

Nicola Pugno

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

335
papers

11,051
citations

48
h-index

95
g-index

376
ext. papers

13,227
ext. citations

5.6
avg, IF

6.74
L-index

#	Paper	IF	Citations
335	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. <i>Nanoscale</i> , 2015 , 7, 4598-810	7.7	2015
334	Multifunctionality and control of the crumpling and unfolding of large-area graphene. <i>Nature Materials</i> , 2013 , 12, 321-5	27	641
333	Nonlinear material behaviour of spider silk yields robust webs. <i>Nature</i> , 2012 , 482, 72-6	50.4	322
332	Molecular and nanostructural mechanisms of deformation, strength and toughness of spider silk fibrils. <i>Nano Letters</i> , 2010 , 10, 2626-34	11.5	301
331	YAP regulates cell mechanics by controlling focal adhesion assembly. <i>Nature Communications</i> , 2017 , 8, 15321	17.4	260
330	Quantized fracture mechanics. <i>Philosophical Magazine</i> , 2004 , 84, 2829-2845	1.6	251
329	Modeling and simulation in tribology across scales: An overview. <i>Tribology International</i> , 2018 , 125, 169-199	1.9	213
328	Microfluidization of Graphite and Formulation of Graphene-Based Conductive Inks. <i>ACS Nano</i> , 2017 , 11, 2742-2755	16.7	192
327	Production and processing of graphene and related materials. <i>2D Materials</i> , 2020 , 7, 022001	5.9	179
326	Experiments and modeling of carbon nanotube-based NEMS devices. <i>Journal of the Mechanics and Physics of Solids</i> , 2005 , 53, 1314-1333	5	157
325	Spatulate structures in biological fibrillar adhesion. <i>Soft Matter</i> , 2010 , 6, 3269	3.6	154
324	Cleaning interfaces in layered materials heterostructures. <i>Nature Communications</i> , 2018 , 9, 5387	17.4	152
323	Large scale mechanical metamaterials as seismic shields. <i>New Journal of Physics</i> , 2016 , 18, 083041	2.9	151
322	Are scaling laws on strength of solids related to mechanics or to geometry?. <i>Nature Materials</i> , 2005 , 4, 421-3	27	145
321	Toward Stretchable Self-Powered Sensors Based on the Thermoelectric Response of PEDOT:PSS/Polyurethane Blends. <i>Advanced Functional Materials</i> , 2018 , 28, 1704285	15.6	119
320	Bio-mimetic mechanisms of natural hierarchical materials: a review. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013 , 19, 3-33	4.1	114
319	Nanoscale Mechanics of Graphene and Graphene Oxide in Composites: A Scientific and Technological Perspective. <i>Advanced Materials</i> , 2016 , 28, 6232-8	24	103

318	Coupling local resonance with Bragg band gaps in single-phase mechanical metamaterials. <i>Extreme Mechanics Letters</i> , 2017 , 12, 30-36	3.9	100
317	Hierarchical self-entangled carbon nanotube tube networks. <i>Nature Communications</i> , 2017 , 8, 1215	17.4	91
316	Proof of Concept for an Ultrasensitive Technique to Detect and Localize Sources of Elastic Nonlinearity Using Phononic Crystals. <i>Physical Review Letters</i> , 2017 , 118, 214301	7.4	89
315	Predictive modelling-based design and experiments for synthesis and spinning of bioinspired silk fibres. <i>Nature Communications</i> , 2015 , 6, 6892	17.4	86
314	3D Micropatterned Surface Inspired by <i>Salvinia molesta</i> via Direct Laser Lithography. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 25560-7	9.5	86
313	Numerical Analysis of Nanotube Based NEMS Devices [Part II: Role of Finite Kinematics, Stretching and Charge Concentrations. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2005 , 72, 726-737	2.7	83
312	A translational nanoactuator based on carbon nanoscrolls on substrates. <i>Applied Physics Letters</i> , 2010 , 96, 053115	3.4	77
311	Enhancement of interfacial adhesion in glass fiber/epoxy composites by electrophoretic deposition of graphene oxide on glass fibers. <i>Composites Science and Technology</i> , 2016 , 126, 149-157	8.6	76
310	Protein disorder-order interplay to guide the growth of hierarchical mineralized structures. <i>Nature Communications</i> , 2018 , 9, 2145	17.4	76
309	Extreme strength observed in limpet teeth. <i>Journal of the Royal Society Interface</i> , 2015 , 12,	4.1	72
308	Mimicking nacre with super-nanotubes for producing optimized super-composites. <i>Nanotechnology</i> , 2006 , 17, 5480-5484	3.4	72
307	Coherently aligned nanoparticles within a biogenic single crystal: A biological prestressing strategy. <i>Science</i> , 2017 , 358, 1294-1298	33.3	67
306	In-plane elastic buckling of hierarchical honeycomb materials. <i>European Journal of Mechanics, A/Solids</i> , 2012 , 34, 120-129	3.7	66
305	Tunable Core Size of Carbon Nanoscrolls. <i>Journal of Computational and Theoretical Nanoscience</i> , 2010 , 7, 517-521	0.3	63
304	Dynamic quantized fracture mechanics. <i>International Journal of Fracture</i> , 2006 , 140, 159-168	2.3	61
303	Observation of optimal gecko's adhesion on nanorough surfaces. <i>BioSystems</i> , 2008 , 94, 218-22	1.9	59
302	Failure processes in embedded monolayer graphene under axial compression. <i>Scientific Reports</i> , 2014 , 4, 5271	4.9	58
301	The theory of multiple peeling. <i>International Journal of Fracture</i> , 2011 , 171, 185-193	2.3	58

300	Synergistic effect of graphene nanoplatelets and carbon black in multifunctional EPDM nanocomposites. <i>Composites Science and Technology</i> , 2016 , 128, 123-130	8.6	58
299	Hierarchical Fibers with a Negative Poisson's Ratio for Tougher Composites. <i>Materials</i> , 2013 , 6, 699-712	3.5	57
298	Tubular Adhesive Joints Under Axial Load. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2003 , 70, 832-839	2.7	56
297	Spider web-structured labyrinthine acoustic metamaterials for low-frequency sound control. <i>New Journal of Physics</i> , 2017 , 19, 105001	2.9	55
296	Gigahertz breathing oscillators based on carbon nanoscrolls. <i>Applied Physics Letters</i> , 2009 , 95, 163113	3.4	55
295	A fractal comminution approach to evaluate the drilling energy dissipation. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2002 , 26, 499-513	4	53
294	Wetting theory for small droplets on textured solid surfaces. <i>Scientific Reports</i> , 2016 , 6, 37813	4.9	53
293	Design and Fabrication of Bioinspired Hierarchical Dissipative Elastic Metamaterials. <i>Physical Review Applied</i> , 2018 , 10,	4.3	52
292	Scaling of energy dissipation in crushing and fragmentation: a fractal and statistical analysis based on particle size distribution. <i>International Journal of Fracture</i> , 2004 , 129, 131-139	2.3	51
291	Spider web-inspired acoustic metamaterials. <i>Applied Physics Letters</i> , 2016 , 109, 071905	3.4	51
290	Modelling of the strength-porosity relationship in glass-ceramic foam scaffolds for bone repair. <i>Journal of the European Ceramic Society</i> , 2014 , 34, 2663-2673	6	49
289	Critical length scales and strain localization govern the mechanical performance of multi-layer graphene assemblies. <i>Nanoscale</i> , 2016 , 8, 6456-62	7.7	49
288	Adhesion of Elastic Thin Films: Double Peeling of Tapes Versus Axisymmetric Peeling of Membranes. <i>Tribology Letters</i> , 2013 , 52, 439-447	2.8	48
287	A general shape/size-effect law for nanoindentation. <i>Acta Materialia</i> , 2007 , 55, 1947-1953	8.4	48
286	The role of defects in the design of space elevator cable: From nanotube to megatube. <i>Acta Materialia</i> , 2007 , 55, 5269-5279	8.4	48
285	One, Two, and Three-Dimensional Universal Laws for Fragmentation due to Impact and Explosion. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2002 , 69, 854-856	2.7	47
284	In Situ Exfoliation of Graphene in Epoxy Resins: A Facile Strategy to Efficient and Large Scale Graphene Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 24112-22	9.5	46
283	Multiscale stochastic simulations for tensile testing of nanotube-based macroscopic cables. <i>Small</i> , 2008 , 4, 1044-52	11	46

282	Mechanical peeling of free-standing single-walled carbon-nanotube bundles. <i>Small</i> , 2010 , 6, 438-45	11	44
281	Synergetic material and structure optimization yields robust spider web anchorages. <i>Small</i> , 2013 , 9, 2747-56	4	43
280	Modeling of the planetary ball-milling process: The case study of ceramic powders. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 2205-2212	6	42
279	The design of self-collapsed super-strong nanotube bundles. <i>Journal of the Mechanics and Physics of Solids</i> , 2010 , 58, 1397-1410	5	42
278	Spider silk reinforced by graphene or carbon nanotubes. <i>2D Materials</i> , 2017 , 4, 031013	5.9	40
277	Mechanical Stability of Flexible Graphene-Based Displays. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 22605-14	9.5	40
276	Tuning frequency band gaps of tensegrity mass-spring chains with local and global prestress. <i>International Journal of Solids and Structures</i> , 2018 , 155, 47-56	3.1	39
275	Cracks and re-entrant corners in functionally graded materials. <i>Engineering Fracture Mechanics</i> , 2006 , 73, 1279-1291	4.2	39
274	Mechanics of carbon nanoscrolls: a review. <i>Acta Mechanica Solida Sinica</i> , 2010 , 23, 484-497	2	38
273	Accordion-like metamaterials with tunable ultra-wide low-frequency band gaps. <i>New Journal of Physics</i> , 2018 , 20, 073051	2.9	37
272	Nanoindentation cannot accurately predict the tensile strength of graphene or other 2D materials. <i>Nanoscale</i> , 2015 , 7, 15672-9	7.7	36
271	New quantized failure criteria: application to nanotubes and nanowires. <i>International Journal of Fracture</i> , 2006 , 141, 313-323	2.3	36
270	Analysis of Doubly Clamped Nanotube Devices in the Finite Deformation Regime. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2005 , 72, 445-449	2.7	36
269	Investigating the role of hierarchy on the strength of composite materials: evidence of a crucial synergy between hierarchy and material mixing. <i>Nanoscale</i> , 2012 , 4, 1200-7	7.7	33
268	Designing graphene based nanofoams with nonlinear auxetic and anisotropic mechanical properties under tension or compression. <i>Carbon</i> , 2017 , 111, 796-806	10.4	32
267	Octopus-like suction cups: from natural to artificial solutions. <i>Bioinspiration and Biomimetics</i> , 2015 , 10, 035004	2.6	32
266	Disordered protein-graphene oxide co-assembly and supramolecular biofabrication of functional fluidic devices. <i>Nature Communications</i> , 2020 , 11, 1182	17.4	32
265	Evidence of optimal interfaces in bio-inspired ceramic-composite panels for superior ballistic protection. <i>Journal of the European Ceramic Society</i> , 2014 , 34, 2823-2831	6	32

264	Hierarchical fiber bundle model to investigate the complex architectures of biological materials. <i>Physical Review E</i> , 2012 , 85, 011903	2.4	32
263	Unveiling the morphology of the acetabulum in octopus suckers and its role in attachment. <i>Interface Focus</i> , 2015 , 5, 20140050	3.9	31
262	Nitrile butadiene rubber composites reinforced with reduced graphene oxide and carbon nanotubes show superior mechanical, electrical and icephobic properties. <i>Composites Science and Technology</i> , 2018 , 166, 109-114	8.6	31
261	Design of micro-nanoscale bio-inspired hierarchical materials. <i>Philosophical Magazine Letters</i> , 2008 , 88, 397-405	1	31
260	Richter's laws at the laboratory scale interpreted by acoustic emission. <i>Magazine of Concrete Research</i> , 2006 , 58, 619-625	2	31
259	Metamaterials-based sensor to detect and locate nonlinear elastic sources. <i>Applied Physics Letters</i> , 2015 , 107, 161902	3.4	30
258	Graphene and Carbon Nanotube Auxetic Rubber Bionic Composites with Negative Variation of the Electrical Resistance and Comparison with Their Nonbionic Counterparts. <i>Advanced Functional Materials</i> , 2017 , 27, 1606526	15.6	29
257	Mechanical and thermal properties of graphene random nanofoams via Molecular Dynamics simulations. <i>Carbon</i> , 2018 , 132, 766-775	10.4	29
256	A frequency-based hypothesis for mechanically targeting and selectively attacking cancer cells. <i>Journal of the Royal Society Interface</i> , 2015 , 12, 20150656	4.1	28
255	Experimental analysis of self-healing cement-based materials incorporating extruded cementitious hollow tubes. <i>Journal of Intelligent Material Systems and Structures</i> , 2016 , 27, 2633-2652	2.3	27
254	Static and dynamic friction of hierarchical surfaces. <i>Physical Review E</i> , 2016 , 94, 063003	2.4	27
253	Nanomechanics of individual aerographite tetrapods. <i>Nature Communications</i> , 2017 , 8, 14982	17.4	26
252	Scale Effects on the Ballistic Penetration of Graphene Sheets. <i>Scientific Reports</i> , 2018 , 8, 6750	4.9	25
251	Graphene-Based Bionic Composites with Multifunctional and Repairing Properties. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 7607-12	9.5	25
250	2D Material Armors Showing Superior Impact Strength of Few Layers. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 40820-40830	9.5	25
249	Gas Adsorption and Separation in Realistic and Idealized Frameworks of Organic Pillared Graphene: A Comparative Study. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 1980-1987	3.8	25
248	Stretch-induced softening of bending rigidity in graphene. <i>Applied Physics Letters</i> , 2012 , 100, 191913	3.4	25
247	Dry acellular oesophageal matrix prepared by supercritical carbon dioxide. <i>Journal of Supercritical Fluids</i> , 2016 , 115, 33-41	4.2	25

246	Plastic collapse of cylindrical shell-plate periodic honeycombs under uniaxial compression: experimental and numerical analyses. <i>International Journal of Mechanical Sciences</i> , 2016 , 111-112, 125-133	5.5	25
245	Electrospinning of p-Aramid Fibers. <i>Macromolecular Materials and Engineering</i> , 2015 , 300, 1238-1245	3.9	24
244	Solving the Controversy on the Wetting Transparency of Graphene. <i>Scientific Reports</i> , 2015 , 5, 15526	4.9	24
243	Evidence of the most stretchable egg sac silk stalk, of the European spider of the year Meta menardi. <i>PLoS ONE</i> , 2012 , 7, e30500	3.7	24
242	Folding Large Graphene-on-Polymer Films Yields Laminated Composites with Enhanced Mechanical Performance. <i>Advanced Materials</i> , 2018 , 30, e1707449	24	23
241	A generalization of the Coulomb friction law: from graphene to macroscale. <i>Meccanica</i> , 2013 , 48, 1845-1851	23	23
240	The "Egg of Columbus" for making the world's toughest fibres. <i>PLoS ONE</i> , 2014 , 9, e93079	3.7	23
239	Mechanics of plant fruit hooks. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20120913	4.1	23
238	Friction and Adhesion of Different Structural Defects of Graphene. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 44614-44623	9.5	23
237	Staggered Fibrils and Damageable Interfaces Lead Concurrently and Independently to Hysteretic Energy Absorption and Inhomogeneous Strain Fields in Cyclically Loaded Antler Bone. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 2779-2787	5.5	22
236	Grafting carbon nanotubes onto carbon fibres doubles their effective strength and the toughness of the composite. <i>Composites Science and Technology</i> , 2018 , 166, 140-149	8.6	22
235	Ultrasensitive Characterization of Mechanical Oscillations and Plasmon Energy Shift in Gold Nanorods. <i>ACS Nano</i> , 2016 , 10, 2251-8	16.7	22
234	Tribological characteristics of few-layer graphene over Ni grain and interface boundaries. <i>Nanoscale</i> , 2016 , 8, 6646-58	7.7	22
233	Graphene-Based Resonant Sensors for Detection of Ultra-Fine Nanoparticles: Molecular Dynamics and Nonlocal Elasticity Investigations. <i>Nano</i> , 2015 , 10, 1550024	1.1	22
232	Constitutive behavior of pressurized carbon nanoscrolls. <i>International Journal of Fracture</i> , 2011 , 171, 163-168	2.3	22
231	Thermal loading in multi-layered and/or functionally graded materials: Residual stress field, delamination, fatigue and related size effects. <i>International Journal of Solids and Structures</i> , 2006 , 43, 828-841	3.1	22
230	Conversionless efficient and broadband laser light diffusers for high brightness illumination applications. <i>Nature Communications</i> , 2020 , 11, 1437	17.4	21
229	Gas adsorption and dynamics in Pillared Graphene Frameworks. <i>Microporous and Mesoporous Materials</i> , 2018 , 257, 222-231	5.3	21

228	Geometry and Self-stress of Single-Wall Carbon Nanotubes and Graphene via a Discrete Model Based on a 2nd-Generation REBO Potential. <i>Journal of Elasticity</i> , 2016 , 125, 1-37	1.5	21
227	Superhydrophobic Polystyrene by Direct Copy of a Lotus Leaf. <i>BioNanoScience</i> , 2011 , 1, 136-143	3.4	21
226	Velcro [®] nonlinear mechanics. <i>Applied Physics Letters</i> , 2007 , 90, 121918	3.4	21
225	Buckling soft tensegrities: Fickle elasticity and configurational switching in living cells. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 124, 299-324	5	21
224	Mechanics of fragmentation of crocodile skin and other thin films. <i>Scientific Reports</i> , 2014 , 4, 4966	4.9	20
223	Synthesis of single layer graphene on Cu(111) by C60 supersonic molecular beam epitaxy. <i>RSC Advances</i> , 2016 , 6, 37982-37993	3.7	20
222	Imaging and mechanical characterization of different junctions in spider orb webs. <i>Scientific Reports</i> , 2019 , 9, 5776	4.9	19
221	Phenomenological approach to mechanical damage growth analysis. <i>Physical Review E</i> , 2008 , 78, 046103	2.4	19
220	Mechanics of hierarchical materials. <i>International Journal of Fracture</i> , 2008 , 150, 221-226	2.3	19
219	Serpentine locomotion through elastic energy release. <i>Journal of the Royal Society Interface</i> , 2017 , 14,	4.1	18
218	Effect of the Order-Disorder Transition on the Seebeck Coefficient of Nanostructured Thermoelectric CuZnSnS. <i>Nanomaterials</i> , 2019 , 9,	5.4	18
217	A Hierarchical Lattice Spring Model to Simulate the Mechanics of 2-D Materials-Based Composites. <i>Frontiers in Materials</i> , 2015 , 2,	4	18
216	Bioinspired Nanocomposites: Ordered 2D Materials Within a 3D Lattice. <i>Advanced Functional Materials</i> , 2016 , 26, 5569-5575	15.6	18
215	Friction of rough surfaces on ice: Experiments and modeling. <i>Wear</i> , 2016 , 368-369, 258-266	3.5	18
214	Easy, Scalable, Robust, Micropatterned Silk Fibroin Cell Substrates. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1801822	4.6	17
213	Tightening slip knots in raw and degummed silk to increase toughness without losing strength. <i>Scientific Reports</i> , 2016 , 6, 18222	4.9	17
212	Compliant threads maximize spider silk connection strength and toughness. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140561	4.1	17
211	Lobachevsky crystallography made real through carbon pseudospheres. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 13LT01	1.8	17

210	Micromechanics of liquid-phase exfoliation of a layered 2D material: A hydrodynamic peeling model. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 134, 103764	5	17
209	Self-healing of hierarchical materials. <i>Langmuir</i> , 2014 , 30, 1123-33	4	16
208	Mimicking water striders' legs superhydrophobicity and buoyancy with cabbage leaves and nanotube carpets. <i>Journal of Materials Research</i> , 2013 , 28, 976-983	2.5	16
207	An analytical approach for fracture and fatigue in functionally graded materials. <i>International Journal of Fracture</i> , 2006 , 141, 535-547	2.3	16
206	Self-organized and self-propelled aero-GaN with dual hydrophilic-hydrophobic behaviour. <i>Nano Energy</i> , 2019 , 56, 759-769	17.1	16
205	A 2-D model for friction of complex anisotropic surfaces. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 112, 50-65	5	16
204	The multiple V-shaped double peeling of elastic thin films from elastic soft substrates. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 113, 56-64	5	15
203	Fermentation based carbon nanotube multifunctional bionic composites. <i>Scientific Reports</i> , 2016 , 6, 27031	4.9	15
202	Bone matrix development in steroid-induced osteoporosis is associated with a consistently reduced fibrillar stiffness linked to altered bone mineral quality. <i>Acta Biomaterialia</i> , 2018 , 76, 295-307	10.8	15
201	Proof of concept of a frequency-preserving and time-invariant metamaterial-based nonlinear acoustic diode. <i>Scientific Reports</i> , 2019 , 9, 9560	4.9	15
200	Hierarchical multiple peeling simulations. <i>RSC Advances</i> , 2014 , 4, 25447-25452	3.7	15
199	Effect of Surface Grooves on the Static Friction of an Elastic Slider. <i>Tribology Letters</i> , 2015 , 58, 1	2.8	15
198	Numerical implementation of multiple peeling theory and its application to spider web anchorages. <i>Interface Focus</i> , 2015 , 5, 20140051	3.9	15
197	Elastomechanical model of tumor invasion. <i>Applied Physics Letters</i> , 2006 , 89, 233901	3.4	15
196	A design strategy to match the band gap of periodic and aperiodic metamaterials. <i>Scientific Reports</i> , 2020 , 10, 16403	4.9	15
195	Structural Defects Modulate Electronic and Nanomechanical Properties of 2D Materials. <i>ACS Nano</i> , 2021 , 15, 2520-2531	16.7	15
194	A Design of Experiment Rational Optimization of the Degumming Process and Its Impact on the Silk Fibroin Properties. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 1374-1393	5.5	15
193	Hybrid metamaterials combining pentamode lattices and phononic plates. <i>Applied Physics Letters</i> , 2018 , 113, 201901	3.4	15

192	Monte Carlo simulations of measured electron energy-loss spectra of diamond and graphite: Role of dielectric-response models. <i>Carbon</i> , 2017 , 118, 299-309	10.4	14
191	Surface Phenomena Enhancing the Antibacterial and Osteogenic Ability of Nanocrystalline Hydroxyapatite, Activated by Multiple-Ion Doping. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 5947-5959	5.5	14
190	Experimental Observation of a Large Low-Frequency Band Gap in a Polymer Waveguide. <i>Frontiers in Materials</i> , 2018 , 5,	4	14
189	Computational analysis of metallic nanowire-elastomer nanocomposite based strain sensors. <i>AIP Advances</i> , 2015 , 5, 117233	1.5	14
188	Optimal Angles for Maximal Adhesion in Living Tokay Geckos 2012 , 88, 820-830		14
187	Approximating gecko setae via direct laser lithography. <i>Smart Materials and Structures</i> , 2018 , 27, 075009	3.4	14
186	A mixed approach for studying size effects and connecting interactions of planar nano structures as resonant mass sensors. <i>Microsystem Technologies</i> , 2015 , 21, 2375-2386	1.7	13
185	Strong and Tough Silk for Resilient Attachment Discs: The Mechanical Properties of Piriform Silk in the Spider <i>Cupiennius salei</i> (Keyserling, 1877). <i>Frontiers in Materials</i> , 2020 , 7,	4	13
184	Multilayer stag beetle elytra perform better under external loading via non-symmetric bending properties. <i>Journal of the Royal Society Interface</i> , 2018 , 15,	4.1	13
183	Combining Living Microorganisms with Regenerated Silk Provides Nanofibril-Based Thin Films with Heat-Responsive Wrinkled States for Smart Food Packaging. <i>Nanomaterials</i> , 2018 , 8,	5.4	13
182	Evolution of aerial spider webs coincided with repeated structural optimization of silk anchorages. <i>Evolution; International Journal of Organic Evolution</i> , 2019 , 73, 2122-2134	3.8	13
181	Small-on-Large Fractional DerivativeBased Single-Cell Model Incorporating Cytoskeleton Prestretch. <i>Journal of Engineering Mechanics - ASCE</i> , 2017 , 143,	2.4	13
180	How graphene flexes and stretches under concomitant bending couples and tractions. <i>Meccanica</i> , 2017 , 52, 1601-1624	2.1	13
179	Towards the Artsutanov's dream of the space elevator: The ultimate design of a 35GPa strong tether thanks to graphene. <i>Acta Astronautica</i> , 2013 , 82, 221-224	2.9	13
178	Normal Adhesive Force-Displacement Curves of Living Geckos 2011 , 87, 1059-1072		13
177	Superductile, Wavy Silica Nanostructures Inspired by Diatom Algae. <i>Advanced Engineering Materials</i> , 2011 , 13, B405-B414	3.5	13
176	Spider (<i>Linothele megatheloides</i>) and silkworm (<i>Bombyx mori</i>) silks: Comparative physical and biological evaluation. <i>Materials Science and Engineering C</i> , 2020 , 107, 110197	8.3	13
175	Cave spiders choose optimal environmental factors with respect to the generated entropy when laying their cocoon. <i>Scientific Reports</i> , 2015 , 5, 7611	4.9	12

174	OrderDisorder Transition in Kesterite Cu ₂ ZnSnS ₄ : Thermopower Enhancement via Electronic Band Structure Modification. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 7091-7096	3.8	12
173	Nanoscale friction of graphene oxide over glass-fibre and polystyrene. <i>Composites Part B: Engineering</i> , 2018 , 148, 272-280	10	12
172	Slip knots and unfastening topologies enhance toughness without reducing strength of silk fibroin fibres. <i>Interface Focus</i> , 2016 , 6, 20150060	3.9	12
171	Fabrication of ordered silicon nanopillars and nanowires by self-assembly and metal-assisted etching. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 1412-1416	1.6	12
170	Size-scale and slenderness influence on the compressive strain-softening behaviour of concrete. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2001 , 24, 441-450	3	12
169	Vertically-Aligned Functionalized Silicon Micropillars for 3D Culture of Human Pluripotent Stem Cell-Derived Cortical Progenitors. <i>Cells</i> , 2019 , 9,	7.9	12
168	Breaking the Nanoparticle Loading-Dispersion Dichotomy in Polymer Nanocomposites with the Art of Croissant-Making. <i>ACS Nano</i> , 2018 , 12, 9040-9050	16.7	12
167	Hierarchical Spring-Block Model for Multiscale Friction Problems. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 2845-2852	5.5	11
166	The Impact of Shear and Elongational Forces on Structural Formation of Polyacrylonitrile/Carbon Nanotubes Composite Fibers during Wet Spinning Process. <i>Materials</i> , 2019 , 12,	3.5	11
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