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List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

5,120
citations

94269

37
h-index

88477

70
g-index

90
all docs

90
docs citations

90
times ranked

7326
citing authors

#	ARTICLE	IF	CITATIONS
1	Iron-Clad Fibers: A Metal-Based Biological Strategy for Hard Flexible Coatings. <i>Science</i> , 2010, 328, 216-220.	6.0	838
2	Anti-fatigue-fracture hydrogels. <i>Science Advances</i> , 2019, 5, eaau8528.	4.7	305
3	Mussel-Mimetic Protein-Based Adhesive Hydrogel. <i>Biomacromolecules</i> , 2014, 15, 1579-1585.	2.6	265
4	Protein- and Metal-dependent Interactions of a Prominent Protein in Mussel Adhesive Plaques. <i>Journal of Biological Chemistry</i> , 2010, 285, 25850-25858.	1.6	227
5	Adhesion of Mussel Foot Protein-3 to TiO ₂ Surfaces: the Effect of pH. <i>Biomacromolecules</i> , 2013, 14, 1072-1077.	2.6	213
6	Accelerating the design of biomimetic materials by integrating RNA-seq with proteomics and materials science. <i>Nature Biotechnology</i> , 2013, 31, 908-915.	9.4	171
7	Osmotic pressure induced tensile forces in tendon collagen. <i>Nature Communications</i> , 2015, 6, 5942.	5.8	167
8	Self-assembly of amorphous calcium carbonate microlens arrays. <i>Nature Communications</i> , 2012, 3, 725.	5.8	147
9	Cortical bone composition and orientation as a function of animal and tissue age in mice by Raman spectroscopy. <i>Bone</i> , 2010, 47, 392-399.	1.4	131
10	Enamel-like apatite crown covering amorphous mineral in a crayfish mandible. <i>Nature Communications</i> , 2012, 3, 839.	5.8	116
11	Textured fluorapatite bonded to calcium sulphate strengthen stomatopod raptorial appendages. <i>Nature Communications</i> , 2014, 5, 3187.	5.8	103
12	Application of Laser Postionization Secondary Neutral Mass Spectrometry/Time-of-Flight Secondary Ion Mass Spectrometry in Nanotoxicology: Visualization of Nanosilver in Human Macrophages and Cellular Responses. <i>ACS Nano</i> , 2011, 5, 3059-3068.	7.3	91
13	Nanoconfined Î²-Sheets Mechanically Reinforce the Supra-Biomolecular Network of Robust Squid Sucker Ring Teeth. <i>ACS Nano</i> , 2014, 8, 7170-7179.	7.3	88
14	Peptide-Coated Silver Nanoparticles: Synthesis, Surface Chemistry, and pH-Triggered, Reversible Assembly into Particle Assemblies. <i>Chemistry - A European Journal</i> , 2009, 15, 5831-5844.	1.7	85
15	Observations of Multiscale, Stress-Induced Changes of Collagen Orientation in Tendon by Polarized Raman Spectroscopy. <i>Biomacromolecules</i> , 2011, 12, 3989-3996.	2.6	83
16	3D Raman mapping of the collagen fibril orientation in human osteonal lamellae. <i>Journal of Structural Biology</i> , 2014, 187, 266-275.	1.3	80
17	Hierarchical Calcite Crystals with Occlusions of a Simple Polyelectrolyte Mimic Complex Biomineral Structures. <i>Advanced Functional Materials</i> , 2012, 22, 4668-4676.	7.8	69
18	Catechol-Functionalized Chitosan/Iron Oxide Nanoparticle Composite Inspired by Mussel Thread Coating and Squid Beak Interfacial Chemistry. <i>Langmuir</i> , 2013, 29, 10899-10906.	1.6	69

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19	Mussel foot protein-1 (mcfp-1) interaction with titania surfaces. Journal of Materials Chemistry, 2012, 22, 15530.	6.7	61
20	Polarized Raman Anisotropic Response of Collagen in Tendon: Towards 3D Orientation Mapping of Collagen in Tissues. PLoS ONE, 2013, 8, e63518.	1.1	61
21	The Mantis Shrimp Saddle: A Biological Spring Combining Stiffness and Flexibility. Advanced Functional Materials, 2015, 25, 6437-6447.	7.8	61
22	An Alternative Route Towards Metal-Polymer Hybrid Materials Prepared by Vapor-Phase Processing. Advanced Functional Materials, 2011, 21, 3047-3055.	7.8	60
23	Flavonoid Insertion into Cell Walls Improves Wood Properties. ACS Applied Materials & Interfaces, 2012, 4, 5782-5789.	4.0	56
24	Silicification of Peptide-Coated Silver Nanoparticles-A Biomimetic Soft Chemistry Approach toward Chiral Hybrid Core-Shell Materials. ACS Nano, 2011, 5, 820-833.	7.3	55
25	Relationship between the $\nu_2\text{PO}_4/\text{amide I}$ ratio assessed by Raman spectroscopy and the calcium content measured by quantitative backscattered electron microscopy in healthy human osteonal bone. Journal of Biomedical Optics, 2014, 19, 065002.	1.4	55
26	Multiscale characterization of the mineral phase at skeletal sites of breast cancer metastasis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10542-10547.	3.3	55
27	Multi-scale thermal stability of a hard thermoplastic protein-based material. Nature Communications, 2015, 6, 8313.	5.8	54
28	Glycopolymers vesicles with an asymmetric membrane. Chemical Communications, 2009, , 1478.	2.2	53
29	Nanoengineered Colloidal Probes for Raman-Based Detection of Biomolecules inside Living Cells. Small, 2013, 9, 351-356.	5.2	53
30	Accelerated Growth Plate Mineralization and Foreshortened Proximal Limb Bones in Fetuin-A Knockout Mice. PLoS ONE, 2012, 7, e47338.	1.1	50
31	Mussel-inspired adhesive protein-based electrospun nanofibers reinforced by Fe-DOPA complexation. Journal of Materials Chemistry B, 2015, 3, 112-118.	2.9	49
32	Nanoengineered Metal Surface Capsules: Construction of a Metal-Protection System. Small, 2012, 8, 820-825.	5.2	45
33	Nanoplasmonic smooth silica versus porous calcium carbonate bead biosensors for detection of biomarkers. Annalen Der Physik, 2012, 524, 723-732.	0.9	41
34	Correlative imaging reveals physiochemical heterogeneity of microcalcifications in human breast carcinomas. Journal of Structural Biology, 2018, 202, 25-34.	1.3	41
35	Ketoprofen-poly(vinylpyrrolidone) physical interaction. Journal of Crystal Growth, 2004, 265, 302-308.	0.7	40
36	Mechanical homeostasis of a DOPA-enriched biological coating from mussels in response to metal variation. Journal of the Royal Society Interface, 2015, 12, 20150466.	1.5	40

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37	Unraveling the Molecular Requirements for Macroscopic Silk Supercontraction. ACS Nano, 2017, 11, 9750-9758.	7.3	40
38	Mapping and Profiling Lipid Distribution in a 3D Model of Breast Cancer Progression. ACS Central Science, 2019, 5, 768-780.	5.3	40
39	Roadmap across the mesoscale for durable and sustainable cement paste – A bioinspired approach. Construction and Building Materials, 2016, 115, 13-31.	3.2	39
40	Fabrication of Bifunctional Gold/Gelatin Hybrid Nanocomposites and Their Application. ACS Applied Materials & Interfaces, 2014, 6, 1999-2002.	4.0	38
41	Composite SERS-based satellites navigated by optical tweezers for single cell analysis. Analyst, The, 2015, 140, 4981-4986.	1.7	36
42	Pseudoelastic behaviour of a natural material is achieved via reversible changes in protein backbone conformation. Journal of the Royal Society Interface, 2012, 9, 2911-2922.	1.5	35
43	Exploration of Biomass-Derived Activated Carbons for Use in Vanadium Redox Flow Batteries. ACS Sustainable Chemistry and Engineering, 2020, 8, 9472-9482.	3.2	33
44	A New Tetrahydrated Form of Sodium Naproxen. Journal of Pharmaceutical Sciences, 2007, 96, 156-167.	1.6	31
45	Optical Heating and Temperature Determination of Core–Shell Gold Nanoparticles and Single-Walled Carbon Nanotube Microparticles. Small, 2015, 11, 1320-1327.	5.2	31
46	Marine hydroid perisarc: A chitin- and melanin-reinforced composite with DOPA–iron(III) complexes. Acta Biomaterialia, 2013, 9, 8110-8117.	4.1	30
47	Characterization and compaction behaviour of nimesulide crystal forms. International Journal of Pharmaceutics, 2007, 342, 137-144.	2.6	28
48	Layered growth of crayfish gastrolith: About the stability of amorphous calcium carbonate and role of additives. Journal of Structural Biology, 2015, 189, 28-36.	1.3	28
49	Supramolecular gas–solid reaction between formic acid vapours and solid [CoIII(β -5-C5H4COOH)(β -5-C5H4COO)]. Chemical Communications, 2002, , 2296-2297.	2.2	27
50	The three-dimensional structure of anosteocytic lamellated bone of fish. Acta Biomaterialia, 2015, 13, 311-323.	4.1	27
51	Materials Nanoarchitecturing via Cation-Mediated Protein Assembly: Making Limpet Teeth without Mineral. Advanced Materials, 2017, 29, 1701171.	11.1	27
52	Particle Size Effect of Volcanic Ash towards Developing Engineered Portland Cements. Journal of Materials in Civil Engineering, 2018, 30, .	1.3	25
53	Multiscale structural insights of load bearing bamboo: A computational modeling approach. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 107, 103743.	1.5	25
54	Nacre toughening due to cooperative plastic deformation of stacks of co-oriented aragonite platelets. Communications Materials, 2020, 1, .	2.9	24

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55	Differences in the interaction between aryl propionic acid derivatives and poly(vinylpyrrolidone) K30: A multi-methodological approach. <i>Journal of Pharmaceutical Sciences</i> , 2009, 98, 4216-4228.	1.6	23
56	Solid-state and unilateral NMR study of deterioration of a Dead Sea Scroll fragment. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 1551-1557.	1.9	23
57	Large area sub-micron chemical imaging of magnesium in sea urchin teeth. <i>Journal of Structural Biology</i> , 2015, 189, 269-275.	1.3	22
58	Dependence of Mechanical Properties of Lacewing Egg Stalks on Relative Humidity. <i>Biomacromolecules</i> , 2012, 13, 3730-3735.	2.6	21
59	Paleo-Inspired Systems: Durability, Sustainability, and Remarkable Properties. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 7288-7295.	7.2	21
60	Multimodal correlative investigation of the interplaying micro-architecture, chemical composition and mechanical properties of human cortical bone tissue reveals predominant role of fibrillar organization in determining microelastic tissue properties. <i>Acta Biomaterialia</i> , 2016, 44, 51-64.	4.1	20
61	Late production of Egyptian blue: synthesis from brass and its characteristics. <i>Archaeological and Anthropological Sciences</i> , 2019, 11, 5377-5392.	0.7	20
62	Raman imaging and photodegradation study of phthalocyanine containing microcapsules and coated particles. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1901-1907.	1.2	19
63	Disordered Conformation with Low Pii Helix in Phosphoproteins Orchestrates Biomimetic Apatite Formation. <i>Advanced Materials</i> , 2017, 29, 1701629.	11.1	19
64	Full-Field Calcium K-Edge X-ray Absorption Near-Edge Structure Spectroscopy on Cortical Bone at the Micron-Scale: Polarization Effects Reveal Mineral Orientation. <i>Analytical Chemistry</i> , 2016, 88, 3826-3835.	3.2	18
65	Black Drum Fish Teeth: Built for Crushing Mollusk Shells. <i>Acta Biomaterialia</i> , 2022, 137, 147-161.	4.1	17
66	The role of water on the structure and mechanical properties of a thermoplastic natural block co-polymer from squid sucker ring teeth. <i>Bioinspiration and Biomimetics</i> , 2016, 11, 055003.	1.5	16
67	Time-Space-Resolved Chemical Deconvolution of Cementitious Colloidal Systems Using Raman Spectroscopy. <i>Langmuir</i> , 2021, 37, 7019-7031.	1.6	15
68	Large-scale micron-order 3D surface correlative chemical imaging of ancient Roman concrete. <i>PLoS ONE</i> , 2019, 14, e0210710.	1.1	14
69	Quantifying degradation of collagen in ancient manuscripts: the case of the Dead Sea Temple Scroll. <i>Analyst</i> , 2013, 138, 5594-5599.	1.7	13
70	Biomimetic synthesis of chiral erbium-doped silver/peptide/silica core-shell nanoparticles (ESPN). <i>Nanoscale</i> , 2011, 3, 5168.	2.8	11
71	Probing the Role of Bone Lamellar Patterns through Collagen Microarchitecture Mapping, Numerical Modeling, and 3D Printing. <i>Advanced Engineering Materials</i> , 2020, 22, .	1.6	10
72	Reactive binder and aggregate interfacial zones in the mortar of Tomb of Caecilia Metella concrete, 1C BCE, Rome. <i>Journal of the American Ceramic Society</i> , 2022, 105, 1503-1518.	1.9	10

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73	The Temple Scroll: Reconstructing an ancient manufacturing practice. <i>Science Advances</i> , 2019, 5, eaaw7494.	4.7	9
74	Intramolecular Host-Guest Dynamics of FeCp(CO)2X (X = I and CH3) and Mo2Cp2(CO)6 Included in β - or γ -Cyclodextrin. <i>European Journal of Inorganic Chemistry</i> , 2008, 2008, 152-157.	1.0	8
75	On the Origin of the Ink of the Thanksgiving Scroll (1QHodayota). <i>Dead Sea Discoveries</i> , 2009, 16, 97-106.	0.1	8
76	A 13C CP/MAS NMR Study of the Structure and Dynamics of [(η -5-C5H5)2Fe2(CO)4] Included in β -Cyclodextrin: Evidence for Terminal Bridging Exchange in the cis Isomer. <i>Organometallics</i> , 2006, 25, 2248-2252.	1.1	7
77	Integrative and comparative analysis of coiled-coil based marine snail egg cases – a model for biomimetic elastomers. <i>Biomaterials Science</i> , 2014, 2, 710.	2.6	7
78	On the production of ancient Egyptian blue: Multi-modal characterization and micron-scale luminescence mapping. <i>PLoS ONE</i> , 2020, 15, e0242549.	1.1	7
79	Anisotropy in Bone Demineralization Revealed by Polarized Far-IR Spectroscopy. <i>Molecules</i> , 2015, 20, 5835-5850.	1.7	5
80	Multiscale Analysis of Mineralized Collagen Combining X-ray Scattering and Fluorescence with Raman Spectroscopy under Controlled Mechanical, Thermal, and Humidity Environments. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2853-2859.	2.6	4
81	Blowpipes and their metalworking applications: New evidence from Mayapán, Yucatán, Mexico. <i>PLoS ONE</i> , 2020, 15, e0238885.	1.1	2
82	Paläoinspirierte Systeme: Haltbarkeit, Nachhaltigkeit und bemerkenswerte Eigenschaften. <i>Angewandte Chemie</i> , 2018, 130, 7408-7416.	1.6	1
83	Towards an understanding of the chemo-mechanical influences on kidney stone failure via the material point method. <i>PLoS ONE</i> , 2020, 15, e0240133.	1.1	1
84	Multiscale Chemical Imaging of Complex Biological and Archaeological Materials. <i>Springer Series in Surface Sciences</i> , 2018, , 259-269.	0.3	0
85	Title is missing!. , 2020, 15, e0242549.		0
86	Title is missing!. , 2020, 15, e0242549.		0
87	Title is missing!. , 2020, 15, e0242549.		0
88	Title is missing!. , 2020, 15, e0242549.		0