 2019 , 11,	63
1258	Bio-Inspired Stable Lithium-Metal Anodes by Co-depositing Lithium with a 2D Vermiculite Shuttle. 2019 , 58, 6200-6206	65
1257	Elastic and Bransparent bonelas an electrochemical separator. 2019 , 12, 132-138	3
1256	Designing biomimetic liquid diodes. 2019 , 15, 1902-1915	38
1255	Hierarchical nanomaterials via biomolecular self-assembly and bioinspiration for energy and environmental applications. 2019 , 11, 4147-4182	88
1254	Structural hierarchy confers error tolerance in biological materials. 2019 , 116, 2875-2880	11
1253	Field Assisted Sintering of Nanoporous Boron Carbide with Hierarchical Microstructure. 2019,	0
1252	Sheet-like and tubular aggregates of protein nanofibril-phosphate hybrids. 2019 , 55, 393-396	5
1251	Ultratough nacre-inspired epoxygraphene composites with shape memory properties. 2019 , 7, 2787-2794	34

1250	Bioinspirational understanding of flexural performance in hedgehog spines. 2019 , 94, 553-564	6
1249	Light-Controlled, High-Resolution Patterning of Living Engineered Bacteria Onto Textiles, Ceramics, and Plastic. 2019 , 29, 1901788	44
1248	Bioinspired Nacre-Like Alumina with a Metallic Nickel Compliant Phase Fabricated by Spark-Plasma Sintering. 2019 , 15, e1900573	11
1247	Micro/nano-scale Characterization and Fatigue Fracture Resistance of Mechanoreceptor with Crack-shaped Slit Arrays in Scorpion. 2019 , 16, 410-422	7
1246	Biological growth and synthetic fabrication of structurally colored materials. 2019 , 21, 073001	20
1245	Secret Paper with Vinegar as an Invisible Security Ink and Fire as a Decryption Key for Information Protection. 2019 , 25, 10918-10925	5
1244	Ice-template triggered roughness: A facile method to prepare robust superhydrophobic surface with versatile performance. 2019 , 135, 345-351	6
1243	High-entropy alloys. 2019 , 4, 515-534	932
1242	Mesostructured Nonwovens with Penguin Downy Feather-Like Morphology Top-Down Combined with Bottom-Up. 2019 , 29, 1903166	13
1241	The Biomineralization Proteome: Protein Complexity for a Complex Bioceramic Assembly Process. 2019 , 19, e1900036	14
1240	A comprehensive review of selected biological armor systems (From structure-function to bio-mimetic techniques. 2019 , 225, 111172	12
1239	Using Dynamic Bonds to Enhance the Mechanical Performance: From Microscopic Molecular Interactions to Macroscopic Properties. 2019 , 52, 5014-5025	30
1238	Self-Healing Polymers: From Biological Systems to Highly Functional Polymers. 2019 , 665-717	
1237	Transparent and tough bulk composites inspired by nacre. 2019 , 10, 2794	57
1236	Transparent Impact-Resistant Composite Films with Bioinspired Hierarchical Structure. 2019 , 11, 23616-23622	2 28
1235	Biomimetic 3D printed lightweight constructions: a comparison of profiles with various geometries for efficient material usage inspired by square-shaped plant stems. 2019 , 14, 046007	3
1234	Damping, thermal, and mechanical performances of a novel semi-interpenetrating polymer networks based on polyimide/epoxy. 2019 , 136, 48032	11
1233	The Stomatopod Telson: Convergent Evolution in the Development of a Biological Shield. 2019 , 29, 1902238	9

1232	Fibroin/peptide co-functionalized calcium titanate nanorods improve osteoinductivity of titanium via mimicking osteogenic niche. 2019 , 103, 109836	3
1231	Bioinspired, graphene-enabled Ni composites with high strength and toughness. 2019 , 5, eaav5577	30
1230	Expanding the upper limits of robustness of cellulose nanocrystal aerogels: outstanding mechanical performance and associated pore compression response of chiral-nematic architectures. 2019 , 7, 15309-1531	9 ²⁴
1229	Multiscale Self-Assembly of Mobile-Ligand Molecular Nanoparticles for Hierarchical Nanocomposites. 2019 , 13, 7135-7145	20
1228	Investigation of mechanical properties of tibia and femur articulations of insect joints with different joint functions. 2019 , 9, 900-903	1
1227	Bioinspired approach to enhance mechanical properties of starch based nacre-mimetic nanocomposite. 2019 , 221, 113-119	8
1226	Self-Assembled Functionally Graded Graphene Films with Tunable Compositions and Their Applications in Transient Electronics and Actuation. 2019 , 11, 23463-23473	6
1225	Development of biomimetic electrospun polymeric biomaterials for bone tissue engineering. A review. 2019 , 30, 1308-1355	60
1224	Decentralized manufacturing for biomimetics through cooperation of digitization and nanomaterial design. 2019 , 11, 19179-19189	1
1223	Apatite minerals derived from collagen phosphorylation modification induce the hierarchical intrafibrillar mineralization of collagen fibers. 2019 , 107, 2403-2413	17
1222	Towards balancing in-plane mechanical properties and impact damage tolerance of composite laminates using quasi-UD woven fabrics with hybrid warp yarns. 2019 , 225, 111083	16
1221	Tunable Mechanical Anisotropy, Crack Guiding, and Toughness Enhancement in Two-Stage Reactive Polymer Networks. 2019 , 21, 1900578	9
1220	Design concepts for generating optimised lattice structures aligned with strain trajectories. 2019 , 354, 689-705	14
1219	Hierarchical cellular scaffolds fabricated via direct foam writing using gelled colloidal particle-stabilized foams as the ink. 2019 , 102, 6498-6506	11
1218	Beyond Seashells: Bioinspired 2D Photonic and Photoelectronic Devices. 2019 , 29, 1901460	47
1217	Bioprocess-inspired fabrication of materials with new structures and functions. 2019 , 105, 100571	45
1216	A Review on Modeling Techniques of Cementitious Materials under Different Length Scales: Development and Future Prospects. 2019 , 2, 1900047	15
1215	A Review of Biological Fluid Power Systems and Their Potential Bionic Applications. 2019 , 16, 367-399	16

1214	Water vapor harvesting nanostructures through bioinspired gradient-driven mechanism. 2019 , 728, 167-173	6
1213	Puncture-Resistant Hydrogel: Placing Molecular Complexes Along Phase Boundaries. 2019 , 11, 19421-19428	12
1212	Improved mechanical performance of graphene oxide based artificial nacre composites by regulating the micro-laminated structure and interface bonding. 2019 , 179, 63-68	12
1211	Dental remineralization via poly(amido amine) and restorative materials containing calcium phosphate nanoparticles. 2019 , 11, 15	26
121 0	Mussel-Glue Inspired Adhesives: A Study on the Relevance of l-Dopa and the Function of the Sequence at Nanomaterial-Peptide Interfaces. 2019 , 6, 1900501	14
1209	Highly Thermal-Resilient AgNW Transparent Electrode and Optical Device on Thermomechanically Superstable Cellulose Nanorod-Reinforced Nanocomposites. 2019 , 7, 1900532	10
1208	High-performance polyurethane nanocomposites based on UPy-modified cellulose nanocrystals. 2019 , 219, 191-200	20
1207	Using convolutional neural networks to predict composite properties beyond the elastic limit. 2019 , 9, 609-617	22
1206	Ultrastrong Graphene Films via Long-Chain Ebridging. 2019 , 1, 389-401	57
1205	Analysis of mechanical behavior of 3D printed heterogeneous particle-polymer composites. 2019 , 173, 106840	21
1204	Nanomedicine in Gastric Cancer. 2019 , 213-247	
1203	Shear assisted two phase solvent extraction for high dispersion, filler wetting and fracture resistance in quasi-isotropic epoxy nano-composites. 2019 , 172, 143-151	1
1202	In-Situ Observation of Fracture Behavior of Ti-Aluminide Multi-Layered Composites Produced by a Hybrid Sintering Process. 2019 , 12,	2
1201	Strength and stability in architectured spine-like segmented structures. 2019 , 171, 146-157	7
1200	Structural determinants of mechanical resistance against breakage of a virus-based protein nanoparticle at a resolution of single amino acids. 2019 , 11, 9369-9383	7
1199	An Overview of Bioinspired and Biomimetic Self-Repairing Materials. 2019, 4,	49
1198	Multidimension-Controllable Synthesis of Ant Nest-Structural Electrode Materials with Unique 3D Hierarchical Porous Features toward Electrochemical Applications. 2019 , 29, 1808994	28
1197	Superstrong Noncovalent Interface between Melamine and Graphene Oxide. 2019 , 11, 17068-17078	12

1196	Horse hoof inspired biomimetic structure for improved damage tolerance and crack diversion. 2019 , 220, 362-370	6
1195	Developing high-performance laminated Cu/TiC composites through melt infiltration of Ni-doped freeze-cast preforms. 2019 , 45, 11686-11693	12
1194	Oxidative Kerogen Degradation: A Potential Approach to Hydraulic Fracturing in Unconventionals. 2019 , 33, 4758-4766	15
1193	Gastric Cancer In The Precision Medicine Era. 2019 ,	
1192	Fictional mechanism of materials with soft & hard phases. 2019 , 504, 012058	
1191	3D printing of biomimetic composites with improved fracture toughness. 2019 , 173, 61-73	49
1190	How Water Can Affect Keratin: Hydration-Driven Recovery of Bighorn Sheep (Ovis Canadensis) Horns. 2019 , 29, 1901077	13
1189	Advanced Therapies: Clinical, Non-clinical and Quality Considerations. 2019 , 357-402	1
1188	Extrudable hydroxyapatite/plant oil-based biopolymer nanocomposites for biomedical applications: Mechanical testing and modeling. 2019 , 174, 107790	13
1187	Electrocoiling-guided printing of multiscale architectures at single-wavelength resolution. 2019 , 19, 1953-190	60 ₅
1186	Anisotropic tough multilayer hydrogels with programmable orientation. 2019 , 6, 1504-1511	58
1186	Anisotropic tough multilayer hydrogels with programmable orientation. 2019 , 6, 1504-1511 Synthetic biology for fibres, adhesives and active camouflage materials in protection and aerospace. 2019 , 9, 486-504	58
1185	Synthetic biology for fibres, adhesives and active camouflage materials in protection and	
1185	Synthetic biology for fibres, adhesives and active camouflage materials in protection and aerospace. 2019 , 9, 486-504	13
1185 1184	Synthetic biology for fibres, adhesives and active camouflage materials in protection and aerospace. 2019 , 9, 486-504 Interfibril hydrogen bonding improves the strain-rate response of natural armour. 2019 , 16, 20180775	13
1185 1184 1183	Synthetic biology for fibres, adhesives and active camouflage materials in protection and aerospace. 2019, 9, 486-504 Interfibril hydrogen bonding improves the strain-rate response of natural armour. 2019, 16, 20180775 Ultra-Tough Inverse Artificial Nacre Based on Epoxy-Graphene by Freeze-Casting. 2019, 58, 7636-7640	13 5 53
1185 1184 1183 1182	Synthetic biology for fibres, adhesives and active camouflage materials in protection and aerospace. 2019, 9, 486-504 Interfibril hydrogen bonding improves the strain-rate response of natural armour. 2019, 16, 20180775 Ultra-Tough Inverse Artificial Nacre Based on Epoxy-Graphene by Freeze-Casting. 2019, 58, 7636-7640 Lightweight, flaw-tolerant, and ultrastrong nanoarchitected carbon. 2019, 116, 6665-6672 Nacre-Mimetic Polypropylene Featuring Heterogeneous Distribution of Polymorphic Compositions	13 5 53 80

1178	Bending of biomimetic scale covered beams under discrete non-periodic engagement. 2019 , 166, 22-31	9
1177	Direct Ink Writing of Cement Structures Modified with Nanoscale Additive. 2019 , 21, 1801380	10
1176	Bone-inspired enhanced fracture toughness of de novo fiber reinforced composites. 2019 , 9, 3142	20
1175	Research on the Physico-Mechanical Properties of Moso Bamboo with Thermal Treatment in Tung Oil and Its Influencing Factors. 2019 , 12,	21
1174	Advanced Coating Nanomaterials for Drug Release Applications. 2019 , 413-471	1
1173	Ultra-Tough Inverse Artificial Nacre Based on Epoxy-Graphene by Freeze-Casting. 2019 , 131, 7718-7722	5
1172	Designing tough isotropic structural composite using computation, 3D printing and testing. 2019 , 167, 736-745	16
1171	Nanoindentation-based study of the mechanical behavior of bulk supercrystalline ceramic-organic nanocomposites. 2019 , 39, 3247-3256	32
1170	Developments in 4D-printing: a review on current smart materials, technologies, and applications. 2019 , 10, 205-224	137
1169	Parametric Modeling of Biomimetic Cortical Bone Microstructure for Additive Manufacturing. 2019 , 12,	14
1168	Hierarchical supercrystalline nanocomposites through the self-assembly of organically-modified ceramic nanoparticles. 2019 , 9, 3435	17
1167	Super-reinforced photothermal stability of cellulose nanofibrils films by armour-type ordered doping Mg-Al layered double hydroxides. 2019 , 212, 229-234	7
1166	Effect of processing conditions on the mechanical properties of bio-inspired mechanical gradient nanocomposites. 2019 , 115, 107-114	10
1165	Characterization of dynamic and quasistatic compressive mechanical properties of ice-templated alumina poxy composites. 2019 , 34, 959-971	5
1164	Ternary Supramolecular Ensembles of Cellulose Nanocrystals Exhibiting Multiscale Deformation and Mechano/Chemoresponsive Selective Reflection of Circularly Polarized Light. 2019 , 7, 6851-6858	14
1163	Predicting surface deformation during mechanical attrition of metallic alloys. 2019 , 5,	16
1162	Nacre-like composite films with a conductive interconnected network consisting of graphene oxide, polyvinyl alcohol and single-walled carbon nanotubes. 2019 , 175, 107783	10
1161	Electrically assisted 3D printing of nacre-inspired structures with self-sensing capability. 2019 , 5, eaau9490	122

1160	Deep Learning to Speed up the Development of Structure-Property Relations For Hexagonal Boron Nitride and Graphene. 2019 , 15, e1900656	6
1159	Superior fracture resistance of fiber reinforced polyampholyte hydrogels achieved by extraordinarily large energy-dissipative process zones. 2019 , 7, 13431-13440	26
1158	Design of textured multi-layered structures via magnetically assisted slip casting. 2019 , 15, 3886-3896	12
1157	Quasi-brittle fracture criterion of bamboo-based fiber composites in transverse direction based on boundary effect model. 2019 , 220, 347-354	26
1156	Highly Tough, Stretchable, Self-Healing, and Recyclable Hydrogels Reinforced by in Situ-Formed Polyelectrolyte Complex Nanoparticles. 2019 , 52, 3141-3149	77
1155	Nanostructure and Properties of Nacre-Inspired Clay/Cellulose NanocompositesBynchrotron X-ray Scattering Analysis. 2019 , 52, 3131-3140	25
1154	Biomimetic hard and tough nanoceramic Ti-Al-N film with self-assembled six-level hierarchy. 2019 , 11, 7986-7995	13
1153	Super-tough and strong nanocomposite fibers by flow-induced alignment of carbon nanotubes on grooved hydrogel surfaces. 2019 , 62, 1332-1340	8
1152	Developing strong and tough carbon nanotube films by a proper dispersing strategy and enhanced interfacial interactions. 2019 , 149, 117-124	3
1151	Patterning polymer-filled nanoparticle films via leaching-enabled capillary rise infiltration (LeCaRI). 2019 , 4, 933-939	13
1150	Controlled fiberization of dipeptide in merging phases leads to collagen-level strength and opto/electric mechanofunctionalities. 2019 , 208, 1-7	2
1149	Beautiful and Functional: A Review of Biomimetic Design in Additive Manufacturing. 2019 , 27, 408-427	121
1148	Bio-inspired lightweight polypropylene foams with tunable hierarchical tubular porous structure and its application for oil-water separation. 2019 , 370, 1322-1330	42
1147	A study of the extraordinarily strong and tough silk produced by bagworms. 2019 , 10, 1469	35
1146	Our elemental footprint. <i>Nature Materials</i> , 2019 , 18, 408-409	12
1145	Marine-Inspired Polymers in Medical Adhesion. 2019 , 116, 134-143	68
1144	Bacterially Produced, Nacre-Inspired Composite Materials. 2019 , 15, e1805312	15
1143	Colloidal Materials for 3D Printing. 2019 , 10, 17-42	23

1142	Biomimetic preparation of core-shell structured surface-enhanced Raman scattering substrate with antifouling ability, good stability, and reliable quantitative capability. 2019 , 40, 2172-2179	3
1141	Toughening and Strengthening Mechanisms in Bamboo from Atoms to Fibers. 2019 , 1-29	1
1140	Properties of 3D-Printed Fiber-Reinforced Portland Cement Paste. 2019, 73-113	25
1139	Design and Modeling of High-Strength, High-Transmission Auto Glass with High Sound Transmission Loss. 2019 , 1-18	1
1138	Self-Assembly of Ultralarge Graphene Oxide Nanosheets and Alginate into Layered Nanocomposites for Robust Packaging Materials. 2019 , 2, 1431-1444	7
1137	Bioinspired Mineralization of Type I Collagen Fibrils with Apatite in Presence of Citrate and Europium Ions. 2019 , 9, 13	5
1136	Bioinspired Superwettability Micro/Nanoarchitectures: Fabrications and Applications. 2019 , 29, 1808012	80
1135	Mechanical Metamaterials and Their Engineering Applications. 2019 , 21, 1800864	234
1134	Highly Efficient Mechanoelectrical Energy Conversion Based on the Near-Tip Stress Field of an Antifracture Slit Observed in Scorpions. 2019 , 29, 1807693	15
1133	Ordered Hybrid Micro/Nanostructures and Their Optical Applications. 2019 , 7, 1800980	16
1132	Design and preparation of organic nanomaterials using self-assembled peptoids. 2019 , 110, e23265	10
1131	Fabrication Methods and Characterization Techniques for Porous Ceramic Materials. 2019, 55-65	
1130	Robust hierarchical porous MBG scaffolds with promoted biomineralization ability. 2019 , 178, 22-31	4
1129	Microimaging-informed continuum micromechanics accurately predicts macroscopic stiffness and strength properties of hierarchical plant culm materials. 2019 , 130, 39-57	9
1128	Bio-Inspired Stable Lithium-Metal Anodes by Co-depositing Lithium with a 2D Vermiculite Shuttle. 2019 , 131, 6266-6272	5
1127	Vat photopolymerization of charged monomers: 3D printing with supramolecular interactions. 2019 , 10, 1442-1451	31
1126	Unlocalized crack initiation and propagation in staggered biomaterials. 2019 , 86, 183-192	4
1125	Flaw-Insensitive Hydrogels under Static and Cyclic Loads. 2019 , 40, e1800883	27

1124	Challenges and Opportunities for Solar Evaporation. 2019 , 3, 683-718	420
1123	Bioinspired nacre-like alumina with a bulk-metallic glass-forming alloy as a compliant phase. 2019 , 10, 961	54
1122	Emergence in Biomimetic Materials Systems. 2019 , 97-115	4
1121	Research of the role of microstructure in the wear mechanism of canine and bovine enamel. 2019 , 92, 33-39	10
1120	Nacre-mimetic composite with intrinsic self-healing and shape-programming capability. 2019 , 10, 800	94
1119	Static structure and dynamical behavior of colloidal liquid crystals consisting of hydroxyapatite-based nanorod hybrids. 2019 , 15, 3315-3322	8
1118	A smart bottom-up strategy for fabrication of complex hydrogel constructs with 3D controllable geometric shapes through dynamic interfacial adhesion. 2019 , 7, 1996-2000	4
1117	Porosity and Pore Size Distribution of Native and Delignified Beech Wood Determined by Mercury Intrusion Porosimetry. 2019 , 12,	20
1116	StiffSoft[Binary Synergistic Aerogels with Superflexibility and High Thermal Insulation Performance. 2019 , 29, 1806407	61
1115	Natural and synthetic nanopores directing osteogenic differentiation of human stem cells. 2019 , 17, 319-328	22
1114	Emergence and Modularity in Life Sciences. 2019,	4
1113	Natural polymers for bone repair. 2019 , 199-232	5
1112	Ultra-strong mechanical property and force-driven malleability of water-poor hydrogels. 2019 , 542, 281-288	8
1111	Electropulse-induced laminated structures in a ferritic-pearlitic 35CrMo steel. 2019 , 165, 6-9	10
1110	Mechanobiological assessment of Ti-6Al-4V fabricated via selective laser melting technique: a review. 2019 , 25, 1266-1284	17
1109	Thermomechanical Performance of Bio-Inspired Corrugated-Core Sandwich Structure for a Thermal Protection System Panel. 2019 , 9, 5541	15
1108	The Biological Transformation of Energy Supply and Storage Technologies and Scenarios for Biointelligent Value Creation. 2019 , 39, 1204-1214	6
1107	Bio-/Nanoimmobilization Platform Based on Bioinspired Fibrin-Bone@Polydopamine-Shell Adhesive Composites for Biosensing. 2019 , 11, 47311-47319	5

1106	Bone-inspired microarchitectures achieve enhanced fatigue life. 2019 , 116, 24457-24462	24
1105	A review of calcium phosphate cements and acrylic bone cements as injectable materials for bone repair and implant fixation. 2019 , 17, 2280800019872594	20
1104	A self-assembled, nacre-mimetic, nano-laminar structure as a superior charge dissipation coating on insulators for HVDC gas-insulated systems. 2019 , 11, 18046-18051	34
1103	DNA-based long-lived reaction-diffusion patterning in a host hydrogel. 2019 , 15, 9343-9351	10
1102	Bioinspired surfaces with wettability for antifouling application. 2019 , 11, 22636-22663	66
1101	Smart supramolecular gels of enolizable amphiphilic glycosylfuran. 2019 , 7, 6238-6246	6
1100	Melt-Processable Nacre-Mimetic Hydrocarbon Composites via Polymer 1D Nanostructure Formation. 2019 , 52, 9272-9279	0
1099	Hierarchical Porous Wood Cellulose Scaffold with Atomically Dispersed Pt Catalysts for Low-Temperature Ethylene Decomposition. 2019 , 13, 14337-14347	12
1098	Preparation of highly-dense TiB2 ceramic with excellent mechanical properties by spark plasma sintering using hexagonal TiB2 plates. 2019 , 6, 125055	8
1097	Biological Material Interfaces as Inspiration for Mechanical and Optical Material Designs. 2019 , 119, 12279-12	3 3 6
1096	Twist-to-bend ratio: an important selective factor for many rod-shaped biological structures. 2019 , 9, 17182	7
1095	Research Progress of the Liquid-Phase Exfoliation and Stable Dispersion Mechanism and Method of Graphene. 2019 , 6,	15
1094	The Anatomy, Histology and Physiology of the Healthy and Lame Equine Hoof. 2019,	2
1093	A topflown approach for the preparation of bulk layered metal/organic hybrid material. 2019 , 9, 821-826	O
1092	Heterostructure NaGdF:Yb,Er anchored on MIL-101 for promoting photoelectronic response and photocatalytic activity. 2019 , 11, 22730-22733	13
1091	Cryogenic toughness of natural silk and a proposed structurefunction relationship. 2019 , 3, 2507-2513	11
1090	Hydrogen-bonding-induced assembly of aligned cellulose nanofibers into ultrastrong and tough bulk materials. 2019 , 7, 27023-27031	41
1089	Critical and diverse roles of phosphates in human bone formation. 2019 , 7, 7460-7470	14

1088	Biofabrication in Tissue Regeneration. 2019 , 2019, 3845780	2
1087	High-temperature damage-tolerance of coextruded, bioinspired (⊞acre-like∏ alumina/nickel compliant-phase ceramics. 2019 , 158, 110-115	10
1086	Recent advances of bioinspired functional materials with specific wettability: from nature and beyond nature. 2019 , 4, 52-76	132
1085	Bending and branching of calcite laths in the foliated microstructure of pectinoidean bivalves occurs at coherent crystal lattice orientation. 2019 , 205, 7-17	1
1084	Biomimetic architected materials with improved dynamic performance. 2019 , 125, 178-197	62
1083	Spider-Web-Inspired Stretchable Graphene Woven Fabric for Highly Sensitive, Transparent, Wearable Strain Sensors. 2019 , 11, 2282-2294	65
1082	Experimental characterization and numerical modelling of fracture processes in granite. 2019 , 163, 102-116	25
1081	The construction and performance of multi-level hierarchical hydroxyapatite (HA)/collagen composite implant based on biomimetic bone Haversian motif. 2019 , 162, 60-69	23
1080	Leather enabled multifunctional thermal camouflage armor. 2019 , 196, 64-71	13
1079	Crack propagation design in transparent polymeric conductive films via carbon nanotube fiber-reinforcement and its application for highly sensitive and mechanically durable strain sensors. 2019 , 28, 025008	9
1078	Highly mineralized chitosan-based material with large size, gradient mineral distribution and hierarchical structure. 2019 , 208, 336-344	5
1077	Beaded fiber compositesBtiffness and strength modeling. 2019 , 125, 384-400	9
1076	Interfacial strength-controlled energy dissipation mechanism and optimization in impact-resistant nacreous structure. 2019 , 163, 107532	30
1075	Organ-on-a-Chip for Cancer and Immune Organs Modeling. 2019 , 8, e1801363	71
1074	Preparation of High-Performance Polyethylene Composite Materials Reinforced with Cellulose Nanofiber: Simultaneous Nanofibrillation of Wood Pulp Fibers during Melt-Compounding Using Urea and Diblock Copolymer Dispersant. 2019 , 1, 178-187	8
1073	Bioinspired Ultrasensitive and Stretchable MXene-Based Strain Sensor via Nacre-Mimetic Microscale "Brick-and-Mortar" Architecture. 2019 , 13, 649-659	202
1072	Designed for resistance to puncture: The dynamic response of fish scales. 2019 , 90, 451-459	17
1071	Dental enamel-mimetic large-sized multi-scale ordered architecture built by a well controlled bottom-up strategy. 2019 , 360, 1633-1645	12

1070	Solvent-Controlled Spatial Distribution of SI-AGET-ATRP Grafted Polymers in Lignocellulosic Materials. 2019 , 20, 336-346	8
1069	Direct Evidence for the Polymeric Nature of Polydopamine. 2019 , 58, 1077-1082	88
1068	Multimaterial Microfluidic 3D Printing of Textured Composites with Liquid Inclusions. 2019 , 6, 1800730	41
1067	Direct Evidence for the Polymeric Nature of Polydopamine. 2019 , 131, 1089-1094	29
1066	Effect of freeze speed on the microstructure and damage-tolerance behavior of bio-inspired ZL205A/silicon carbide composites. 2019 , 147, 207-214	4
1065	Engineered nanostructured virus/ZnO hybrid materials with dedicated functional properties. 2019 , 8, 2-15	4
1064	Freeze-casting porous chitosan ureteral stents for improved drainage. 2019 , 84, 231-241	32
1063	Microstructure and Mechanical Properties of Bio-Inspired Ti/Al/Al-Cf Multilayered Composites. 2019 , 21, 1800722	2
1062	An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks. 2019 , 31, e1805985	84
1061	Anisotropy of fracture toughness in nanostructured ceramics controlled by grain boundary design. 2019 , 161, 80-85	19
1060	The potential of three-dimensional printing technologies to unlock the development of new 'bio-inspired' dental materials: an overview and research roadmap. 2019 , 63, 131-139	11
1059	Lessons from the Ocean: Whale Baleen Fracture Resistance. 2019 , 31, e1804574	22
1058	Sequentially Controlled Deformations of Patterned Hydrogels into 3D Configurations with Multilevel Structures. 2019 , 40, e1800681	8
1057	Effect of viscoelasticity on interfacial stress transfer mechanism in the biocomposites: A theoretical study of viscoelastic shear lag model. 2019 , 164, 297-308	9
1056	Structurally Controlled Cellular Architectures for High-Performance Ultra-Lightweight Materials. 2019 , 31, e1803670	38
1055	Bioinspired strong nanocellular composite prepared with magnesium phosphate cement and polyurea aerogel. 2019 , 237, 274-277	3
1054	Preparation and impact resistance performance of bionic sandwich structure inspired from beetle forewing. 2019 , 161, 490-501	20
1053	Sustainable Chitin Nanofibrils Provide Outstanding Flame-Retardant Nanopapers. 2019 , 20, 1098-1108	24

 $_{1052}$ 3D printing of structural gradient soft actuators by variation of bioinspired architectures. **2019**, 54, 6542-6551 $_{16}$

1051	Tuning mechanical reinforcement and bioactivity of 3D printed ternary nanocomposites by interfacial peptide-polymer conjugates. 2019 , 11, 035028	14
1050	Fourier Transform Infrared Spectroscopy of Bone Tissue: Bone Quality Assessment in Preclinical and Clinical Applications of Osteoporosis and Fragility Fracture. 2019 , 17, 24-39	18
1049	Adaptive structural reorientation: Developing extraordinary mechanical properties by constrained flexibility in natural materials. 2019 , 86, 96-108	14
1048	Long distance chemical gradient induced by surface nanocrystallization. 2019 , 14, 137-142	8
1047	Graphene oxide film as a protective barrier for Mg alloy: Worse or better is dependent on a chemical reduction process. 2019 , 145, 389-400	17
1046	Multiscale designs of the chitinous nanocomposite of beetle horn towards an enhanced biomechanical functionality. 2019 , 91, 278-286	4
1045	Bioinspired Struvite Mineralization for Fire-Resistant Wood. 2019 , 11, 5427-5434	38
1044	Topology optimization-guided lattice composites and their mechanical characterizations. 2019 , 160, 402-411	29
1043	Three-dimensional micromechanical assessment of bio-inspired composites with non-uniformly dispersed inclusions. 2019 , 212, 484-499	7
1042	Geometric tailoring of strength and toughness in self-locking interleaved laminates. 2019 , 27, 94-101	1
1041	Stability controlled crack initiation in nacre-like composite materials. 2019 , 125, 591-612	9
1040	Damage-tolerant architected materials inspired by crystal microstructure. 2019 , 565, 305-311	205
1039	The fracture mechanics of biological and bioinspired materials. 2019 , 44, 46-52	18
1038	Fracture mechanics of nacre-like materials using discrete-element models: Effects of microstructure, interfaces and randomness. 2019 , 124, 350-365	31
1037	Strong shear-flow modulation of instabilities in rapid directional solidification. 2019 , 164, 464-472	3
1036	Synergistic effect of Cu on laminated graphene nanosheets/AlCu composites with enhanced mechanical properties. 2019 , 742, 201-210	18
1035	In situ self-assembly of graphene oxide/polydopamine/Sr2+ nanosheets on titanium surfaces for enhanced osteogenic differentiation of mesenchymal stem cells. 2019 , 142, 567-579	20

1034	Towards heterogeneous AlxCoCrFeNi high entropy alloy via friction stir processing. 2019 , 236, 472-475	34
1033	Synergistic delamination toughening of composites using multi-scale carbon reinforcements. 2019 , 161, 18-28	18
1032	The interplay between multiple toughening mechanisms in nanocomposites with spatially distributed and oriented carbon nanotubes as revealed by dual-scale simulations. 2019 , 142, 141-149	20
1031	External fields for the fabrication of highly mineralized hierarchical architectures. 2019 , 34, 169-193	12
1030	Elasticity with Hierarchical Disarrangements: A Field Theory That Admits Slips and Separations at Multiple Submacroscopic Levels. 2019 , 135, 149-182	3
1029	3D-printed biomimetic surface structures with abnormal friction properties. 2019 , 26, 46-52	6
1028	Hydrogels with superior mechanical properties from the synergistic effect in hydrophobic Bydrophilic copolymers. 2019 , 362, 325-338	39
1027	Large Toughening Effect in Biomimetic Geopolymer Composites via Interface Engineered 3D Skeleton. 2019 , 7, 105-110	9
1026	Bioinspired design of hybrid composite materials. 2019 , 10, 90-105	12
1025	Crushing resistance and energy absorption of pomelo peel inspired hierarchical honeycomb. 2019 , 125, 163-172	69
1024	Biomimetic 3D Printing of Hierarchical and Interconnected Porous Hydroxyapatite Structures with High Mechanical Strength for Bone Cell Culture. 2019 , 21, 1800678	32
1023	Disordered Structures in Biology Can Provide Material Properties not Obtained with Precise Hierarchy. 2019 , 29, 1805734	2
1022	Fungi-Enabled Synthesis of Ultrahigh-Surface-Area Porous Carbon. 2019 , 31, e1805134	46
1021	Molecular insights into multilayer 18-crown-6-like graphene nanopores for K+/Na+ separation: A molecular dynamics study. 2019 , 144, 32-42	18
1020	Air bubbles in calcium caseinate fibrous material enhances anisotropy. 2019 , 87, 497-505	20
1019	Light-Triggered Transformation of Molecular Baskets into Organic Nanoparticles. 2019 , 25, 273-279	7
1018	Bi-directional freeze casting of porous alumina ceramics: A study of the effects of different processing parameters on microstructure. 2019 , 39, 514-521	11
1017	A study on the tubular composite with tunable compression mechanical behavior inspired by wood cell. 2019 , 89, 132-142	5

1016	Biomimetic Graphite Foils with High Foldability and Conductivity. 2019 , 3, 1800282	1
1015	Construction of continuous proton-conduction channels through polyvinylimidazole nanotubes to enhance proton conductivity of polymer electrolyte membrane. 2019 , 136, 47106	6
1014	Nanoengineered biomaterials for bone/dental regeneration. 2019 , 13-38	3
1013	Hepatocyte culture on 3D porous scaffolds of PCL/PMCL. 2019 , 173, 185-193	16
1012	Anisotropic freeze-cast collagen scaffolds for tissue regeneration: How processing conditions affect structure and properties in the dry and fully hydrated states. 2019 , 90, 350-364	21
1011	Modeling of a biological material nacre: Waviness toughness model. 2019 , 26, 789-795	5
1010	Multiscale modelling and homogenisation of fibre-reinforced hydrogels for tissue engineering. 2020 , 31, 143-171	12
1009	Historical Development of Hybrid Materials. 2020 , 445-455	1
1008	Wasser: Wie beeinflusst es die CaCO3-Bildung?. 2020 , 132, 1814-1833	2
1007	Water: How Does It Influence the CaCO Formation?. 2020 , 59, 1798-1816	48
1007	Water: How Does It Influence the CaCO Formation?. 2020 , 59, 1798-1816 Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020 , 30, 1902971	48 9
	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for	
1006	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020 , 30, 1902971 Fracture Micromechanism of the Hierarchically Organized Biocomposite (Dentin of the Human	
1006	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020 , 30, 1902971 Fracture Micromechanism of the Hierarchically Organized Biocomposite (Dentin of the Human Teeth). 2020 , 55-60	9
1006	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020, 30, 1902971 Fracture Micromechanism of the Hierarchically Organized Biocomposite (Dentin of the Human Teeth). 2020, 55-60 Controlled Microstructural Architectures Based on Smart Fabrication Strategies. 2020, 30, 1901760 Manufacturing, Applications and Mechanical Properties of Lightweight Wood-Based Sandwich	9
1006	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020, 30, 1902971 Fracture Micromechanism of the Hierarchically Organized Biocomposite (Dentin of the Human Teeth). 2020, 55-60 Controlled Microstructural Architectures Based on Smart Fabrication Strategies. 2020, 30, 1901760 Manufacturing, Applications and Mechanical Properties of Lightweight Wood-Based Sandwich Panels. 2020, 411-416 Electrospun polyurethane fibrous membranes of mimicked extracellular matrix for periodontal	9 22 2
1006 1005 1004 1003 1002	Gradually Crosslinking Carbon Nanotube Array in Mimicking the Beak of Giant Squid for Compression-Sensing Supercapacitor. 2020, 30, 1902971 Fracture Micromechanism of the Hierarchically Organized Biocomposite (Dentin of the Human Teeth). 2020, 55-60 Controlled Microstructural Architectures Based on Smart Fabrication Strategies. 2020, 30, 1901760 Manufacturing, Applications and Mechanical Properties of Lightweight Wood-Based Sandwich Panels. 2020, 411-416 Electrospun polyurethane fibrous membranes of mimicked extracellular matrix for periodontal ligament: Molecular behavior, mechanical properties, morphology, and osseointegration. 2020, 34, 753-762 Nanotechnology-based biomaterials for orthopaedic applications: Recent advances and future	9 22 2 8

998	From a body temperature-triggered reversible shape-memory material to high-sensitive bionic soft actuators. 2020 , 18, 100463	16
997	Introduction to 3D and 4D printing technology: State of the art and recent trends. 2020 , 1-24	13
996	Nature-inspired surface topography: design and function. 2020 , 63, 1	11
995	3D and 4D printing of pH-responsive and functional polymers and their composites. 2020 , 85-117	11
994	Strength and toughness enhancement in 3d printing via bioinspired tool path. 2020 , 185, 108239	19
993	Refractory interphase and its role on the mechanical properties of boron containing nacre-like ceramic. 2020 , 40, 165-172	7
992	Bioinspired hierarchical helical nanocomposite macrofibers based on bacterial cellulose nanofibers. 2020 , 7, 73-83	31
991	Quantitative evaluation of the in vivo biocompatibility and performance of freeze-cast tissue scaffolds. 2020 , 15, 055003	2
990	Bioinspired 2D Nanomaterials for Sustainable Applications. 2020 , 32, e1902806	49
989	Design of damage tolerant and crack-free layered ceramics with textured microstructure. 2020 , 40, 427-435	11
988	Multimaterial Dual Gradient Three-Dimensional Printing for Osteogenic Differentiation and Spatial Segregation. 2020 , 26, 239-252	14
988		14 74
	Segregation. 2020 , 26, 239-252	
987	Segregation. 2020, 26, 239-252 Injectable Cryogels for Biomedical Applications. 2020, 38, 418-431 Non-Equilibrium, Light-Adaptive, Steady-State Reconfiguration of Mechanical Patterns in	74
987	Segregation. 2020, 26, 239-252 Injectable Cryogels for Biomedical Applications. 2020, 38, 418-431 Non-Equilibrium, Light-Adaptive, Steady-State Reconfiguration of Mechanical Patterns in Bioinspired Nanocomposites. 2020, 30, 1905309 Crashworthiness design of self-similar graded honeycomb-filled composite circular structures. 2020	74
987 986 985	Injectable Cryogels for Biomedical Applications. 2020, 38, 418-431 Non-Equilibrium, Light-Adaptive, Steady-State Reconfiguration of Mechanical Patterns in Bioinspired Nanocomposites. 2020, 30, 1905309 Crashworthiness design of self-similar graded honeycomb-filled composite circular structures. 2020, 233, 117344 Enhancement of the strength-ductility relationship for carbon nanotube/AltuMg	74 9 19
987 986 985 984	Injectable Cryogels for Biomedical Applications. 2020, 38, 418-431 Non-Equilibrium, Light-Adaptive, Steady-State Reconfiguration of Mechanical Patterns in Bioinspired Nanocomposites. 2020, 30, 1905309 Crashworthiness design of self-similar graded honeycomb-filled composite circular structures. 2020, 233, 117344 Enhancement of the strength-ductility relationship for carbon nanotube/AlltuMg nanocomposites by material parameter optimisation. 2020, 157, 602-613 Forty years after the promise of ©ceramic steel? ©: Zirconia-based composites with a metal-like	74 9 19 30

980	A Materials Perspective on the Design of Damage-Resilient Bone Implants Through Additive/Advanced Manufacturing. 2020 , 72, 1195-1210	5
979	Independent control of dynamic material properties by exploiting structural hierarchy and intrinsic structural gradients. 2020 , 23, 100865	1
978	Predicting the orientation of magnetic microgel rods for soft anisotropic biomimetic hydrogels. 2020 , 11, 496-507	21
977	Bone Cement. 2020 ,	1
976	DNA Framework-Encoded Mineralization of Calcium Phosphate. 2020 , 6, 472-485	31
975	Bioinspired hierarchical cross-linked graphene-silicon nanofilms via synergistic interfacial interactions as integrated negative electrodes for high-performance lithium storage. 2020 , 22, 2105-2114	2
974	Shape memory hierarchical AB copolymer networks. 2020 , 11, 909-921	3
973	Bioinspired by cell membranes: functional polymeric materials for biomedical applications. 2020 , 4, 750-774	25
972	Kinetic Evolution in Metal-Dependent Self-Assembly of Peptide-Terpyridine Conjugates. 2020 , 41, e1900565	О
971	Fabrication of nacre-like polymer/clay nanocomposites with water-resistant and self-adhesion properties. 2020 , 564, 113-123	5
970	A programmable, fast-fixing, osteo-regenerative, biomechanically robust bone screw. 2020 , 103, 293-305	10
969	Thermoplastic moulding of regenerated silk. <i>Nature Materials</i> , 2020 , 19, 102-108	68
968	Structural Orientation and Anisotropy in Biological Materials: Functional Designs and Mechanics. 2020 , 30, 1908121	25
967	Inconel-steel multilayers by liquid dispersed metal powder bed fusion: Microstructure, residual stress and property gradients. 2020 , 32, 101027	6
966	Effect of polymerflanoparticle interactions on solvent-driven infiltration of polymer (SIP) into nanoparticle packings: a molecular dynamics study. 2020 , 5, 666-674	6
965	Enhancing Toughness of Medium-Density Fiberboard by Mimicking Nacreous Structures through Advanced Manufacturing Techniques. 2020 , 146, 04020001	2
964	Effects of temperature and platelets on lamella wall microstructure, structural stability, and compressive strength in ice-templated ceramics. 2020 , 9, 100537	4
963	Mechanical performances of four lattice materials guided by topology optimisation. 2020 , 178, 339-345	8

962	Palm readings: Manicaria saccifera palm fibers are biocompatible textiles with low immunogenicity. 2020 , 108, 110484	7
961	Nano-enabled poly(vinyl alcohol) based injectable bio-nanocomposite hydrogel scaffolds. 2020 , 137, 48789	8
960	Mechanics and fracture of structured pillar interfaces. 2020 , 137, 103825	7
959	Tough Ordered Mesoporous Elastomeric Biomaterials Formed at Ambient Conditions. 2020 , 14, 241-254	5
958	Lithium metal electrode protected by stiff and tough self-compacting separator. 2020 , 69, 104399	14
957	Interfacial Nanoparticle Complexation of Oppositely Charged Nanocelluloses into Functional Filaments with Conductive, Drug Release, or Antimicrobial Property. 2020 , 12, 1765-1774	7
956	Design of biodegradable, implantable devices towards clinical translation. 2020 , 5, 61-81	188
955	Quantification of sheet nacre morphogenesis using X-ray nanotomography and deep learning. 2020 , 209, 107432	9
954	Peeling and Mesoscale Dissociation of Silk Fibers for Hybridization of Electrothermic Fibrous Composites. 2020 , 8, 248-255	5
953	Associative Learning by Classical Conditioning in Liquid Crystal Network Actuators. 2020 , 2, 194-206	30
952	Configurations evolution of a buckled ribbon in response to out-of-plane loading. 2020, 34, 100604	11
951	Algorithmic-driven design of shark denticle bioinspired structures for superior aerodynamic properties. 2020 , 15, 026001	8
950	Mechanical aspects of dental implants and osseointegration: A narrative review. 2020, 103, 103574	52
949	Polymer Grafting Inside Wood Cellulose Fibers by Improved Hydroxyl Accessibility from Fiber Swelling. 2020 , 21, 597-603	17
948	3D Printing of Textiles: Potential Roadmap to Printing with Fibers. 2020 , 32, e1902086	47
947	Biomimetic Mineralized Organic I horganic Hybrid Macrofiber with Spider Silk-Like Supertoughness. 2020 , 30, 1908556	40
946	Mechanical Properties and Cytotoxicity of Differently Structured Nanocellulose-hydroxyapatite Based Composites for Bone Regeneration Application. 2019 , 10,	22
945	When does nanotube grafting on fibers benefit the strength and toughness of composites?. 2020 , 188, 107989	10

944	Structural and mechanical evolution of Tridacna gigas during permineralization. 2020 , 103, 103609	1
943	Observations of 3 nm Silk Nanofibrils Exfoliated from Natural Silkworm Silk Fibers. 2020 , 2, 153-160	14
942	Bioinspired design of triboceramics: Learning from the anisotropic micro-fracture response of dental enamel under sliding contact. 2020 , 46, 27983-27989	6
941	Mussel-Inspired Design of a Carbon Fiber-Cellulosic Polymer Interface toward Engineered Biobased Carbon Fiber-Reinforced Composites. 2020 , 5, 27072-27082	7
940	Revealing Nonclassical Nucleation Pathways Using Cryogenic Electron Microscopy. 2020 , 147-200	3
939	Optimal design and manufacture of variable stiffness laminated continuous fiber reinforced composites. 2020 , 10, 16507	16
938	New insights into food hydrogels with reinforced mechanical properties: A review on innovative strategies. 2020 , 285, 102278	23
937	Cost-effective fabrication of bio-inspired nacre-like composite materials with high strength and toughness. 2020 , 202, 108414	11
936	Bioinspired approaches to toughen calcium phosphate-based ceramics for bone repair. 2020 , 112, 104078	15
935	Deep learning for topology optimization of 2D metamaterials. 2020 , 196, 109098	73
935	Deep learning for topology optimization of 2D metamaterials. 2020, 196, 109098 Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020, 14, 100884	73
	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through	
934	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020 , 14, 100884	2
934	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020 , 14, 100884 Self-Assembled Bioinspired Nanocomposites. 2020 , 53, 2622-2635	2 27
934 933 932	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020, 14, 100884 Self-Assembled Bioinspired Nanocomposites. 2020, 53, 2622-2635 Fibers reinforced composite hydrogels with improved lubrication and load-bearing capacity. 2020, 1 Nacre-Mimetic Green Flame Retardant: Ultra-High Nanofiller Content, Thin Nanocomposite as an	2 27 4
934 933 932 931	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020, 14, 100884 Self-Assembled Bioinspired Nanocomposites. 2020, 53, 2622-2635 Fibers reinforced composite hydrogels with improved lubrication and load-bearing capacity. 2020, 1 Nacre-Mimetic Green Flame Retardant: Ultra-High Nanofiller Content, Thin Nanocomposite as an Effective Flame Retardant. 2020, 12, Large-Scale Assembly of Peptide-Based Hierarchical Nanostructures and Their Antiferroelectric	2 27 4
934 933 932 931 930	Exploiting bio-inspired high energy-absorbent metal/ceramic composites through emulsion-ice-templating and melt infiltration. 2020, 14, 100884 Self-Assembled Bioinspired Nanocomposites. 2020, 53, 2622-2635 Fibers reinforced composite hydrogels with improved lubrication and load-bearing capacity. 2020, 1 Nacre-Mimetic Green Flame Retardant: Ultra-High Nanofiller Content, Thin Nanocomposite as an Effective Flame Retardant. 2020, 12, Large-Scale Assembly of Peptide-Based Hierarchical Nanostructures and Their Antiferroelectric Properties. 2020, 16, e2003986 Novel bio-inspired three-dimensional nanocomposites based on montmorillonite and chitosan.	2 27 4 6

926	2D and 3D graphical datasets for bamboo-inspired tubular scaffolds with functional gradients: micrographs and tomograms. 2020 , 31, 105870	1
925	Bioinspired Design for Energy Storage Devices. 2020 , 193-211	
924	Multi-functional flexible 2D carbon nanostructured networks. 2020 , 11, 5134	29
923	Crack propagation and toughening mechanisms of bio-inspired artificial spicules fabricated by additive manufacturing technique. 2020 , 110, 102797	2
922	Microstructure Analysis and Chemical and Mechanical Characterization of the Shells of Three Freshwater Snails. 2020 , 5, 25757-25771	6
921	Bioinspired Underwater Propulsors. 2020 , 113-139	1
920	Bioinspired Design of Graphene-Based Materials. 2020 , 30, 2007458	8
919	Synergistic toughening of bio-inspired molybdenum disulfide-chitosan lignocellulosic nacre with photocatalytic properties. 2020 , 20, 100785	3
918	Spatial-varying multi-phase infill design using density-based topology optimization. 2020 , 372, 113354	21
917	Nanobeam X-ray fluorescence and diffraction computed tomography on human bone with a resolution better than 120hm. 2020 , 212, 107631	5
916	Aquatic Animals Operating at High Reynolds Numbers. 2020 , 235-270	1
915	Bio-inspired mineral fluorescent hydrogels cross-linked by amorphous rare earth carbonates. 2020 , 56, 13646-13648	3
914	Bioinspired wood-like coaxial fibers based on MXene@graphene oxide with superior mechanical and electrical properties. 2020 , 12, 21325-21333	10
913	Ultrastrong Hierarchical Porous Materials via Colloidal Assembly and Oxidation of Metal Particles. 2020 , 30, 2003550	8
912	Chameleon-Inspired Stress-Responsive Multicolored Ultratough Films. 2020 , 12, 36731-36739	4
911	Nanoscale Organization and Functional Analysis of Carnivorous Plant Mucilage by Atomic Force Microscopy. 2020 , 19, 579-593	2
910	Extremely Tough Hydrogels with Cotton Fibers Reinforced. 2020 , 22, 2000508	6
909	Crack sensitivity of nacre-like laminate composite materials: Monte Carlo simulation based on stability theory. 2020 , 202, 646-659	1

908	Lightweight, compression-resistant cellular structures inspired from the infructescence of Liquidambar formosana. 2020 , 110, 103961	3
907	Guiding Lights: Tissue Bioprinting Using Photoactivated Materials. 2020 , 120, 10950-11027	55
906	Engineering Biomimetic Calcium Phosphate Nanoparticles: A Green Synthesis of Slow-Release Multinutrient (NPK) Nanofertilizers 2020 , 3, 1344-1353	39
905	Influence of non-rubber components on film formation behavior of natural rubber latex. 2020 , 298, 1263-127	16
904	Bioinspired scaffolds with hierarchical structures for tailored mechanical behaviour and cell migration. 2020 , 46, 24102-24109	2
903	Bio-Inspired Platelet-Reinforced Polymers with Enhanced Stiffness and Damping Behavior. 2020 , 2, 3557-356	5 2
902	Bio-inspired protective structures for marine applications. 2020 , 15, 056016	5
901	Deformation treatment and microstructure of graphene-reinforced metal matrix nanocomposites: A review of graphene post-dispersion. 2020 , 27, 888-899	4
900	A cationitrile sequence encodes mild poly(ionic liquid) crosslinking for advanced composite membranes. 2020 , 7, 2683-2689	14
899	Advent of a Wide-Band-Gap Semiconducting Low-Density Material Possessing Significantly High Specific Hardness. 2020 , 29, 4187-4196	
898	Superconducting Cu/Nb nanolaminate by coded accumulative roll bonding and its helium damage characteristics. 2020 , 197, 212-223	16
897	Design the wave attenuation property of nacreous composites. 2020 , 40, 100875	3
896	Fracture mechanics of the endocarp of Cocos nucifera. 2020 , 195, 108944	2
895	Grain-size effect on plastic flow stress of nanolaminated polycrystalline aluminum/graphene composites. 2020 , 148, 103530	7
894	Self-healing by design: universal kinetic model of strength recovery in self-healing ceramics. 2020 , 21, 593-608	7
893	Emerging Nanocellulose Technologies: Recent Developments. 2021 , 33, e2000630	66
892	Preparation and biological properties of collagen/nano-hydroxyapatite composite nanofibers based on ordered nano-hydroxyapatite ceramic fibers. 2020 , 602, 124802	2
891	Strong structural occupation ratio effect on mechanical properties of silicon carbide nanowires. 2020 , 10, 11386	

890	Multi-scale interface design of strong and damage resistant hierarchical nanostructured materials. 2020 , 196, 109169	6
889	Muscle-like Ultratough Hybrid Hydrogel Constructed by Heterogeneous Inorganic Polymerization on an Organic Network. 2020 ,	9
888	3D printing of metal-organic framework incorporated porous scaffolds to promote osteogenic differentiation and bone regeneration. 2020 , 12, 24437-24449	23
887	Correlation between Color and Elasticity in Shells: Biological Design to Enhance the Mechanical Properties 2020 , 3, 9012-9018	
886	A mechanically adaptive hydrogel with a reconfigurable network consisting entirely of inorganic nanosheets and water. 2020 , 11, 6026	9
885	Green Fabrication of High-Performance Chitin Nanowhiskers/PVA Composite Films with a B rick-and-Mortar I structure. 2020 , 8, 17807-17815	5
884	Hard to Soft: Biogenic Absorbent Sponge-like Material from Waste Mussel Shells. 2020 , 3, 2029-2041	3
883	Piezoelectric Heterogeneity in Collagen Type I Fibrils Quantitatively Characterized by Piezoresponse Force Microscopy. 2020 , 6, 6680-6689	2
882	Harmonic Structure Design: A Strategy for Outstanding Mechanical Properties in Structural Materials. 2020 , 10, 1615	6
881	Strategies for simultaneous strengthening and toughening via nanoscopic intracrystalline defects in a biogenic ceramic. 2020 , 11, 5678	8
880	Bacterially Grown Cellulose/Graphene Oxide Composites Infused with Poly (Glutamic Acid) as Biodegradable Structural Materials with Enhanced Toughness. 2020 , 3, 12055-12063	5
879	Hierarchical Toughening of a Biomimetic Bulk Cement Composite. 2020 , 12, 53297-53309	3
878	New insights into the spatial confinement mechanism of nucleation of biogenic aragonite crystals from bivalve nacre. 2020 , 22, 6596-6602	1
877	Biomimicry of iridescent, patterned insect cuticles: comparison of biological and synthetic, cholesteric microcells using hyperspectral imaging. 2020 , 17, 20200239	2
876	Biodegradable materials for bone defect repair. 2020 , 7, 54	27
875	Shape-Preserving Chemical Conversion of Architected Nanocomposites. 2020 , 32, e2003999	9
874	Ultra-Strong, Ultra-Tough, Transparent, and Sustainable Nanocomposite Films for Plastic Substitute. 2020 , 3, 1308-1317	45
873	New advances in fiber-reinforced composite honeycomb materials. 2020 , 63, 1348-1370	17

872	Nature and Chinese Art Inspire Materials for Light Harvesting. 2020, 3, 24-26	1
871	Mimicking Natural Microenvironments: Design of 3D-Aligned Hybrid Scaffold for Dentin Regeneration. 2020 , 8, 836	4
870	Modelling and Experimental Investigation of Hexagonal Nacre-Like Structure Stiffness. 2020 , 4, 91	О
869	Controlling ice formation on gradient wettability surface for high-performance bioinspired materials. 2020 , 6, eabb4712	33
868	Wood and the Activity of Dead Tissue. 2021 , 33, e2001412	8
867	Mechanical and Tribological Performances Enhanced by Self-Assembled Structures. 2020 , 32, e2002004	4
866	Investigation of failure mechanisms of nacre at macro and nano scales. 2020 , 112, 104018	5
865	Availability of Environmental Iron Influences the Performance of Biological Adhesives Produced by Blue Mussels. 2020 , 54, 10254-10260	2
864	The usefulness of Bidden' units of specific stress. 2020 , 90, 2350-2351	
863	Bioinspired Materials for Wound Healing Application: The Potential of Silk Fibroin. 2020, 13,	19
862	Influence of a novel hierarchical cellular structure on the mechanical behavior: The thousands of eyes bobhi material. 2020 , 110, 103984	2
861	A nature-inspired interface design strategy of carbon fiber composites by growing brick-and-mortar structure on carbon fiber. 2020 , 200, 108382	13
860	An elegant coupling: Freeze-casting and versatile polymer composites. 2020 , 109, 101289	26
859	Assembly of Anisotropic Nanocellulose Films Stronger than the Original Tree. 2020,	10
858	Elastic Wave Propagation in Lattice Metamaterials with Koch Fractal. 2020, 33, 600-611	17
8 ₅ 8	Elastic Wave Propagation in Lattice Metamaterials with Koch Fractal. 2020 , 33, 600-611 Advanced bio-inspired structural materials: Local properties determine overall performance. 2020 , 41, 177-199	17
	Advanced bio-inspired structural materials: Local properties determine overall performance. 2020 ,	

854	Bionic Organs. 2020 , 167-192	1
853	Bioinspired Design of Nanostructures. 2020 , 212-232	
852	Flying of Insects. 2020 , 271-299	1
851	Bioinspired Building Envelopes. 2020 , 343-354	
850	Index. 2020 , 355-360	
849	Zwitterionic Polydopamine Engineered Interface for In Vivo Sensing with High Biocompatibility. 2020 , 132, 23651-23655	3
848	Liquid Metal-Polymer Microlattice Metamaterials with High Fracture Toughness and Damage Recoverability. 2020 , 16, e2004190	13
847	Mapping the Mechanical Properties of Hierarchical Supercrystalline Ceramic-Organic Nanocomposites. 2020 , 25,	7
846	Hierarchical Disordered Colloidal Thin Films with Duplex Optical Elements for Advanced Anti-Counterfeiting Coding. 2020 , 8, 2001378	6
845	Laser-based interfacial patterning enables toughening of CFRP/epoxy joints through bridging of adhesive ligaments. 2020 , 139, 106094	10
844	Spiral Honeycomb Microstructured Bacterial Cellulose for Increased Strength and Toughness. 2020 , 12, 50748-50755	4
843	Kinetically Controlled Sequential Seeded Growth: A General Route to Crystals with Different Hierarchies. 2020 , 14, 15953-15961	8
842	Carbon Fiber and Syntactic Foam Hybrid Materials via CoreBhell Material Extrusion Additive Manufacturing. 2020 , 5, 2000731	6
841	Nacre toughening due to cooperative plastic deformation of stacks of co-oriented aragonite platelets. 2020 , 1,	10
840	Human Cortical Bone as a Structural Material. 2020 , 20-44	
839	Uncovering a high-performance bio-mimetic cellular structure from trabecular bone. 2020 , 10, 14247	2
838	Synthesis of Bio-Inspired Guanine Microplatelets: Morphological and Crystallographic Control. 2020 , 26, 16228-16235	6
837	Bamboo-Inspired Materials and Structures. 2020 , 89-110	3

836 Designing Nature-Inspired Liquid-Repellent Surfaces. **2020**, 300-319

835	A multiscale analytical framework for mode I crack in staggered composites. 2020 , 145, 104157	3
834	Thermodynamic Parameters Controlling Nanoparticle Spatial Packing in Polymer Solutions. 2020 , 53, 8704-8713	8
833	Biomimetic and Soft Robotics. 2020 , 320-342	
832	On the vital role of enamel prism interfaces and graded properties in human tooth survival. 2020 , 16, 20200498	2
831	Properties of Sleeve Joints Made from Reduced Bamboo. 2020 , 10, 5985	
830	The Specific Molecular Composition and Structural Arrangement of Gular Skin Tissue Provide Its High Mechanical Compliance. 2020 , 21,	1
829	Pushing and Pulling on Ropes: Hierarchical Woven Materials. 2020 , 7, 2001271	10
828	Bioinspired composites reinforced with ordered steel fibers produced via a magnetically assisted 3D printing process. 2020 , 55, 15510-15522	9
827	Design Principles of High-Performance Graphene Films: Interfaces and Alignment. 2020 , 3, 696-707	22
826	Zwitterionic Polydopamine Engineered Interface for In Vivo Sensing with High Biocompatibility. 2020 , 59, 23445-23449	32
825	Functional inks and extrusion-based 3D printing of 2D materials: a review of current research and applications. 2020 , 12, 19007-19042	38
824	Bioinspired Design of Multilayered Composites. 2020 , 45-88	
823	Bioelectronics-Related 2D Materials Beyond Graphene: Fundamentals, Properties, and Applications. 2020 , 30, 2003732	14
822	Surface and Interface Engineering for Nanocellulosic Advanced Materials. 2021 , 33, e2002264	87
821	Amyloid-Mediated Fabrication of OrganicIhorganic Hybrid Materials and Their Biomedical Applications. 2020 , 7, 2001060	12
820	Progress in Bio-inspired Anti-solid Particle Erosion Materials: Learning from Nature but Going beyond Nature. 2020 , 33,	8
819	Ionic Liquid-Based Stimuli-Responsive Functional Materials. 2020 , 30, 2005522	28

8₁8 A natural impact-resistant bicontinuous composite nanoparticle coating. *Nature Materials*, **2020**, 19, 1236–71243₄1

817	Biomimetic design of iridescent insect cuticles with tailored, self-organized cholesteric patterns. 2020 , 11, 4108	18
816	Magneto-Sensitive Smart Materials and Magnetorheological Mechanism. 2020,	4
815	The journey of multifunctional bone scaffolds fabricated from traditional toward modern techniques. 2020 , 3, 281-306	22
814	Assessing the role of loading direction on the uniaxial compressive response of multilayered ice-templated alumina-epoxy composites. 2020 , 14, 100895	5
813	Full strength and toughness recovery after repeated cracking and healing in bone-like high temperature ceramics. 2020 , 10, 18990	6
812	3D Nanostructures for Tissue Engineering, Cancer Therapy, and Gene Delivery. 2020 , 2020, 1-24	25
811	Applying Bio-Inspired hierarchical design to jamming technology: Improving density-efficient mechanical properties and opening application spaces. 2020 , 9, 15555-15565	2
810	Carbon Nano-Onions Reinforced Multilayered Thin Film System for Stimuli-Responsive Drug Release. 2020 , 12,	18
809	An all-natural bioinspired structural material for plastic replacement. 2020 , 11, 5401	50
808	A creative approach to prepare structure-tunable multilayered PMMA/PS/PMMA foams. 2020, 209, 123061	8
807	A Multidirectionally Thermoconductive Phase Change Material Enables High and Durable Electricity Real-Environment Solar-Thermal-Electric Conversion. 2020 , 14, 15738-15747	61
806	Recent additive manufacturing methods categorized by characteristics of ceramic slurries for producing dual-scale porous ceramics. 2020 , 10, 481-492	1
805	Machine Learning for Advanced Additive Manufacturing. 2020 , 3, 1541-1556	32
804	3D structured materials and devices for artificial photosynthesis. 2020 , 31, 282001	3
803	Strong Macroscale Supercrystalline Structures by 3D Printing Combined with Self-Assembly of Ceramic Functionalized Nanoparticles. 2020 , 22, 2000352	16
802	A self-healable, moldable and bioactive biomaterial gum for personalised and wearable drug delivery. 2020 , 8, 4340-4356	6
801	Bioinspired Hierarchical Liquid-Metacrystal Fibers for Chiral Optics and Advanced Textiles. 2020 , 30, 2002193	24

800	Tightly shut: flexible valve margins and microstructural asymmetry in pterioid bivalves. 2020 , 167, 1	3
799	Anisotropic Double-Network Hydrogels via Controlled Orientation of a Physical Sacrificial Network. 2020 , 2, 2350-2358	11
798	Bioinspired Fabrication of Calcium-Doped TiP Coating with Nanofibrous Microstructure to Accelerate Osseointegration. 2020 , 31, 1641-1650	7
797	Flexible Piezoresistive Sensors with Wide-Range Pressure Measurements Based on a Graded Nest-like Architecture. 2020 , 12, 26137-26144	36
796	Transparent Nacre-like Composites Toughened through Mineral Bridges. 2020 , 30, 2002149	8
795	Metal-Level Robust, Folding Endurance, and Highly Temperature-Stable MXene-Based Film with Engineered Aramid Nanofiber for Extreme-Condition Electromagnetic Interference Shielding Applications. 2020 , 12, 26485-26495	56
794	Age-Related Regeneration of Osteochondral and Tibial Defects by a Fibrin-Based Construct. 2020 , 8, 404	2
793	Shaping Nanoparticles for Interface Catalysis: Concave Hollow Spheres via Deflation-Inflation Asymmetric Growth. 2020 , 7, 2000393	15
792	Insect wing damage: causes, consequences and compensatory mechanisms. 2020 , 223,	16
791	Creation of Highly Ordered "Nano-Mille-Feuille" Hard/Soft Nanoparticle Multilayers with Interparticle Cross-Linking by Diacetylene-Containing Chains. 2020 , 36, 5596-5607	4
790	Facile construction of a double network cross-linked luminescent supramolecular elastomer by hydrosilylation and pillar[5]arene host-guest recognition. 2020 , 56, 6719-6722	9
789	Hydrogels toughened by biominerals providing energy-dissipative sacrificial bonds. 2020 , 8, 5184-5188	16
788	Decoupling the Amplitude and Wavelength of Anisotropic Topography and the Influence on Osteogenic Differentiation of Mesenchymal Stem Cells Using a High-Throughput Screening Approach 2020 , 3, 3690-3697	6
787	In[Vivo Disintegration and Bioresorption of a Nacre-Inspired Graphene-Silk Film Caused by the Foreign-Body Reaction. 2020 , 23, 101155	6
786	Pd Nanoparticle-Decorated 3D-Printed Hierarchically Porous TiO Scaffolds for the Efficient Reduction of a Highly Concentrated 4-Nitrophenol Solution. 2020 , 12, 28100-28109	34
7 ⁸ 5	Biomimetic Multiscale Hierarchical Topography Enhances Osteogenic Differentiation of Human Mesenchymal Stem Cells. 2020 , 7, 2000385	13
784	4D Printing Strain Self-Sensing and Temperature Self-Sensing Integrated Sensor-Actuator with Bioinspired Gradient Gaps. 2020 , 7, 2000584	29
783	Cholla cactus frames as lightweight and torsionally tough biological materials. 2020 , 112, 213-224	5

782	Biology-Inspired Supramolecular Peptide Systems. 2020 , 6, 1222-1236	24
781	Progress in research on hybrid metal matrix composites. 2020 , 838, 155274	43
78o	Soft Defect-Tolerant Material Inspired by American Lobsters. 2020 , 12, 26509-26514	1
779	Tailorable hierarchical structures of biomimetic hydroxyapatite micro/nano particles promoting endocytosis and osteogenic differentiation of stem cells. 2020 , 8, 3286-3300	19
778	Bioinspired selective synthesis of liquid-crystalline nanocomposites: formation of calcium carbonate-based composite nanodisks and nanorods. 2020 , 2, 2326-2332	4
777	Bioinspired fiberboard-and-mortar structural nanocomposite based on ultralong hydroxyapatite nanowires with high mechanical performance. 2020 , 399, 125666	7
776	Three-dimensional structural interrelations between cells, extracellular matrix, and mineral in normally mineralizing avian leg tendon. 2020 , 117, 14102-14109	15
775	Microribbons composed of directionally self-assembled nanoflakes as highly stretchable ionic neural electrodes. 2020 , 117, 14667-14675	29
774	Tensile strength model of bamboo srimber by 3-p-b fracture test on the basis of non-LEFM. 2020 , 198, 108295	9
773	Microstructure and formation mechanism of Cf/SiC and Nb joint brazed with laminated amorphous TiZrtuNi/crystalline Ti composite filler. 2020 , 179, 109480	8
772	Non-classical crystal growth on a hydrophobic substrate: learning from bivalve nacre. 2020 , 22, 3100-3105	3
771	Mechanical properties of glassy polymers with controlled NP spatial organization. 2020 , 90, 106640	10
770	Discontinuous fibrous Bouligand architecture enabling formidable fracture resistance with crack orientation insensitivity. 2020 , 117, 15465-15472	35
769	Mechanical properties and toughening mechanisms of natural silkworm silks and their composites. 2020 , 110, 103942	5
768	Strengthening and toughening mechanisms of Mg matrix composites reinforced with specific spatial arrangement of in-situ TiB2 nanoparticles. 2020 , 198, 108174	34
767	Flow fields control nanostructural organization in semiflexible networks. 2020 , 16, 5439-5449	10
766	Coherent nanofiber array buckling-enabled synthesis of hierarchical layered composites with enhanced strength. 2020 , 39, 100773	О
765	Hierarchical Assembly of Nanocellulose into Filaments by Flow-Assisted Alignment and Interfacial Complexation: Conquering the Conflicts between Strength and Toughness. 2020 , 12, 32090-32098	14

(2017-2020)

764	Mapping the 3D orientation of nanocrystals and nanostructures in human bone: Indications of novel structural features. 2020 , 6, eaba4171	25
763	Bioinspired Compliance Grading Motif of Mortar in Nacreous Materials. 2020 , 12, 33256-33266	6
762	Evolution of 3D Printing Methods and Materials for Electrochemical Energy Storage. 2020 , 32, e2000556	69
761	Sliding Avalanches Between Nacreous Tablets. 2020 , 20, 5024-5029	6
760	A review of biomimetic research for erosion wear resistance. 2020 , 3, 331-347	4
759	Fabrication and characterization of FAST sintered micro/nano boron carbide composites with enhanced fracture toughness. 2020 , 40, 5272-5285	8
758	Nature-derived materials for the fabrication of functional biodevices. 2020 , 7, 100065	39
757	Anisotropic porous ceramic material with hierarchical architecture for thermal insulation. 2021,	1
756	Bottom-up approaches to engineered living materials: Challenges and future directions. 2021 , 4, 3095-3120	1
755	Tailoring plasticity mechanisms in compositionally graded hierarchical steels fabricated using additive manufacturing. 2021 , 11, 20112	O
754	Mechanical properties of unidirectional bio-inspired composites with two non-self-similar hierarchical structures. 2021 , 163, 104082	
753	Flexible inorganic@rganic hybrids with dual inorganic components. 2021 , 22, 100584	2
752	Intelligent analysis technology of bamboo structure. Part I: The variability of vascular bundles and fiber sheath area. 2021 , 174, 114163	10
751	Chapter 3:Synthesis of Non-natural Polymers with Controlled Primary Structures. 2016 , 66-106	
750	Chapter 8:Biological and Bio-inspired Heterogeneous Composites: From Resilient Palm Trees to Stretchable Electronics. 2016 , 286-304	
749	Natural Bone and Tooth: Structure and Properties. 2017 , 45-85	О
748	Applications. 2017 , 77-127	
747	Control Over Nanocrystalline Apatite Formation: What Can the X-Ray Total Scattering Approach Tell Us. 2017 , 211-225	5

746	Biomimetic Materials. 2017, 189-213	
745	HIDROGEL PARA IMPRESS□ Ø 4D.	
744	Summary. 633-646	
743	Coherent injection of light into an absorbing scattering medium with a microscopic pore. 2018 , 43, 2189-2192	1
742	The Role of Advance Composite material In Contemporary Buildings. 2018 , 2, 95-101	
741	Bone-Inspired Microarchitectured Materials with Enhanced Fatigue Life.	1
740	Recent progress of solidification of suspensions. 2019 , 68, 018101	
739	Arapaima Fish Scale: One of the Toughest Flexible Biological Materials.	О
738	Biodegradable Composite Scaffold for Bone Tissue Regeneration. 2019 , 657-679	
737	Analysis of Finnish blue mussel (Mytilus edulis L.) shell: Biomineral ultrastructure, organic-rich interfacial matrix and mechanical behavior.	
736	Smart Building and Current Technologies. 2021 , 75-91	0
735	Hybrid Bio-Inspired Structure Based on Nacre and Woodpecker Beak for Enhanced Mechanical Performance. 2021 , 13,	3
734	Complex SiC-based structures with high specific strength fabricated by vat photopolymerization and one-step pyrolysis. 2021 , 48, 102430	2
733	Fabrication of a mechanically tough and strong graphene oxide aerogel modified phenolic resin by balancing the trade-off between load transfer efficiency and chain segment mobility. 2021 , 152, 106701	2
732	Nature inspired emerging sensing technology: Recent progress and perspectives. 2021 , 146, 100647	3
731	Theoretical Investigation on the Friction Behavior of Bio-Inspired Hard-Soft-Integrated Materials. 2021 , 11, 1296	О
730	Detecting and curing the voids in nacre-inspired layered MXene films. 2021, 67, 347-347	О
729	Biomimetic Mechanically Strong One-Dimensional Hydroxyapatite/Poly(d,l-lactide) Composite Inducing Formation of Anisotropic Collagen Matrix. 2021 ,	2

(2021-2021)

728	Cross-Scale Biological Models of Species for Future Biomimetic Composite Design: A Review. 2021 , 11, 1297	2
727	Internal 3D cracks evolution and the toughening mechanisms of the hierarchical structures in Strombus gigas shell. 2021 , 110211	Ο
726	Intelligent analysis technology of bamboo structure. Part II: The variability of radial distribution of fiber volume fraction. 2021 , 174, 114164	4
725	Primary Information About Biomaterials. 2020 , 1-30	
724	Natural Biomineralization-Inspired Magnesium Silicate Composite Coating Upregulates Osteogenesis, Enabling Strong Anterior Cruciate Ligament Graft-Bone Healing In Vivo. 2021 , 7, 133-143	1
723	The local and global geometry of trabecular bone.	
722	Carbon Nanohorns as Effective Nanotherapeutics in Cancer Therapy. 2021, 7, 3	3
721	Light-Induced Programmable 2D Ordered Patterns Based on a Hyperbranched Poly(ether amine) (hPEA)-Functionalized Graphene Film. 2021 , 13, 1704-1713	2
720	Failure Modes of a Laminated Composite With Complaint Interlayers. 2021, 88,	
719	A novel approach of high-voltage low-current electric energy input to synthesise cost-effective ultra-strong ductile material. 2021 , 101, 555-575	3
718	Dynamic mechanical response and damage mechanisms of nacre-inspired 2024Al/B4C composite at elevated temperature. 2022 , 831, 142263	1
717	Biomimetic Materials for Engineering Applications. 2022 , 25-34	
716	Dynamic compressive response and impact resistance of bioinspired nacre-like 2024Al/B4C composites. 2022 , 831, 142261	1
715	A universal mechanical framework for noncovalent interface in laminated nanocomposites. 2022 , 158, 104560	4
714	Identifying Structure-Property Relationships of Micro-Architectured Porous Scaffolds through 3D Printing and Finite Element Analysis 2022 , 202,	0
713	Multifunctional nacre-mimetic Ti3C2Tx films with tunable conductivity and mechanical properties by controlling interlay supramolecular interactions. 2022 , 430, 132852	1
712	Conductivity: Materials Design. 2020 , 19-41	
711	Collagen-based biocomposites inspired by bone hierarchical structures for advanced bone regeneration: ongoing research and perspectives. 2021 ,	5

710	Flexible but Robust Ti3C2Tx MXene/bamboo Microfibril Composite Paper for High-Performance Wearable Electronics.	3
709	The osteocyte lacuno-canalicular network in bone investigated by synchrotron radiation-based techniques. 2019 ,	O
708	Pressure-Less Processing of Ceramics with Deliberate Elongated Grain Orientation and Size. 2020 , 45-56	
707	Control of self-organization: From equilibrium to non-equilibrium. 2020 , 69, 140503	
706	Design and Modeling of High-Strength, High-Transmission Auto Glass with High Sound Transmission Loss. 2020 , 2091-2108	
705	Ongoing research and future research challenges. 2021 , 433-459	1
704	Dissecting Biological and Synthetic Soft-Hard Interfaces for Tissue-Like Systems. 2021 ,	5
703	Performance and retention mechanisms of corn silk to atmospheric heavy metal lead. 2021 , 1-11	
702	Additive Manufacturing of Micro-Electro-Mechanical Systems (MEMS). 2021 , 12,	2
701	Hierarchical structure and mechanical properties of fish scales from Lutjanidae with different habitat depths. 2021 ,	O
700	Bio-Inspired CeramicMetal Composites Using Ceramic 3D Printing and Centrifugal Infiltration. 2101009	3
699	Colloidal Self-Assembly Approaches to Smart Nanostructured Materials. 2021 ,	28
698	Directed Assembly of Large-Sized, Mechanically Robust, Nacre-Inspired Graphene Oxide/Sodium Alginate Nanocomposite Paper. 2020 , 305, 2000493	2
697	Robust Self-Regeneratable Stiff Living Materials.	
696	Incredible internal strains within a biogenic single crystal viewed by X-ray diffraction tomography.	
695	[Application of biomimetic restoration in oral-maxillofacial hard tissue repair]. 2021 , 39, 129-135	
694	Novel insights into nanomaterials for immunomodulatory bone regeneration.	2
693	Fabrication of dual-sensitive heterogeneity organohydrogel with temperature/surrounding-phase regulatory superomniphobic surface for on-demand oil/water separation. 2022 , 276, 125447	О

(2021-2022)

692	Highly aligned aramid nanofibrillar nanocomposites for enhanced dynamic mechanical properties. 2022 , 229, 109467	2
691	Amorphous calcium magnesium phosphate nanocomposites with superior osteogenic activity for bone regeneration 2021 , 8, rbab068	2
690	Advances in Field-Assisted 3D Printing of Bio-Inspired Composites: From Bioprototyping to Manufacturing. 2021 , e2100332	2
689	Stimuli-Responsive Natural Proteins and Their Applications. 2021,	1
688	Mechanistically Scoping Cell-free and Cell-dependent Artificial Scaffolds in Rebuilding Skeletal and Dental Hard Tissues. 2021 , e2107922	1
687	A de novo matrix for macroscopic living materials from bacteria.	
686	Mechanical properties of biomimetic ceramic with bouligand architecture.	О
685	Three-dimensional cell-laden collagen scaffolds: From biochemistry to bone bioengineering. 2021 ,	1
684	The architecture of Recent brachiopod shells: diversity of biocrystal and biopolymer assemblages in rhynchonellide, terebratulide, thecideide and craniide shells. 2022 , 169, 1	O
683	Deep Learning Unlocks X-ray Microtomography Segmentation of Multiclass Microdamage in Heterogeneous Materials. 2021 , e2107817	2
682	Multiscale mechanics of noncovalent interface in graphene oxide layered nanocomposites. 2021, 100304	О
681	Enhanced high-strain-rate impact resistance of helicoidal composites by fused deposition modelling. 1-13	Ο
680	Emerging Trends in Additively Manufactured Materials and Novel Flexible/Stretchable Conductor Technologies. 2022 , 201-243	
679	Toward stronger robocast calcium phosphate scaffolds for bone tissue engineering: A mini-review and meta-analysis 2021 , 112578	4
678	Functional amyloid-chitin hybrid ink coupled with flexible fabrication approaches for diverse macro and micro-structures 2022 , 13, 100179	1
677	3D printing of layered ceramic/carbon fiber composite with improved toughness. 2021 , 50, 102543	O
676	Light-controlled Nucleation and Shaping of Self-Assembling Nanocomposites. 2021, e2107843	3
675	Bioinspired Fabrication of Peptide-Based Capsid-Like Nanoparticles for Gene Delivery. 2021 , 1-15	

Biomolecular templates for interfacial nanomaterial assembly. **2021**,

673	Simple synthesis of self-assembled nacre-like materials with 3D periodic layers from nanochitin via hydrogelation and mineralization.	1
672	Orthophosphate and alkaline phosphatase induced the formation of apatite with different multilayered structures and mineralization balance 2022 ,	3
671	Effects of gradient distribution and aggregate structure of fibers on the flexibility and flexural toughness of natural moso bamboo (Phyllostachys edulis). 2022 , 16, 853-863	4
670	Numerical analysis of fracture toughness in tessellated materials by continuous distributed dislocation technique. 2022 , 261, 108192	
669	Fracture of hierarchical multi-layered bioinspired composites. 2022 , 159, 104750	1
668	Nacre's brickthortar structure suppresses the adverse effect of microstructural randomness. 2022 , 159, 104769	0
667	Coupled bendEwist mechanics of biomimetic scale substrate. 2022, 159, 104711	0
666	Designing staggered platelet composite structure with Gaussian process regression based Bayesian optimization. 2022 , 220, 109254	0
665	Acacia mangium tannin functionalized graphene nanoplatelets produced via ball-milling for sustainable soy protein-based film. 2022 , 177, 114478	1
664	Hierarchical strengthening of carbon fibre composite T-joints using nanoparticles and Z-pins. 2022 , 154, 106775	1
663	3D-print infill generation using the biological phase field of an optimized discrete material orientation vector field. 2022 , 232, 109626	O
662	Large-area transparent biocomposite films based on nanocellulose and nanochitin via horizontal centrifugal casting 2022 , 281, 119051	O
661	In-Situ Grown Bilayer MOF from Robust Wood Aerogel with Aligned Microchannel Arrays Toward Selective Extraction of Uranium from Seawater.	
660	Evaluation of remodeling and geometry on the biomechanical properties of nacreous bivalve shells 2022 , 12, 710	0
659	Creep Behavior of Graphene Oxide, Silk Fibroin, and Cellulose Nanocrystal Bionanofilms. 2101640	O
658	Microfluidic Assembly of Microblocks into Interlocked Structures for Enhanced Strength and Toughness 2022 ,	1
657	Influence of Al2O3 platelets addition on ceramic slurry and local flow induced platelets alignment in ceramic mask stereolithography process. 2022 ,	O

656	Heterogeneously engineered porous media for directional and asymmetric liquid transport. 2022 , 3, 100710	3
655	Roadmap on soft robotics: multifunctionality, adaptability and growth without borders.	7
654	Hierarchical microgroove/nanopore topography regulated cell adhesion to enhance osseointegration around intraosseous implants 2021 ,	O
653	Unraveling of Advances in 3D-Printed Polymer-Based Bone Scaffolds 2022 , 14,	4
652	A Stiffness-Switchable, Biomimetic Smart Material Enabled by Supramolecular Reconfiguration 2021 , e2107857	11
651	Microstructure and mechanical behaviors of Al/Cu laminated composites fabricated by accumulative roll bonding and intermediate annealing. 2022 , 832, 142510	6
650	Biomineralized Materials as Model Systems for Structural Composites: 3D Architecture 2022 , e2106259	3
649	Mesocrystalline Ordering and Phase Transformation of Iron Oxide Biominerals in the Ultrahard Teeth of Cryptochiton stelleri. 2100202	4
648	Fragmentation of Beaded Fibres in a Composite 2022 , 15,	Ο
647	Improving Polysaccharide-Based Chitin/Chitosan-Aerogel Materials by Learning from Genetics and Molecular Biology 2022 , 15,	3
646	Morphological Study of Bio-Based Polymers in the Consolidation of Waterlogged Wooden Objects 2022 , 15,	1
645	The Improvement in Surface Properties of Metallic Implant via Magnetron Sputtering: Recent Progress and Remaining Challenges. 2022 , 8,	1
644	A framework for the sustainability implications of 3D bioprinting through hature-inspired materials and structures. 2022 , 5, 412	3
643	A flexible and degradable hybrid mineral as a plastic substitute 2021 , e2107523	9
642	Progressive changes in crystallographic textures of biominerals generate functionally graded ceramics. 2022 , 3, 1527-1538	1
641	Osteosarcoma tumor microenvironment: the key for the successful development of biologically relevant 3D in vitro models. 2022 , 1, 5-27	O
640	Organic/inorganic hydrogels by simultaneous self-assembly and mineralization of aromatic short-peptides.	3
639	3D Printing of Nacre-Inspired Structures with Exceptional Mechanical and Flame-Retardant Properties 2022 , 2022, 9840574	О

638	Strong magnets with ordered structures. 2022 , 10, 1-5	5
637	Bioinspired elastomer composites with programmed mechanical and electrical anisotropies 2022 , 13, 524	5
636	The effect of surface treatments and graphene-based modifications on mechanical properties of natural jute fiber composites: A review 2022 , 25, 103597	6
635	A century of research on calcium silicate hydrate (CBH): Leaping from structural characterization to nanoengineering.	O
634	Dislocation re-emission induced staged work hardening in graphene-nanotwin reinforced Cu: A molecular dynamics simulation study. 146442072110681	O
633	Structural Mechanisms in Soft Fibrous Tissues: A Review. 2022 , 8,	2
632	ImageMech: From Image to Particle Spring Network for Mechanical Characterization. 8,	0
631	Osteon-mimetic 3D nanofibrous scaffold enhances stem cell proliferation and osteogenic differentiation for bone regeneration 2022 ,	1
630	A Prestressing Strategy Enabled Synergistic Energy-Dissipation in Impact-Resistant Nacre-Like Structures 2022 , e2104867	2
629	Bibliometric survey and network analysis of biomimetics and nature inspiration in engineering science 2022 ,	O
628	The Sustainable Materials Roadmap.	1
627	Bone-on-a-Chip: A Microscale 3D Biomimetic Model to Study Bone Regeneration. 2101467	O
626	Circular Subwavelength Photodetectors for 3D Space Exploration. 2102163	1
625	Uniformly assembly of filamentous phage/SiO2 composite films with tunable chiral nematic structures in capillary confinement. 2022 , 584, 152629	0
624	Bioinspired 2D Isotropically Fatigue-Resistant Hydrogels. 2021 , e2107106	9
623	Artificial Nacre with High Toughness Amplification Factor: Residual Stress-Engineering Sparks Enhanced Extrinsic Toughening Mechanisms 2021 , e2108267	3
622	Controlling failure regimes in Brick-and-Mortar structures. 2022 , 51, 101596	0
621	Bioinspired microneedle patches: Biomimetic designs, fabrication, and biomedical applications. 2022 , 5, 390-429	6

620	Multifunctional pressure/temperature/bending sensor made of carbon fibre-multiwall carbon nanotubes for artificial electronic application. 2022 , 154, 106796	1
619	Biomimetic confined self-assembly of chitin nanocrystals. 2022 , 43, 101420	O
618	A nature-inspired hierarchical branching structure pressure sensor with high sensitivity and wide dynamic range for versatile medical wearables 2022 , 203, 114028	1
617	Contact damage tolerance of alumina-based layered ceramics with tailored microstructures.	1
616	Ultratough conductive graphene/alumina nanocomposites. 2022 , 156, 106871	1
615	Escaping the Labyrinth of Bioinspiration: Biodiversity as Key to Successful Product Innovation. 2110235	3
614	Strong, Healable, Stimulus-Responsive Fluorescent Elastomers Based on Assembled Borate Dynamic Nanostructures 2022 , e2107164	6
613	Printable, castable, nanocrystalline cellulose-epoxy composites exhibiting hierarchical nacre-like toughening. 2022 , 29, 2387	Ο
612	Evading strength and ductility trade-off in an inverse nacre structured magnesium matrix nanocomposite. 2022 , 228, 117730	3
611	A Bayesian Learning Framework for Fast Prediction and Uncertainty Quantification of Additively Manufactured Multi-Material Components. 2022 , 117528	O
610	Hierarchical toughening of laminated nanocomposites with three-dimensional graphene/carbon nanotube/SiC nanowire. 2022 , 100180	1
609	Review on materials and structures inspired by bamboo. 2022 , 325, 126656	2
608	3D mechanics of scaled membranes. 2022 , 241, 111498	
607	In-situ grown bilayer MOF from robust wood aerogel with aligned microchannel arrays toward selective extraction of uranium from seawater. 2022 , 433, 134346	4
606	Embracing complexity in biomaterials design. 2022 , 6, 100039	3
605	In-situ formation Ti-Al-C compounds reinforced SiCp/2A14 Al joint: Microstructure evolution and mechanical properties. 2022 , 150, 107896	
604	Advancing the Mechanical Performance of Glasses: Perspectives and Challenges. 2021, e2109029	8
603	Advances in biomineralization-inspired materials for hard tissue repair. 2021 , 13, 42	8

602	Advances in porous inorganic nanomaterials for bone regeneration. 2022, 9130005	O
601	Recent Advances in High-strength and High-toughness Polyurethanes Based on Supramolecular Interactions.	3
600	Programmable Self-Assembling Protein Nanomaterials: Current Status and Prospects. 2022, 51-94	
599	Alignment of strontium hexaferrite, by cold compaction of anisotropic non-magnetically interacting crystallites 2022 ,	1
598	Well-Ordered Microstructures from Droplet Self-Assembly. 2022, 195-216	
597	Upcycling agro-industrial blueberry waste into platform chemicals and structured materials for application in marine environments.	1
596	Biomimicry for natural and synthetic composites and use of machine learning in hierarchical design. 2022 , 141-182	
595	Advanced applications of 2/3D nanocellulose-based hybrid materials prepared via in-situ mineralization.	0
594	Polymerization in nature yields clues to innovation in additive manufacturing. 2022, 337-365	
593	Biomimetics Applied in Electrochemistry. 2022 , 1-35	
592	Effects of Hydration on Mechanical Properties of Acylated HydroxyapatiteBtarch Composites. 2022 , 4, 1666-1674	
591	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. 2022 , 19, 799	1
591 590	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical	1
	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. 2022 , 19, 799	
590	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. 2022 , 19, 799 Protein Splicing of Inteins: A Powerful Tool in Synthetic Biology 2022 , 10, 810180	2
590 589	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. 2022, 19, 799 Protein Splicing of Inteins: A Powerful Tool in Synthetic Biology 2022, 10, 810180 Bamboo-inspired cell-scale assembly for energy device applications. 2022, 6, Crack growth simulation in a functionally graded material plate with uniformly distributed pores	2
590 589 588	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. 2022, 19, 799 Protein Splicing of Inteins: A Powerful Tool in Synthetic Biology 2022, 10, 810180 Bamboo-inspired cell-scale assembly for energy device applications. 2022, 6, Crack growth simulation in a functionally graded material plate with uniformly distributed pores using extended finite element method. 2022,	2

584	Mechanisms of Strain-Induced Interfacial Strengthening of Wet-Spun Filaments 2022,	2
583	Development of amphibious biomimetic robots. 2022 , 23, 157-187	2
582	Damage-tolerant material design motif derived from asymmetrical rotation 2022 , 13, 1289	0
581	Tough and Healable Elastomers via Dynamic Integrated Moiety Comprising Covalent and Noncovalent Interactions.	o
580	Mechanical performance of additively manufactured lightweight cellular solids: Influence of cell pattern and relative density on the printing time and compression behavior. 2022 , 215, 110474	O
579	An anti-freezing biomineral hydrogel of high strain sensitivity for artificial skin applications. 1	О
578	A Review on Electrical and Electronics Part of 3D Printer. 2022, 1228, 012007	
577	Compression behaviors of the bio-inspired hierarchical lattice structure with improved mechanical properties and energy absorption capacity. 2022 , 17, 2755-2771	1
576	One-Pot Synthesis of Magnetoplasmonic Au@FeO Nanowires: Bioinspired Bouligand Chiral Stack 2022 ,	2
575	Contraction and Expansion of Nanocomposites during Ion Exchange Reactions 2022 , 22, 2289-2293	3
<i>575 574</i>	Contraction and Expansion of Nanocomposites during Ion Exchange Reactions 2022, 22, 2289-2293 Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022, e2103524	2
	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural	
574	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022 , e2103524 Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by	2
574 573	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022, e2103524 Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by Additive Manufacturing for Lightweight Silicon Photovoltaics Technology 2022, 14, Platelet-Activating Biominerals Enhanced Injectable Hydrogels With Superior Bioactivity for Bone	2 O
574 573 572	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022, e2103524 Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by Additive Manufacturing for Lightweight Silicon Photovoltaics Technology 2022, 14, Platelet-Activating Biominerals Enhanced Injectable Hydrogels With Superior Bioactivity for Bone Regeneration 2022, 10, 826855	2 O
574 573 572 571	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022, e2103524 Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by Additive Manufacturing for Lightweight Silicon Photovoltaics Technology 2022, 14, Platelet-Activating Biominerals Enhanced Injectable Hydrogels With Superior Bioactivity for Bone Regeneration 2022, 10, 826855 Silk-based bioinspired structural and functional materials 2022, 25, 103940	2 O O
574 573 572 571 570	Biomineralized Materials as Model Systems for Structural Composites: Intracrystalline Structural Features and Their Strengthening and Toughening Mechanisms 2022, e2103524 Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by Additive Manufacturing for Lightweight Silicon Photovoltaics Technology 2022, 14, Platelet-Activating Biominerals Enhanced Injectable Hydrogels With Superior Bioactivity for Bone Regeneration 2022, 10, 826855 Silk-based bioinspired structural and functional materials 2022, 25, 103940 Uncovering the crystal defects within aragonite CaCO 2022, 119, e2122218119 Nanoscale-Structured Hybrid Bragg Stacks with Orientation- and Composition-Dependent Mechanical and Thermal Transport Properties: Implications for Nacre Mimetics and Heat	2 O O

566	Recent Progress of Applying Mesoscopic Functionalization Engineering Principles to Spin Advanced Regenerated Silk Fibroin Fibers. 1	О
565	Additive manufacturing of Ti-Ni bimetallic structures 2022 , 215,	1
564	Emerging biomimetic nanotechnology in orthopedic diseases: progress, challenges, and opportunities. 2022 ,	6
563	How much biology is in the product? Role and relevance of biological evolution and function for bio-inspired design 2022 , 1	1
562	Micro-scale thermodynamic model of microstructure and stress evolution in parts via selective laser melting. 1	О
561	Hierarchical tetramodal-porous architecture of zinc oxide nanoparticles microfluidically synthesized via dual-step nanofabrication. 2022 , 215, 110486	1
560	In situ determination of the extreme damage resistance behavior in stomatopod dactyl club 2022 , 29, 775-786	О
559	Ultrahigh cavitation erosion resistant metal-matrix composites with biomimetic hierarchical structure. 2022 , 234, 109730	3
558	Hierarchical structure design of Strombus gigas shell inspired laminated artificial composites and the mechanical performance optimization strategy. 1-11	О
557	Graphene oxide-reinforced thin shells for high-performance, lightweight cement composites. 2022 , 235, 109796	O
556	Insight into the behaviour of bamboo culms subjected to bending 2022, 19, 20210913	О
555	Bioinspired sensor system for health care and human-machine interaction.	8
554	Bioinspired Tough Solid-State Electrolyte for Flexible Ultralong-Life Zinc-Air Battery 2022 , e2110585	7
553	In Situ Crystallization of Hydroxyapatite on Carboxymethyl Cellulose as a Biomimetic Approach to Biomass-Derived Composite Materials 2022 , 7, 12127-12137	O
552	Insight into the interfacial architecture of a hybrid additively-manufactured stainless steel/Ni-based superalloy bimetal. 2022 , 216, 110595	О
551	Controlled morphing of architected liquid crystal elastomer elements: modeling and simulations. 2022 , 121, 103858	1
550	3D printing of TiC-MXene-incorporated composite scaffolds for accelerated bone regeneration 2022 , 17,	2
549	Extreme strain rate deformation of nacre-inspired graphene/copper nanocomposites under laser-induced hypersonic micro-projectile impact. 2022 , 235, 109763	1

548	Enhanced Low-Velocity Impact Resistance of Helicoidal Composites by Fused Filament Fabrication (FFF) 2022 , 14,	2
547	Reinforcement of nest-like Zn layers on the surface of carbon fibers for rigid polyurethane composites.	
546	An Investigation of Integrated Multi-Scale 3D Printing for Hierarchical Structures Fabrication. 2022,	1
545	Mechanical response and damage evolution of bio-inspired B4C-reinforced 2024Al composites subjected to quasi-static and dynamic loadings. 2022 , 840, 142991	O
544	Effect of the fibre length on the mechanical anisotropy of glass fibrelleinforced polymer composites printed by Multi Jet Fusion. 1-15	1
543	Efficient Softening and Toughening Strategies of Cellulose Nanofibril Nanocomposites Using Comb Polyurethane 2022 ,	O
542	High-throughput microstructure and composition characterisation of microplatelet reinforced composites using directional reflectance microscopy. 2022 , 229, 117798	O
541	One-step preparation of functionally hierarchical and structurally hierarchical biomimetic bioceramics composed of porous hydroxyapatite and carbon fiber reinforced hydroxyapatite composites. 2022 , 283, 126012	
540	Covalent treatment of carbon fibre with functionalized MoS2 nanosheets using thiol-ene click chemistry: The improvement of interface in multiscale epoxy composites. 2022 , 236, 109821	O
539	Study on the strengthening and toughening design of the interlayer interface of GO-based bionic nacre composites and its optimization mechanisms. 2022 , 223, 109423	2
538	Stem from nature: Bioinspired adhesive formulations for wound healing 2022,	3
537	Subambient daytime cooling enabled by hierarchically architected all-inorganic metapaper with enhanced thermal dissipation. 2022 , 96, 107085	2
536	Ultrahigh content cellulose reinforced sustainable structural materials enabled by a nacre-inspired strategy. 2022 , 180, 114749	O
535	Ultra-high energy stored into multi-layered functional porous carbon tubes enabled by high-rate intercalated pseudocapacitance. 2022 , 192, 153-161	O
534	Improved properties of bamboo by thermal treatment with wood wax oil. 2022, 643, 128807	O
533	Bio-inspired synthesis of flavonoids incorporated CaCO3: Influence on the phase, morphology and mechanical strength of the composites. 2022 , 642, 128720	O
532	Smart-simulation derived elastic 3D fibrous aerogels with rigid oxide elements and all-in-one multifunctions. 2022 , 437, 135444	1
531	A review of 3D printed porous ceramics. 2022 , 42, 3351-3373	4

530	Bamboo-inspired design of a stable and high-efficiency catalytic capillary microreactor for nitroaromatics reduction. 2022 , 310, 121297	6
529	Transforming wood as next-generation structural and functional materials for a sustainable future. 2022 , 4,	5
528	Superior Hard but Quickly Reversible Si-O-Si Network Enables Scalable Fabrication of Transparent, Self-Healing, Robust, and Programmable Multifunctional Nanocomposite Coatings 2021 ,	5
527	Self-Organized Spatiotemporal Mineralization of Hydrogel: A Simulant of Osteon 2021 , e2106649	O
526	Recombinant Spider Silk Protein and Delignified Wood Form a Strong Adhesive System. 2022 , 10, 552-561	4
525	Effects of particle size of hydroxyapatite on mechanical property and cytocompatibility of hydroxyapatite/poly(amino acid) composites. 2022 , 43, 1107-1120	O
524	Anisotropic Hydrogels with a Multiscale Hierarchical Structure Exhibiting High Strength and Toughness for Mimicking Tendons 2021 ,	7
523	Dynamics of polydisperse multiple emulsions in microfluidic channels 2021 , 104, 065112	
522	Enhancing the Fracture Toughness of Biomimetic Composite Through 3D Printing. 2022, 215-244	
521	NON-INVASIVE ANALYTICAL TECHNIQUES APPLIED ON PIGMENTS CHARACTERIZATION OF ANCIENT BIVALVE SHELLS. 2021 , 21, 1121-1132	
520	Bones and Teeth. 2021 , 520-540	
519	Overview on metamaterial: History, types and applications. 2021 ,	2
518	Biotemplating of Metal Drganic Framework Nanocrystals for Applications in Small-Scale Robotics. 2022 , 32, 2107421	2
517	Polyacrylamide mediated polyvinyl pyrrolidone composites incorporated with aligned molybdenum disulfide. 2022 , 139, 52061	O
516	Biomimetic approaches towards lightweight composite structures for car interior parts. 2021 , 212, 110281	2
515	Sintering graded foamed beads: Compressive properties. 2022 , 139, 52052	Ο
514	Bioinspired Materials for Energy Storage 2021 , e2101076	4
513	Biologically Inspired Designs for Additive Manufacturing of Lightweight Structure. 2022 , 245-260	

512	Ultrastrong, elastic, and fatigue-resistant SiC nanowires network. 2022 , 105, 2783-2790	O
511	Sustainable Multiscale High-Haze Transparent Cellulose Fiber Film via a Biomimetic Approach. 2022 , 4, 87-92	5
510	The effect of graphene size and arrangement on crack propagation of Graphene/Aluminum composites. 2022 ,	
509	Cellulose-assisted electrodeposition of zinc for morphological control in battery metal recycling.	1
508	3D printing of sponge spicules-inspired flexible bioceramic-based scaffolds 2022,	1
507	Dataset for hierarchical tetramodal-porous architecture of zinc oxide nanoparticles microfluidically synthesized via dual-step nanofabrication 2022 , 42, 108137	
506	Harnessing the power of natural evolution for discovering metastructures with new operation modalities. 2022 ,	
505	Formation of Pixelated Elastic Films via Capillary Suction of Curable Elastomers in Templated Hele-Shaw Cells 2022 , e2109682	O
504	Reshapable Osteogenic Biomaterials Combining Flexible Melt Electrowritten Organic Fibers with Inorganic Bioceramics 2022 ,	1
503	On the adhesion performance of gradient-structured Ni P metallic coatings. 2022 , 143170	2
502	Additively Manufactured Porous Ti6Al4V for Bone Implants: A Review. 2022 , 12, 687	O
501	Generative design, manufacturing, and molecular modeling of 3D architected materials based on natural language input. 2022 , 10, 041107	2
500	Hyphal systems and their effect on the mechanical properties of fungal sporocarps 2022,	2
499	Development of a biopolymer modified geopolymer based cementitious material for enhancement of pumpable roof support. 2022 , 55, 1	
498	Design and Modeling of MEMS Microgrippers for Laser-Based Additive Manufacturing. 2022 , 2, 225-239	0
497	Nanoindentation of Supercrystalline Nanocomposites: Linear Relationship Between Elastic Modulus and Hardness. 1	O
496	Data_Sheet_1.pdf. 2020 ,	
495	Table_1.DOCX. 2020 ,	

494	Table_1.DOCX. 2020 ,	
493	Video_1.MP4. 2020 ,	
492	Video_2.MP4. 2020 ,	
491	Video_3.MP4. 2020 ,	
490	Data_Sheet_1.PDF. 2019 ,	
489	Table_1.xlsx. 2019 ,	
488	Nanoarchitecture Tough Biological Composites from Assembled Chitinous Scaffolds 2022,	1
487	Biomimetic bi-material designs for additive manufacturing 2022,	Ο
486	Bioinspired Fabrication of Peptide-Based Capsid-Like Nanoparticles for Gene Delivery. 2022 , 219-233	
485	Bioinspired ceramics for bone tissue applications. 2022 , 111-143	
484	Bioinspired design: lessons from hierarchical structures and local properties of natural ceramics and their composites. 2022 , 145-162	
483	Deformation behavior of chicken eggshell. 2022 ,	
482	Bioinspired Structures for Soft Actuators. 2101521	0
481	Bioinspired cellulose-integrated MXene-based hydrogels for multifunctional sensing and electromagnetic interference shielding.	1
480	Mechanics of three-dimensional soft network materials with a class of bio-inspired designs. 1-45	0
479	Special Issue: Biomimetic Organic-Inorganic Composites 2022 , 15,	
478	Developing nacre-inspired laminate-reticular 2024Al/B4C composites with high damage resistance by adjusting compositional wettability. 2022 , 32, 1105-1118	Ο
477	Bamboo-based Biomaterials for Cell Transportation and Bone Integration 2022, e2200287	Ο

476	Electrostatically Directed Long-Range Self-Assembly of Nucleotides with Cationic Nanoparticles to Form Multifunctional Bioplasmonic Networks.	
475	Electrostatically Directed Long-Range Self-Assembly of Nucleotides with Cationic Nanoparticles to Form Multifunctional Bioplasmonic Networks 2022 ,	2
474	Enzyme Immobilization on a Delignified Bamboo Scaffold as a Green Hierarchical Bioreactor.	2
473	Equivalent 3D properties of thin-walled composite structures using mechanics of structure genome. 1-12	
472	Bioinspired Approaches to Self-Assembly of Virus-like Particles: From Molecules to Materials 2022	3
471	The Tensile Behaviour of Unaged and Hygrothermally Aged Asymmetric Helicoidally Stacked CFRP Composites. 2022 , 6, 137	O
470	A sustainable single-component "Silk nacre" 2022 , 8, eabo0946	2
469	Physical and Chemical Characterization of Biomineralized Collagen with Different Microstructures. 2022 , 13, 57	1
468	High-Performance Crack-Resistant Elastomer with Tunable "J-Shaped" Stress-Strain Behavior Inspired by the Brown Pelican 2022 ,	О
467	Recent Advances in Cryogenic 3D Printing Technologies. 2200245	1
466	Biofilm-inspired Amyloid-Polysaccharide Composite Materials. 2022 , 27, 101497	1
465	Unraveling the distinct germination processes of sporopollenin-based pollen grains and spores through morphological analyses upon natural nano-architectonics process. 2022 , 27, 101471	1
464	Hierarchical networks of anisotropic hydrogels based on cross-linked Poly(vinyl alcohol)/Poly(vinylpyrrolidone). 2022 , 251, 124920	2
463	Mechanical behaviors and fracture mechanisms of CFRP sandwich composite structures with bio-inspired thin-walled corrugated cores. 2022 , 126, 107599	1
462	The role of non-rubber components acting as endogenous antioxidants on thermal-oxidative aging behavior of natural rubber. 2022 , 111, 107614	2
461	Strength-fracture toughness synergy strategy in ostrich tibia's compact bone: Hierarchical and gradient 2022 , 131, 105262	
460	Analysing fracture properties of bio-inspired 3D printed suture structures. 2022 , 176, 109317	2
	Robust biomimetic Ti3C2Tx nanocomposite films enhanced by mussel-inspired polymer for highly	

458	Directional combustion induced by 3D aligned carbon channel arrays for combustion chamber-free micro-thruster. 2022 , 444, 136527	2
457	Natural bamboo coil springs with high cyclic-compression durability fabricated via a hydrothermal-molding-fixing method. 2022 , 184, 115055	O
456	Brittle Solids: From Physics and Chemistry to Materials Applications. 2022 , 52,	0
455	A Bioinspired Ultratough Composite Produced by Integration of Inorganic Ionic Oligomers within Polymer Networks 2022 ,	2
454	Optimization of the measurement of residual stresses by the incremental hole drilling method. Part I: Numerical correction of experimental errors by a configurable numerical-experimental coupling. 2022 , 115703	О
453	Resolving nanoscopic structuring and interfacial THz dynamics in setting cements.	5
452	Bamboo-Based Microfluidic System for Sustainable Bio-devices. 2022 , 141-169	0
451	Amino Termination of Ti 3 C 2 MXene Induces its Graphene Hybridized Film with Enhanced Ordered Nanostructure and Excellent Multiperformance. 2102418	O
450	Functionally graded lightweight cement-based composites with outstanding mechanical performances via additive manufacturing. 2022 , 102911	2
449	Mechanically strong, thermostable, and flame-retardant composites enabled by Brown paper made from bamboo. 2022 , 109544	1
448	Bioinspired multiscale optical structures towards efficient light management in optoelectronic devices. 2022 , 100225	1
447	Saline Tolerant Tough-yet-strong Fiber-reinforced Gel-nacre for Soft Actuator. 2022 , 137091	0
446	High-strength, flexible and superhydrophobic graphene/aramid nanofiber nanocomposite films for electromagnetic interference shielding application. 2022 ,	О
445	Interface regulation effects on mechanical behavior of heterostructure Ti6Al4V/TiAl-based laminated composite sheets. 2022 ,	O
444	The onset of solidification: From interface formation to the Stefan regime. 2022 , 156, 194701	
443	Histomorphometry of Ossification in Functionalised Ceramics with Tripeptide Arg-Gly-Asp (RGD): An In Vivo Study. 2022 , 12, 761	0
442	Bioinspired Strategies for Excellent Mechanical Properties of Composites.	2
441	Effect of moisture content on bambool mode I interlaminar fracture toughness: The competition between promoting and impeding crack growth. 2022 , 341, 127822	О

440	Strong, tough and high temperature self-lubricated fibrous monolithic ceramic in Al2O3/Cr2O3 system. 2022 , 172, 107646	0
439	Friction and wear behavior of bioinspired composites with nacre-like lamellar and brick-and-mortar architectures against human enamel. 2022 , 128, 133-141	O
438	A nanostructured look of collagen apatite porosity into human mineralized collagen fibril. 2022 , 1-5	
437	Symmetry-Breaking and Self-Sorting in Block Copolymer-Based Multicomponent Nanocomposites.	
436	Spinning from nature: Engineered preparation and application of high-performance bio-based fibers. 2022 ,	0
435	Bioinspired nacre-like 2024Al/B4C composites with high damage tolerance. 2022 ,	O
434	Engineered fabrication of enamel-mimetic materials. 2022,	O
433	A comprehensive review on 3D printing advancements in polymer composites: technologies, materials, and applications.	O
432	Nacre-Inspired Nanocomposite Films with Enhanced Mechanical and Barrier Properties by Self-Assembly of Poly(Lactic Acid) Coated Mica Nanosheets. 2202221	6
431	Low-value wood for sustainable high-performance structural materials.	7
430	Advantages of 3D Printing for Circular Economy and Its Influence on Designers. 2022 , 2, 991-1000	O
429	Flexible Sustained Ionogels with Ionic Hyperbranched Polymers for Enhanced Ion-Conduction and Energy Storage.	1
428	Crumpled sheets, fractal dimension, and wrinkles in research. 2022 , 5, 1627-1629	O
427	Enhanced Mechanical Property of Acrylic Polymer/Graphene/Carbon Fibers Hybrid for Water Proof Coating. 2022 , 20, 1-10	
426	Nanostructured block copolymer muscles.	6
425	Improving the Mechanical Properties, Roughness, Thermal Stability, and Contact Angle of the Acrylic Polymer by Graphene and Carbon Fiber Doping for Waterproof Coatings.	0
424	Interlaminar fracture property of Moso bamboo strips influenced by fiber distributions in bamboo internode and node. 2022 , 294, 115777	О

422	3D printing of graphene polymer composites. 2022 , 247-281	
421	Bioinspired High-Strength Montmorillonite-Alginate Hybrid Film: The Effect of Different Divalent Metal Cation Crosslinking. 2022 , 14, 2433	
420	One-Pot Self-Assembly of Dual-Color Domes Using Mono-Sized Silica Nanoparticles.	
419	On the damage tolerance of 3-D printed Mg-Ti interpenetrating-phase composites with bioinspired architectures. 2022 , 13,	7
418	Pseudomorphic Replacement in the Transformation between Metal Drganic Frameworks toward Three-Dimensional Hierarchical Nanostructures.	2
417	Bioinspired macromolecular templates for crystallographic orientation control of ZnO thin films through zinc hydroxide carbonate.	
416	Dual-Driven Mechanically and Tribologically Adaptive Hydrogels Solely Constituted of Graphene Oxide and Water.	2
415	Rapid Flow Synthesis of a Biomimetic Carbonate Apatite as an Effective Drug Carrier.	О
414	Micro-scale fracture toughness of textured alumina ceramics. 2022,	О
413	Advances in Translational 3D Printing for Cartilage, Bone, and Osteochondral Tissue Engineering. 2201869	2
412	Continuous ice-templating of macro-porous materials with uniformly ordered architecture.	2
411	Strong, Tough Bioactive Glasses and Composite Scaffolds. 2022 , 147-172	
410	Tough, bioinspired transparent glass-ceramics.	О
409	Magneto-Orientation of Magnetic Double Stacks for Patterned Anisotropic Hydrogels with Multiple Responses and Modulable Motions.	
408	Bi-directional freezing to fabricate freeze-cast ceramics with orientation gradient and uniaxial compressive deformation behavior of infiltrated composites. 2022 , 101492	
407	PRESTO: Rapid protein mechanical strength prediction with an end-to-end deep learning model. 2022 , 101803	1
406	Nanoparticle Self-Assembly: From Design Principles to Complex Matter to Functional Materials.	6
405	Wet shells and dry tales: the evolutionary llust-Solstories behind the structurefunction of biominerals. 2022 , 19,	1

404	Magneto-Orientation of Magnetic Double Stacks for Patterned Anisotropic Hydrogels with Multiple Responses and Modulable Motions.	3
403	Site-Selective Coordination Assembly of Dynamic Metal P henolic Networks.	
402	Site-Selective Coordination Assembly of Dynamic Metal P henolic Networks.	2
401	Biotemplating synthesis of organized structures inspired by biological processes. 2022, 11, 100108	
400	Use of Bombyx mori silk fibroin in tissue engineering: From cocoons to medical devices, challenges, and future perspectives. 2022 , 139, 212982	3
399	Dynamic behaviors of bio-inspired structures: Design, mechanisms, and models. 2022 , 265, 114490	6
398	Cellulose nanofibers reinforced nanocomposites with high strength and toughness by tunable wet-drawing and ionic cross-linking method. 2022 , 242, 110078	1
397	Examining the impact of asymmetry in lattice-based mechanical metamaterials. 2022, 172, 104386	0
396	Toughness and its mechanisms in epoxy resins. 2022 , 130, 100977	7
395	Crashworthiness analysis of bioinspired hierarchical gradient multicell tubes under axial impact. 2022 , 179, 109591	О
394	Preparation of a strong soy protein adhesive with mildew proof, flame-retardant, and electromagnetic shielding properties via constructing nanophase-reinforced organicshorganic hybrid structure. 2022 , 447, 137536	О
393	Multifunctional artificial nacre via biomimetic matrix-directed mineralization. 2022, 52, 1	
392	Understanding tyrosine self-assembly: from dimer assembly to magnetized fluorescent nanotubes embedded into PVA films.	
391	A fractional model and its application to heat prevention coating with cocoon-like hierarchy. 2022 , 26, 2493-2498	1
390	Rheological Characterization Tools: A Review. 2022 , 1-21	
389	Injectable macromolecule-based calcium phosphate bone substitutes.	О
388	Design and Mechanical Characterization Using Digital Image Correlation of Soft Tissue-Mimicking Polymers. 2022 , 14, 2639	0
387	A novel hybrid design method of lattice structure based on failure mode. 2022 , 65,	О

386	Assessment of Optimal Conditions for Marine Invertebrate Cell-Mediated Mineralization of Organic Matrices. 2022 , 7, 86		
385	Mechanical properties and toughening mechanisms of highly textured Ti3AlC2 composite material. 2022 ,		1
384	Force Transmission in Disordered Fibre Networks. 10,		1
383	Biocompatible silane adhesion layer on titanium implants improves angiogenesis and osteogenesis. 2022 , 213033		O
382	Flexible MXene/Cellulose Nanofiber Aerogels for Efficient Electromagnetic Absorption.		2
381	Hydrogels totally from inorganic nanosheets and water with mechanical robustness, self-healing, controlled lubrication and anti-corrosion.		O
380	Osteoimmunity-Regulating Biomimetically Hierarchical Scaffold for Augmented Bone Regeneration. 2202044		9
379	Hierarchical Porous Ceramics with Distinctive Microstructures by Emulsion-Based Direct Ink Writing.		4
378	Mussel-Inspired Polydopamine-Based Multilayered Coatings for Enhanced Bone Formation. 10,		О
377	Strong and Tough Nacre-Inspired Graphene Oxide Composite with Hierarchically Similar Structure.		1
376	Graphene oxide bulk material reinforced by heterophase platelets with multiscale interface crosslinking. <i>Nature Materials</i> ,	27	7
375	Recent Advances in Self-Assembly and Application of Para-Aramids. 2022, 27, 4413		1
374	Hierarchical Porous Cellulosic Triboelectric Materials for Extreme Environmental Conditions. 2200664		3
373	Well-Ordered Nanonetwork Metamaterials from Block Copolymer Templated Syntheses.		2
372	3D Printed Biomimetic Metamaterials with Graded Porosity and Tapering Topology for Improved Cell Seeding and Bone Regeneration. 2022 ,		О
371	Effect of fiber geometry on fracture and fatigue of composite hydrogels. 1-32		O
370	Mechanical compressive behavior of pomelo peel and multilayer polymeric film/foam systems. 2022 , 17, 056004		О
369	Tough, aorta-inspired soft composites. 2022 , 119,		3

368	Lamellar and interpenetrated Al/(Al2O3IIiC) composites prepared by bidirectional freeze casting and melt infiltration. 2022 ,	О
367	Functionally graded additive manufacturing for orthopedic applications. 2022 , 33, 70-80	O
366	3D printing of ceramic composite with biomimetic toughening design. 2022 , 58, 103027	О
365	A biomineralization-inspired strategy of self-encapsulation for perovskite solar cells. 2022 , 101, 107575	3
364	Novel micro-lattice biomaterials for human skull repair with matching skull density and compression stiffness & amp; strength. 2022 , 325, 132781	О
363	Machine learning assisted wrinkling design of hierarchical thin sheets. 2022 , 213, 111638	
362	Bubble freeze casting artificial rattan. 2022 , 449, 137870	О
361	Optical properties of novel luminescent nacre-like epoxy/graphene nanocomposite coating integrated with lanthanide-activated aluminate nanoparticles.	О
360	A review on additive manufacturing of ceramic matrix composites. 2022,	5
359	Shock-Resistant and Energy-Absorbing Properties of Bionic NiTi Lattice Structure Manufactured by SLM.	O
358	User Guide to Ring-Opening Metathesis Polymerization of endo-Norbornene Monomers with Chelated Initiators.	О
357	Mussel-Inspired Biomaterials: From Chemistry to Clinic.	7
356	Bioinspired stretchable molecular composites of 2D-layered materials and tandem repeat proteins. 2022 , 119,	
355	Self-Adaptive Hierarchical Gradient Structure-Based In Situ Sensor with High-Pressure Resolution. 2200848	O
354	Conch-Shell-Inspired Tough Ceramic. 2205309	2
353	Ultraductile Bar with Bioinspired Helical Strands. 2022 , 148,	O
352	A review of advanced materials, structures and deformation modes for adaptive energy dissipation and structural crashworthiness. 2022 , 180, 109808	1
351	Laser powder bed fusion of Ti6Al4V lattice structures and their applications. 2020 , 30, 68-78	5

350	Oriented attachment and aggregation as a viable pathway to self-assembled organic/inorganic hybrid materials.	
349	A Preliminary Study on the Flexural Behavior of Nacre-Inspired Cementitious Materials. 2022 , 74, 3445-3453	O
348	The mechanical characterization of the legs, fangs, and prosoma in the spider Harpactira curvipes (Pocock 1897). 2022 , 12,	
347	Robust Assembly of Cross-Linked Protein Nanofibrils into Hierarchically Structured Microfibers. 2022 , 16, 12471-12479	O
346	Nacre-like composites with superior specific damping performance. 2022 , 119,	О
345	Tailored torsion and bending-resistant avian-inspired structures.	Ο
344	Bioinspired Laminated Bioceramics with High Toughness for Bone Tissue Engineering.	
343	Synthesis of antibacterial silver and zinc doped nano-hydroxyapatite with potential in bone tissue engineering applications. 2022 ,	2
342	Scalable Fabrication of High-Performance Bulk Nacre-Mimetic Materials on a Nanogrooved Surface.	1
341	Magnetostrictive and Electroconductive Stress-Sensitive Functional Spider Silk. 2207382	2
340	Topographical biointerface regulating cellular functions for bone tissue engineering.	
339	Rapid Synthesis of Multifunctional Apatite via the Laser-Induced Hydrothermal Process. 2022 , 16, 12840-1285	11
338	Water Processable Bioplastic Films from Functionalized Protein Fibrils. 2200926	
337	Viscoelastic properties of bioinspired asymmetric helicoidal CFRP composites.	O
336	Impact of aromatic residues on the intrinsic disorder and transitional behaviour of model IDPs. 2022 , 100400	
335	Tropocollagen Inspired Hierarchical Spiral Structure of Organic Fibers in Epoxy Bulk for Three-dimensional High Thermal Conductivity. 2206088	3
334	Growing designability in structural materials.	О
333	Interfacial Mechanical Behavior in Nacre of Red Abalone and Other Shells: A Review.	О

332	Chiral Liquid Crystalline Properties of Cellulose Nanocrystals: Fundamentals and Applications.	1
331	Hierarchical Multiresolution Design of Bioinspired Structural Composites Using Progressive Reinforcement Learning. 2200459	o
330	Fluidic innervation sensorizes structures from a single build material. 2022, 8,	2
329	Grain-Slip Derived Network Topology to Remarkable Strength Toughness Combination of Perovskite Film for Flexible Solar Cells. 2202298	1
328	Magnetically assisted drop-on-demand 3D printing of microstructured multimaterial composites. 2022 , 13,	3
327	Understanding the confined TiB fiber-like structure for strength-ductility combination of discontinuous-reinforced titanium matrix composites. 2022 , 852, 143645	
326	Nanoengineering and green chemistry-oriented strategies toward nanocelluloses for protein sensing. 2022 , 308, 102758	0
325	Bio-inspired self-stitching discontinuous fiber reinforced composites with enhanced ductility and energy absorption. 2022 , 34, 101261	
324	Fracture resistance of 3D nano-architected lattice materials. 2022 , 56, 101883	0
323	3D printing of natural fiber and composites: A state-of-the-art review. 2022 , 222, 111065	4
322	Deciphering structural biological materials: Viewing from the mechanics perspective and their prospects. 2022 , 245, 110213	2
321	Three-dimensional printing of biomimetic variable stiffness composites with controlled orientations and volume fraction of fibers. 2022 , 299, 116091	
320	Biomass derived carbonaceous materials with tailored superstructures designed for advanced supercapacitor electrodes. 2022 , 187, 115457	0
319	Coordination geometry in metallo-supramolecular polymer networks. 2022 , 471, 214733	2
318	Soft Missing Rib Structures with Controllable Negative Poisson Ratios over Large Strains via Isogeometric Design Optimization. 2022 , 148,	
317	Bioinspired nanocomposite films with graphene and MXene. 2022 , 12, 100117	
316	Surface heterostructuring of laser-clad 316L stainless steel through texture-driven deformation twinning. 2022 , 221, 114989	1
315	Room-temperature self-healing supramolecular polyurethanes based on the synergistic strengthening of biomimetic hierarchical hydrogen-bonding interactions and coordination bonds. 2023 , 451, 138673	3

314	Nanocellulose-based membranes for highly efficient molecular separation. 2023, 451, 138711	O
313	Jerky-Inspired Fabrication of Anisotropic Hydrogels with Widely Tunable Mechanical Properties. 2022 , 38, 10986-10993	O
312	Thermodynamics incompatibility-driven covalent crosslinking network in situ phase separation from biomimetic design. 2022 , 258, 125335	O
311	Nano-vascularized polymers: how nanochannels impact the mechanical behaviour at the macroscale. 2022 , 46, 101610	O
310	Interface mediated deformation and fracture of an elasticplastic bimaterial system resolved by in situ transmission scanning electron microscopy. 2022 , 223, 111136	О
309	Effects of microwave-assisted drying on the drying shrinkage and chemical properties of bamboo stems. 2022 , 187, 115547	O
308	Research on high strength and creep behavior of in-situ (Al2O3I+IZrB2)/7055 Al nanocomposites. 2022 , 193, 112296	1
307	On different 3D printing methods and fracture performance in DCB composite specimens including structured interfaces. 2022 , 122, 103552	1
306	Biomimetic formation of fluorapatite nanorods in confinement and the opposite effects of additives on the crystallization kinetics. 2022 , 6, 2678-2689	O
305	Chloride ions directed synthesis of plate-like Cu2O mesocrystals for effective nitrogen fixation.	O
304	Fabrication of Multiscale Polymeric Fibres for Biomedical Applications. 2022,	0
303	Electrospun nanofibers for bone regeneration: from biomimetic composition, structure to function. 2022 , 10, 6078-6106	2
302	Compressive Deformation and the Failure of Functionally Graded Bamboo Structures: Implications for Bioinspired Design. 2022 ,	0
301	Smart biomaterials and their potential applications in tissue engineering. 2022 , 10, 6859-6895	0
300	Bio-chemo-mechanical coupling models of soft biological materials: A review. 2022,	O
299	Fatigue of hydrogels. 2022 , 119-138	0
298	Emerging single-atom iron catalysts for advanced catalytic systems.	1
297	Reinforcing hydrogels with in situ formed amorphous CaCO3. 2022 , 10, 4949-4958	O

296	Fatigue crack non-propagation behavior of a gradient steel structure from induction hardened railway axles. 2023 , 166, 107296	О
295	Investigation of Bioinspired Nacreous Structure on Strength and Toughness. 2022 , 7, 120	О
294	Bioinspired PcBN/hBN fibrous monolithic ceramic: High-temperature crack resistance responses and self-lubricating performances. 2022 , 11, 1391-1403	1
293	Chitosan-Based Scaffolds for Facilitated Endogenous Bone Re-Generation. 2022 , 15, 1023	3
292	Enhanced strengthductility synergy of carbon nanotube/AltuMg composites via introducing laminate structure and grain modification. 2022 , 243, 110178	1
291	Biomechanics and mechanobiology of the bone matrix. 2022 , 10,	1
290	Direct preparation of solid carbon dots by pyrolysis of collagen waste and their applications in fluorescent sensing and imaging. 10,	0
289	A Biomimetic Basalt Fiber/Epoxy Helical Composite Spring with Hierarchical Triple-Helix Structures Inspired by the Collagen Fibers in Compact Bone. 2022 , 7, 135	О
288	Fast Construction of Biomimetic OrganicIhorganic Interface by Crosslinking of Calcium Phosphate Oligomers: A Strategy for Instant Regeneration of Hard Tissue. 2201161	0
287	Robust Underwater Oil-Repellent Biomimetic Ceramic Surfaces: Combining the Stability and Reproducibility of Functional Structures.	О
286	Biomedical Materials and Devices with Focus on Orthopaedic and Cardio-vascular Problems.	0
285	A de novo matrix for macroscopic living materials from bacteria. 2022 , 13,	1
284	Three Dimensional Printing of Bioinspired Crossed-Lamellar Metamaterials with Superior Toughness for Syntactic Foam Substitution. 2022 , 14, 42504-42512	1
283	Biomineralization of bone tissue: calcium phosphate-based inorganics in collagen fibrillar organic matrices. 2022 , 26,	4
282	Mechanically robust bamboo node and its hierarchically fibrous structural design.	1
281	Simple strategy toward tailoring fracture properties of brittle architected materials.	1
280	Anelasticity in thin-shell nanolattices. 2022 , 119,	0
279	A review on nature-inspired gating membranes: from concept to design and applications.	2

278	Lightweight, ultra-tough, 3D-architected hybrid carbon microlattices. 2022 ,	1
277	Matrix-Directed Mineralization for Bulk Structural Materials.	2
276	Recent advances in nacre-inspired anisotropic thermally conductive polymeric nanocomposites.	0
275	Fracture and toughening mechanisms in nanotwinned and nanolayered materials.	O
274	Biomineralization-Inspired Intermediate Precursor for the Controllable Gelation of PolyphenolMacromolecule Hydrogels. 2022 , 14, 44890-44901	O
273	Cellodextrin Phosphorylase-Catalyzed Single-Process Production and Superior Mechanical Properties of OrganicIhorganic Hybrid Hydrogels Composed of Surface-Carboxylated Synthetic Nanocelluloses and Hydroxyapatite.	O
272	Unraveling the Mechanisms of the Apis mellifera Honeycomb Construction by 4D X-ray Microscopy. 2202361	1
271	Multiphysical model to predict thermomechanical fracture of functional hierarchical biomimetic composites. 2022 , 116261	O
270	Ice-Templated Fabrication of Porous Materials with Bioinspired Architecture and Functionality.	1
269	Chipping of ceramic-based dental materials by micrometric particles.	O
268	Superior mechanical properties by exploiting size-effects and multiscale interactions in hierarchically architected foams. 2022 , 101899	O
267	Dynamic dentin: A quantitative microscopic assessment of age and spatial changes to matrix architecture, peritubular dentin, and collagens types I and III. 2022 , 107899	O
266	Mechanical behaviors of multidimensional gradient gyroid structures under static and dynamic loading: A numerical and experimental study. 2022 , 59, 103187	О
265	Coronal dentin differs between young and mature adult humans: A systematic review. 2022 , 144, 105553	O
264	Plastic deformation of polymer matrix composites reinforced with beaded fibers. 2022 , 256, 111985	2
263	Rheological Characterization Tools: A Review. 2022 , 659-678	O
262	Trends characterizing technological innovations that increase environmental pressure: A typology to support action for sustainable consumption. 3,	О
261	Aloe-vera-based biopolymeric composite scaffolds for bone tissue engineering: A review. 2022,	O

260	Investigations into Multi-scale Mechanical Characterization of Bamboo- a Natural Material.	Ο
259	Ultrahigh Mechanical Strength and Robust Room-Temperature Self-Healing Properties of a Polyurethane Traphene Oxide Network Resulting from Multiple Dynamic Bonds. 2022 , 16, 16724-16735	5
258	Programming Multistable Metamaterials to Discover Latent Functionalities. 2202883	0
257	Scaffold-based bone tissue engineering in microgravity: potential, concerns and implications. 2022 , 8,	1
256	Prolonged in situ self-healing in structural composites via thermo-reversible entanglement. 2022 , 13,	0
255	Novel structural designs of 3D-printed osteogenic graft for rapid angiogenesis.	1
254	Tailoring Structure: Current Design Strategies and Emerging Trends to Hierarchical Catalysts. 2022 , 12, 1152	0
253	Advancements and Utilizations of Scaffolds in Tissue Engineering and Drug Delivery. 2022, 23,	Ο
252	A hydrogel-based mechanical metamaterial for the interferometric profiling of extracellular vesicles in patient samples.	0
251	The axial crushing performance of bio-inspired hierarchical multi-cell hexagonal tubes. 2022 , 107880	2
250	Bioinspired Chiral Template Guided Mineralization for Biophotonic Structural Materials. 2206509	1
249	Comparative nanoindentation study of geological and biogenic calcite. 2022, 105538	O
248	Bending Study of Six Biological Models for Design of High Strength and Tough Structures. 2022 , 7, 176	Ο
247	Bioinspired Remineralization of Artificial Caries Lesions Using PDMAEMA/Carbomer/Calcium Phosphates Hybrid Microgels. 2022 , 8, 681	O
246	Role of Inorganic Amorphous Constituents in Highly Mineralized Biomaterials and Their Imitations.	1
245	High strength and damage-tolerance in echinoderm stereom as a natural bicontinuous ceramic cellular solid. 2022 , 13,	O
244	Fractional Modeling in Action: a Survey of Nonlocal Models for Subsurface Transport, Turbulent Flows, and Anomalous Materials.	1
243	The Mechanics of Bioinspired Stiff-to-Compliant Multi-Material 3D-Printed Interfaces. 2022 , 7, 170	2

242	Stiffness and toughness of soft/stiff suture joints in biological composites. 2022, 43, 1469-1484	O
241	Lanthanide-Containing Hybrid Hydrogels with High Mechanical/Luminescent Anisotropic Parameters.	O
240	Dynamic mechanical thermal analysis of unaged and hygrothermally aged discontinuous Bouligand structured CFRP composites. 2022 , 4, 045001	O
239	Learning the Stress-Strain Fields in Digital Composites using Fourier Neural Operator. 2022, 105452	O
238	Bio-inspired tubular hierarchical porous materials with selective liquids absorption. 2023, 18,	O
237	Force-Induced Synergetic Pigmentary and Structural Color Change of Liquid Crystalline Elastomer with Nanoparticle-Enhanced Mechanosensitivity. 2205325	1
236	Rational Design of Soft⊞ard Interfaces through Bioinspired Engineering. 2204498	1
235	New insight into tailorable eutectic high entropy alloys with remarkable strengthductility synergy and ample shaping freedom fabricated using laser powder bed fusion. 2022 , 103257	O
234	A soil-inspired dynamically responsive chemical system for microbial modulation.	1
233	Atomic force microscopy (AFM) and its applications to bone-related research. 2022,	O
232	Adjustable mechanical properties design of microstructure by using generative and adversarial network with gradient penalty. 1-12	O
231	Biocompatible Scaffold Based on Silk Fibroin for Tissue Engineering Applications.	O
230	Dense and strong calcite ceramics prepared by room-temperature cold sintering based on high-pressure-enhanced solubility.	O
229	How getting twisted in scaffold design can promote bone regeneration: A fluidEtructure interaction evaluation. 2022 , 145, 111359	O
228	Optically transparent, ultra-tough, aerosol-sprayable, waterborne polyurethane composite reinforced with natural polymer nanofibers. 2022 , 247, 110353	1
227	Toughening of high-strength scalable laminated nanocomposites with discontinuous Bouligand-type architecture through soft flow-shear-induced alignment. 2022 , 189, 115780	O
226	Generative multiscale analysis of de novo proteome-inspired molecular structures and nanomechanical optimization using a VoxelPerceiver transformer model. 2023 , 170, 105098	О
225	Out-of-plane crushing performances of cell-based hierarchical honeycombs based on the evaluation criteria for ideal energy absorption. 2023 , 182, 110246	1

224	In vitro and in vivo evaluation of hierarchical porous structure for osteogenic differentiation promotion. 2023 , 330, 133388	О
223	Weak hydrogen bonds on CF enhancing interfacial strength and toughness for CFRPs. 2023 , 231, 109826	O
222	Interpenetrating phase composite graded lattice structure integrated with load-bearing and sensing capabilities. 2023 , 164, 107294	О
221	Bio-inspired 3D-printed lattice structures for energy absorption applications: A review. 146442072211219	2
220	Investigation on the Microstructures and Mechanical Properties of the Shells of Tridacna crocea.	О
219	Collagen piezoelectricity in osteogenesis imperfecta and its role in intrafibrillar mineralization. 2022 , 5,	O
218	Recent advances on injectable nanocomposite hydrogels towards bone tissue rehabilitation.	О
217	Dry shrinkage of Moso bamboo in relation to vascular bundle structure. 2022 ,	O
216	Isotropically Ultrahigh Thermal Conductive Polymer Composites by Assembling Anisotropic Boron Nitride Nanosheets into a Biaxially Oriented Network.	1
215	Generating 3D architectured nature-inspired materials and granular media using diffusion models based on language cues.	O
214	Facile, High-Yield, and Freeze-and-Thaw-Assisted Approach to Fabricate Bamboo-Derived Hollow Lignocellulose Microcapsules for Controlled Drug Release.	О
213	Biomimicking Nature-Inspired Design Structures An Experimental and Simulation Approach Using Additive Manufacturing. 2022 , 7, 186	1
212	Polymers for Additive Manufacturing. 1-30	О
211	Fabrication of Multilayered Biofunctional Material with an Enamel-like Structure. 2022 , 23, 13810	O
210	Pullout resistance of beaded fibers in a polymer matrix. 1-43	О
209	A Continuous Gradient Colloidal Glass. 2208745	1
208	Nature-mimicking rigid tough interface in fibrous composites: Effect of polymer/GO combination. 2022 , 33, 104883	Ο
207	Magnesium-organic framework modified biodegradable electrospun scaffolds for promoting osteogenic differentiation and bone regeneration. 2022 , 181, 111692	O

206	Radially oriented functional thermal materials prepared by flow field-driven self-assembly strategy. 2022 , 104, 107986	О
205	Light interaction with natural photonic crystal from band gap structure to possible light localization phenomena. 2022 , 52, 101089	O
204	High-temperature fracture behaviour of layered alumina ceramics with textured microstructure. 2022 ,	О
203	Blending strategy to modify PEEK-based orthopedic implants. 2022 , 110427	O
202	Mechanical Janus Structures by Soft-Hard Material Integration. 2208339	О
201	Separator Design for High-Performance Supercapacitors: Requirements, Challenges, Strategies, and Prospects. 56-78	2
200	Ultrasmall Sized Calcium Phosphate Nanoclusters Based Organic-Inorganic Biofiber for Accelerated Bone Fracture Healing. 2022 , 100290	O
199	Bioinspired Impact-Resistant and Self-Monitoring Nanofibrous Composites. 2205219	O
198	Bone tissue engineering for treating osteonecrosis of the femoral head. 2023 , 3,	2
197	Global perspective and African outlook on additive manufacturing research lan overview. 2022, 9, 35	O
196	Multiscale computational solid mechanics: data and machine learning. 2022, 38, 568-585	О
195	Multi-responsive and programmable actuators made with nacre-inspired graphene oxide-bacterial cellulose film. 2022 , 18, 9057-9068	O
194	3D-printed polymer foams maintain stiffness and energy dissipation under repeated loading. 2023 , 37, 101453	О
193	High strength in combination with high toughness in layered intrinsic heterocyclic aramid films via constructing liquid crystal-like structure during gelation self-assembly. 2023 , 183, 111740	O
192	Inorganic-based biomaterials for rapid hemostasis and wound healing. 2022 , 14, 29-53	1
191	Controlling the hierarchical microstructure of bioceramic scaffolds by 3D printing of emulsion inks. 2023 , 61, 103332	O
190	Bio-inspired multi-cell tubular structures approaching ideal energy absorption performance. 2023 , 225, 111495	О
189	Accurate prediction of topology of composite plates via machine learning and propagation of elastic waves. 2023 , 37, 101465	O

188	Ultrastrong and damage-tolerant ceramic architectures via 3D printing. 2023, 61, 103361	Ο
187	Ultra-lightweight living structural material for enhanced stiffness and environmental sensing. 2023 , 18, 100504	O
186	Cellulose gelation in NaOH(aq) by CO2 absorption: Effects of holding time and concentration on biomaterial development. 2023 , 302, 120355	2
185	A bionic solution to make cement matrix tough. 2023 , 136, 104881	O
184	Preparation of collagen fibrils from mineralized tissues and evaluation by atomic force microscopy. 2023 , 138, 105624	О
183	Constructing synergistically strengthening-toughening 3D network bundle structures by stereocomplex crystals for manufacturing high-performance thermoplastic polyurethane nanofibers reinforced poly(lactic acid) composites. 2023 , 232, 109847	O
182	Surface morphology regulation of colloidal Nanoparticles: A convenient Kinetically-Controlled seeded growth strategy. 2023 , 633, 284-290	О
181	3D printing of multifunctional gradient bone scaffolds with programmable component distribution and hierarchical pore structure. 2023 , 166, 107361	O
180	Templating strategies for 3D-structured thermally conductive composites: Recent advances and thermal energy applications. 2023 , 133, 101054	О
179	In Situ Identification of Secondary Structures in Unpurified Bombyx mori Silk Fibrils Using Polarized Two-Dimensional Infrared Spectroscopy. 2022 , 23, 5340-5349	1
178	Editorial: Biologically-informed approaches to design processes and applications. 10,	0
177	Bioinspired Tough and Strong Fibers with Hierarchical CoreBhell Structure. 2201962	1
176	Inverse design of truss lattice materials with superior buckling resistance. 2022, 8,	О
175	Gradient Micropillar Array Inspired by Tree Frog for Robust Adhesion on Dry and Wet Surfaces. 2022 , 7, 209	O
174	Crashworthiness analysis of bio-inspired hierarchical circular tube under axial crushing.	0
173	Achievements in Mesoporous Bioactive Glasses for Biomedical Applications. 2022 , 14, 2636	O
172	Hierarchically structured bioinspired nanocomposites.	5
171	Reevaluating Flexible Lithium-Ion Batteries from the Insights of Mechanics and Electrochemistry. 2022 , 5,	O

170	Nature-inspired architected materials using unsupervised deep learning. 2022, 1,	О
169	Bamboo nodes show nature's wisdom.	O
168	Bioinspired basalt fiber composites with higher impact resistance through coupling sinusoidal and helical structures inspired by mantis shrimp. 2022 , 108073	1
167	Peculiar Tensile and Fracture Behaviors of Natural Silk Fiber in the Presence of an Artificial Notch. 2022 , 55, 11059-11067	1
166	Anomalous inapplicability of nacre-like architectures as impact-resistant templates in a wide range of impact velocities. 2022 , 13,	О
165	Combining Finite Element and Machine Learning Methods to Predict Structures of Architectured Interlocking Ceramics.	O
164	Maximum utilization of nacre-mimetic composites by architecture manipulation and interface modification towards critical damage state. 2022 , 109893	1
163	An experimental and numerical study of the microstructural and biomechanical properties of human peripheral nerve endoneurium for the design of tissue scaffolds. 10,	O
162	Preparation, Properties, and Mechanism of Flame-Retardant Poly(vinyl alcohol) Aerogels Based on the Multi-Directional Freezing Method. 2022 , 23, 15919	О
161	Lightweight and Strong Ceramic Network with Exceptional Damage Tolerance.	O
160	Tensile behaviour of unaged and hygrothermally aged discontinuous Bouligand structured CFRP composites.	О
159	Development of osteon-like scaffold-cell construct by quadruple coaxial extrusion-based 3D bioprinting of nanocomposite hydrogel. 2022 , 213254	1
158	Additive manufacturing of porous biominerals.	O
157	Tough and Conductive Nacre-inspired MXene/Epoxy Layered Bulk Nanocomposites.	O
156	Tough and Conductive Nacre-inspired MXene/Epoxy Layered Bulk Nanocomposites.	O
155	Nature-inspired reentrant surfaces. 2022 , 101064	1
154	Preparation and characterization of oriented hydroxyapatite bundles in supersaturated solution: Ionic interference and charge balance. 2022 ,	O
153	Research Progress of Shape Memory Polymer and 4D Printing in Biomedical Application. 2201975	1

152	Limpet teeth microstructure unites auxeticity with extreme strength and high stiffness. 2022, 8,	0
151	Compression and Deformation Behaviors of Hierarchical Circular-Cell Lattice Structure with Enhanced Mechanical Properties and Energy Absorption Capacity. 2022 , 9, 786	O
150	Bioinspired Materials: From Distinct Dimensional Architecture to Thermal Regulation Properties.	O
149	Bone Tissue Engineering Scaffolds: Function of Multi-Material Hierarchically Structured Scaffolds. 2202766	O
148	Optimisation of Selective Laser Melted Ti6Al4V Functionally Graded Lattice Structures Accounting for Structural Safety. 2022 , 15, 9072	О
147	Accurate Prediction of Microstructure of Composites using Machine Learning. 2200674	O
146	Super-Strong Hydrogel Composites Reinforced with PBO Nanofibers for Cartilage Replacement. 2200240	O
145	Macroscale Fabrication of Lightweight and Strong Porous Carbon Foams Through Template-Coating pair Design. 2206416	O
144	Could Bio-Inspired Nacre-Like Ceramics be Suitable to Fabricate Musical Instruments?. 2022 , 5, 20592043221	1461
143	Interfacial Crack Growth Between Nacreous Tablets. 2023 ,	O
143	Interfacial Crack Growth Between Nacreous Tablets. 2023, Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023, 101072	0
	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare.	
142	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023 , 101072	1
142	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023, 101072 Electric, magnetic, and shear field-directed assembly of inorganic nanoparticles.	1
142 141 140	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023, 101072 Electric, magnetic, and shear field-directed assembly of inorganic nanoparticles. Hydrogels with ultra-highly additive adjustable toughness under quasi-isochoric conditions.	1 0
142 141 140	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023, 101072 Electric, magnetic, and shear field-directed assembly of inorganic nanoparticles. Hydrogels with ultra-highly additive adjustable toughness under quasi-isochoric conditions. Bioinspired Carbon Superstructures for Efficient Electromagnetic Shielding. Investigation of interfacial strength in nacre-mimicking tungsten heavy alloys for nuclear fusion	1 0 0
142 141 140 139	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023, 101072 Electric, magnetic, and shear field-directed assembly of inorganic nanoparticles. Hydrogels with ultra-highly additive adjustable toughness under quasi-isochoric conditions. Bioinspired Carbon Superstructures for Efficient Electromagnetic Shielding. Investigation of interfacial strength in nacre-mimicking tungsten heavy alloys for nuclear fusion applications. 2023, 13,	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

134	Self-assembly of bioinspired peptides for biomimetic synthesis of advanced peptide-based nanomaterials: A mini-review.	0
133	Multi-scale modelling predicts plant stem bending behaviour in response to wind to inform lodging resistance. 2023 , 10,	Ο
132	Understanding Frugal Engineering for Equity: Exploring Convergence of Biological Designs and Social Innovations. 1-21	0
131	Regulated multi-scale mechanical performance of functionally graded lattice materials based on multiple bioinspired patterns. 2023 , 226, 111564	O
130	Failure progression and toughening mechanism of 3D-printed nacre-like structures under in-plane compression. 2023 , 138, 105653	0
129	Improved interlaminar fracture toughness of carbon fiber/epoxy composites by a combination of extrinsic and intrinsic multiscale toughening mechanisms. 2023 , 252, 110503	1
128	Constructing a Porous Structure on the Carbon Fiber Surface for Simultaneously Strengthening and Toughening the Interface of Composites. 2023 , 15, 2437-2448	0
127	Revelation of microcracks as tooth structural element by X-ray tomography and machine learning. 2022 , 12,	O
126	Bioinspired Basalt Fiber Composites with Higher Impact Resistance Through Coupling Sinusoidal and Helical Structures Inspired by Mantis Shrimp.	0
125	Tooth Diversity Underpins Future Biomimetic Replications. 2023 , 8, 42	O
124	Bamboo cellulose: Structure, properties, and applications. 2023 , 23-48	0
123	Bird-inspired robotics principles as a framework for developing smart aerospace materials. 00219983231152	26 0
122	Renewable micro hydroxyapatite (mHA) extracted from animal bones, and fabricated mHA-Jute-vinyl ester bio-composite as an intumescent green flame retardant material.	0
121	Protein-Based Biological Materials: Molecular Design and Artificial Production.	O
120	Bio-inspired advancements in additive manufacturing. 2023 , 313-324	0
119	Joint-Inspired Liquid and Thermal Conductive Interface for Designing Thermal Interface Materials with High Solid Filling yet Excellent Thixotropy. 2214071	Ο
118	Bioprinting of bone. 2023 , 95-118	O
117	Bio-inspired nacre-like composites with excellent mechanical properties, gas-barrier function and fire-retardant performances based on self-assembly between hyperbranched poly(amido amine)s and montmorillonite. 2023 , 13, 3661-3668	O

116	Circulating Tumor Cells in Cancer Diagnostics and Prognostics by Single-Molecule and Single-Cell Characterization.	2
115	Scalable Manufacturing of Mechanical Robust Bio-Inspired Ceramic-Resin Composites with Locally Tunable Heterogeneous Structures. 2209510	О
114	Electrospun fibrous membrane reinforced hydrogels with preferable mechanical and tribological performance as cartilage substitutes.	О
113	Polymerization within Nanoporous Anodized Alumina Oxide Templates (AAO): A Critical Survey. 2023 , 15, 525	O
112	Laser additive manufacturing of lightweight reticulated shell structure with elevated compressive property inspired by diving bell of water spider. 2023 , 485-508	О
111	Advances in 3D Printing Technology for Tissue Engineering. 2023 , 181-206	О
110	Rpdas Doped Antibacterial Mof-Hydrogel: Bio-Inspired Synergistic Whole-Process Wound Healing.	О
109	Advances in atomic oxygen resistant polyimide composite films. 2023 , 168, 107459	O
108	New Bamboo-Based Materials. 2023, 323-344	О
107	Chitosan Nanocomposites as Scaffolds for Bone Tissue Regeneration. 2023 , 377-394	O
106	Positive, negative and controlled durotaxis.	O
105	Fabrication and Testing of Bioinspired Composites with Curved Multilayer Microstructures.	O
104	A Review of the Mechanical Properties of Graphene Aerogel Materials: Experimental Measurements and Computer Simulations. 2023 , 16, 1800	O
103	Superior Plasticity of Silver-Based Composites with Reinforcing Pyrochlore. 2023 , 13, 325	O
102	Nanostructured 3D-Printed Hybrid Scaffold Accelerates Bone Regeneration by Photointegrating Nanohydroxyapatite. 2300038	О
101	Architected microlattices for structural and functional applications: Lessons from nature. 2023 , 6, 1082-1095	O
100	Biomimetic Gradient Bouligand Structure Enhances Impact Resistance of Ceramic-Polymer Composites.	О
99	Additively manufactured MAX- and MXene-composite scaffolds for bone regeneration- recent advances and future perspectives. 2023 , 225, 113282	Ο

98	Bioinspired design optimization for pseudo-ductility in platelet fibre laminates. 2023, 168, 107494	O
97	Development of ceramic/Mg lamellar composites with superior high-temperature mechanical properties. 2023 , 872, 144932	O
96	A crack-bridging model of brick and mortar architecture considering the anisotropic property. 2023 , 312, 116868	О
95	Emerging trends in multi-modal multi-dimensional biomechanical materials research. 2023 , 141, 105754	O
94	Nacre-like graphene oxide nanocomposite with nanodiamonds as nanoasperities. 2023, 135, 109878	0
93	Atomic-scale deformation mechanisms of nano-polycrystalline Cu/Al layered composites: almolecular dynamics simulation. 2023 , 24, 1177-1189	O
92	3D printing of architectured epoxy-based composite lattices with exceptional strength and toughness. 2023 , 256, 110653	О
91	Design and assembly of chain-oriented-crystalline multilayered composite with largely improved mechanical strength. 2023 , 238, 110031	O
90	Continuous confined interfacial design in graphene/Cu composites with structural integrity enables improvement of comprehensive properties. 2023 , 169, 107525	0
89	Constructing tough bilayer hydrogel with excellent lubrication performance for load-bearing application. 2023 , 184, 108436	O
88	An engineered lamellar bone mimicking full-scale hierarchical architecture for bone regeneration. 2023 , 27, 181-199	0
87	Lignin-induced sacrificial conjoined-network enabled strong and tough chitosan membrane for food preservation. 2023 , 313, 120876	O
86	Mixed-mode fracture model to quantify local toughness in nacre-like alumina. 2023, 43, 4472-4481	0
85	Energy absorption characteristics of bio-inspired hierarchical multi-cell bi-tubular tubes. 2023 , 251, 108260	O
84	Construction relationship between a functionally graded structure of bamboo and its strength and toughness: Underlying mechanisms. 2023 , 379, 131241	0
83	Fabrication of graphene/Cu composites with in-situ grown graphene from solid carbon source. 2023 , 24, 2372-2384	O
82	3D-printed bioinspired Al2O3/polyurea dual-phase architecture with high robustness, energy absorption, and cyclic life. 2023 , 463, 142378	0
81	The interplay between constituent material and architectural disorder in bioinspired honeycomb structures. 2023 , 188, 103863	O

80	Bamboo-inspired strong, tough and stable composites derived from renewable bamboo. 2023 , 194, 116292	1
79	Multi-scale hierarchical carbon nanotube fiber reinforced composites towards enhancement of axial/transverse strength and fracture toughness. 2023 , 167, 107449	O
78	Generalization and optimization of two hierarchical non-self-similar bio-inspired composites. 2023 , 10, 100172	0
77	Biocompatibility and osteointegration capability of ETCP manufactured by stereolithography 3D printing: In vitro study. 2023 , 18,	O
76	Characterization and reaction mechanism of in-situ micro-laminated Cr2AlC coatings by plasma spraying Cr3C2/Al/Cr powder mixtures. 2023 , 456, 129271	0
75	Mixed-mode I/II fracture performances of glued laminated bamboo in the in-plane longitudinal direction. 2023 , 281, 109080	O
74	An ultralow-friction, low-temperature-lubrication, anti-volatilization and anti-corrosion organohydrogel merely containing nanosilica gelator. 2023 , 180, 108302	О
73	Plants as inspiration for material-based sensing and actuation in soft robots and machines.	1
72	Hierarchical levels of the ginkgo seed shell. 2023 , 68, 376-378	О
71	Dendritic Polymers in Tissue Engineering: Contributions of PAMAM, PPI PEG and PEI to Injury Restoration and Bioactive Scaffold Evolution. 2023 , 15, 524	О
70	Wood-nacre[]Development of a Bio-inspired Wood-Based Composite for Beam and 3D-Surface Elements with Improved Failure Mechanisms.	0
69	Synthesis Approach and Adsorption Properties of SiOC Nanocomposite by Chitin Templating. 2022 , 37, 1041-1047	О
68	Elastically Isotropic Truss-Plate-Hybrid Hierarchical Microlattices with Enhanced Modulus and Strength. 2206024	0
67	Biological Scaffolds Assembled with Magnetic Nanoparticles for Bone Tissue Engineering: A Review. 2023 , 16, 1429	О
66	Bio-Inspired Morphological Evolution of Metastructures with New Operation Modalities. 2300019	О
65	Application of Functionalized Carbon Nanotubes in Biomimetic/Bioinspired Systems. 2023, 257-279	О
64	Chitosan scaffolds with mesoporous hydroxyapatite and mesoporous bioactive glass.	О
63	Lightweight, highly tough and durable YBa2Cu3O7⊠ superconductor. 2023 , 10,	O

62	Functionalized Cortical Bone-Inspired Composites Adapt to the Mechanical and Biological Properties of the Edentulous Area to Resist Fretting Wear. 2023 , 10,	O
61	Unsupervised cross-domain translation via deep learning and adversarial attention neural networks and application to music-inspired protein designs. 2023 , 4, 100692	O
60	Interface modulations of high-performance graphene anticorrosion coatings. 2023, 178, 107463	O
59	Natural micropatterned fish scales combing direct osteogenesis and osteoimmunomodulatory functions for enhancing bone regeneration. 2023 , 255, 110620	O
58	Bioinspired composites: nature guidance for advanced materials future. 2023, 5, 012004	O
57	Collagen/ECarrageenan-Based Scaffolds as Biomimetic Constructs for In Vitro Bone Mineralization Studies. 2023 , 24, 1258-1266	O
56	Bioinspired Cellular Single-Walled Carbon Nanotube Aerogels with Temperature-Invariant Elasticity and Fatigue Resistance for Potential Energy Dissipation. 2023 , 6, 3012-3019	О
55	Thermopressure Coupling Effect Mimicking Natural Graphite Formation to Enhance the Storage KIbn Performance of Carbonaceous Heterostructures. 2023 , 6,	O
54	Effect of Geometry and Orientation on the Tensile Properties and Failure Mechanisms of Compliant Suture Joints. 2023 , 15, 11084-11091	O
53	3D printing of living structural biocomposites. 2023 , 62, 21-32	1
52	Assembly of Nanowires into Macroscopic One-Dimensional Fibers in Liquid State.	O
51	Organized mineralized cellulose nanostructures for biomedical applications.	O
50	Functional and Structural Facts of Effective Electromagnetic Interference Shielding Materials: A Review. 2023 , 8, 8134-8158	O
49	The complex structure of Fomes fomentarius represents an architectural design for high-performance ultralightweight materials. 2023 , 9,	O
49 48	The complex structure of Fomes fomentarius represents an architectural design for	0
	The complex structure of Fomes fomentarius represents an architectural design for high-performance ultralightweight materials. 2023 , 9, Local electropulse-induced gradient and hierarchical architecture of soft-hard phase in 35CrMo	
48	The complex structure of Fomes fomentarius represents an architectural design for high-performance ultralightweight materials. 2023, 9, Local electropulse-induced gradient and hierarchical architecture of soft-hard phase in 35CrMo steel. 2023, 869, 144793 Grayscale Digital Light Processing Gradient Printing for Stress Concentration Reduction and	0

44	Hierarchically Structured Hydroxyapatite Particles Facilitate the Enhanced Integration and Selective Anti-Tumor Effects of Amphiphilic Prodrug for Osteosarcoma Therapy. 2202668	O
43	Flexible CNTs/CNF-WPU aerogel for smart electromagnetic wave absorbing with tuning effective absorption bandwidth. 2023 , 207, 13-22	O
42	Drosophila melanogaster resilin improves the mechanical properties of transgenic silk. 2023, 18, e0282533	О
41	A Molecular Scale Understanding of Misorientation Toughening in Corals and Seashells. 2300373	O
40	Could effective fracture toughness of polycrystalline aggregates exceed inner grain fracture toughness by adjusting toughness of grain boundary?. 2023 , 282, 109170	O
39	Fracture toughness analysis of interlocked brick and mortar structure considering the anisotropic behavior.	O
38	Architected Metal Selenides via Sequential Cation and Anion Exchange on Self-Organizing Nanocomposites. 2023 , 35, 2394-2401	О
37	Knots are not for naught: Design, properties, and topology of hierarchical intertwined microarchitected materials. 2023 , 9,	O
36	Perspective and Prospects for Ordered Functional Materials. 2300193	O
35	Extreme hardness via nanoscale confinement effects in ultra-low density carbon matrix nanocomposites. 2023 , 207, 245-260	O
34	Salt Transport in Crosslinked Hydrogel Membranes Containing Zwitterionic Sulfobetaine Methacrylate and Hydrophobic Phenyl Acrylate. 2023 , 15, 1387	О
33	Preparation and Characterization of Hydrotalcite-Derived Material from Mullite-Rich Tailings (II): CO2 Capture from Coal-Fired Thermal Power Plants. 2023 , 299-330	O
32	Bone regeneration by biodegradable polymers. 2022 , 61, 816-845	О
31	Efficiency of variable stiffness composites with curvilinear fibers under shear loading. 2023,	O
30	Toughness Amplification via Controlled Nanostructure in Lightweight Nano-Bouligand Materials. 2207779	O
29	Biocrystal assembly patterns, biopolymer distribution and material property relationships in mytilus galloprovincialis, Bivalvia, and haliotis glabra, Gastropoda, shells. 2023 , 28, 101749	O
28	Biomimetic Mineralization: From Microscopic to Macroscopic Materials and Their Biomedical Applications.	О
27	Design, fabrication, and properties evaluation of novel nested lattice structures. 2023 , 68, 103510	О

26	Bioinspired Stabilization of Amorphous Calcium Carbonate by Carboxylated Nanocellulose Enables Mechanically Robust, Healable, and Sensing Biocomposites. 2023 , 17, 6664-6674	O
25	Composites with high omnidirectional fracture toughness due to helical interlocking fasteners are found in gingko seed shells. 2023 , 10,	O
24	Biomimetic cellular-structured MCMB@WC composites with excellent mechanical properties. 2023,	О
23	Porous Hybrid Electrode Materials for High Energy Density Li-Ion and Li-S Batteries. 2023 , 193-214	O
22	Ultrastrong and fatigue-resistant bioinspired conductive fibers via the in situ biosynthesis of bacterial cellulose. 2023 , 15,	0
21	The Fracture Mechanics of Biological Materials. 2023 , 255-282	O
20	Mechanical properties of Al2O3 and Al2O3/Al interpenetrated functional gradient structures by 3D printing and melt infiltration. 2023 , 950, 169948	0
19	Advanced Engineered Wood-Material Concepts. 2023 , 1835-1888	O
18	Biological Vibration Damping Strategies and Mechanisms.	O
17	Bioinspired acoustic metamaterials: From natural designs to optimized structures. 10,	O
16	Biomineral mesostructure.	O
15	Controlled Hierarchical Self-Assembly of Nanoparticles and Chiral Molecules into Tubular Nanocomposites.	O
14	High Strength Titanium with Fibrous Grain for Advanced Bone Regeneration.	0
13	A furan-containing biomimetic multiphase structure for strong and supertough sustainable adhesives. 2023 , 4, 101374	O
12	Fungal Engineered Living Materials: The Viability of Pure Mycelium Materials with Self-Healing Functionalities.	О
11	Lightweight Structural Biomaterials with Excellent Mechanical Performance: A Review. 2023 , 8, 153	0
10	Synergistically toughened silicone rubber nanocomposites using carbon nanotubes and molybdenum disulfide for stretchable strain sensors. 2023 , 259, 110759	0
9	Unveiling the secret of ancient Maya masons: Biomimetic lime plasters with plant extracts. 2023 , 9,	O

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8	Soft, Strong, Tough, and Durable Bio-Hydrogels Via Maximizing Elastic Entropy.	Ο
7	Generative design of de novo proteins based on secondary-structure constraints using an attention-based diffusion model. 2023 ,	O
6	Molecular Engineering of Bio-Assemblies: Prospects and Design Rules for Sustainable, Wearable Electromechanical Materials. 2023 , 245-269	O
5	Bionanofiber-reinforced transparent nanocomposites for future applications. 2023 , 297-325	O
4	Improved ballistic performance of a continuous-gradient B4C/Al composite inspired by nacre. 2023 , 874, 145071	O
3	Bamboo-Inspired Structurally Efficient Materials with a Large Continuous Gradient.	O
2	Viral protein nanoparticles (Part 1): pharmaceutical characteristics. 2023, 106460	0
1	Advancing collagen-based biomaterials for oral and craniofacial tissue regeneration. 2023, 5,	O