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List of Publications by Year
in descending order

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85 papers	5,527 citations	109137 35 h-index	79541 73 g-index
92 all docs	92 docs citations	92 times ranked	6576 citing authors

#	Article	IF	Citations
1	Anisotropy of Fluctuation Dynamics of Proteins with an Elastic Network Model. Biophysical Journal, 2001, 80, 505-515.	0.2	1,486
2	An engineered anisotropic nanofilm with unidirectional wetting properties. Nature Materials, 2010, 9, 1023-1028.	13.3	383
3	Vibrational Dynamics of Folded Proteins: Significance of Slow and Fast Motions in Relation to Function and Stability. Physical Review Letters, 1998, 80, 2733-2736.	2.9	382
4	Bioinspired Directional Surfaces for Adhesion, Wetting, and Transport. Advanced Functional Materials, 2012, 22, 2223-2234.	7.8	233
5	Biosynthetic self-healing materials for soft machines. Nature Materials, 2020, 19, 1230-1235.	13.3	189
6	Accelerating the design of biomimetic materials by integrating RNA-seq with proteomics and materials science. Nature Biotechnology, 2013, 31, 908-915.	9.4	171
7	Nanoparticle-based protein detection by optical shift of a resonant microcavity. Applied Physics Letters, 2011, 99, .	1.5	160
8	Inkjet Printing of Selfâ€Assembled 2D Titanium Carbide and Protein Electrodes for Stimuliâ€Responsive Electromagnetic Shielding. Advanced Functional Materials, 2018, 28, 1801972.	7.8	157
9	3D Printing of PDMS Improves Its Mechanical and Cell Adhesion Properties. ACS Biomaterials Science and Engineering, 2018, 4, 682-693.	2.6	119
10	Identification of kinetically hot residues in proteins. Protein Science, 1998, 7, 2522-2532.	3.1	114
11	Molecular dynamics simulations of DiI-C18(3) in a DPPC lipid bilayer. Physical Chemistry Chemical Physics, 2008, 10, 3548.	1.3	88
12	Growth of sculptured polymer submicronwire assemblies by vapor deposition. Polymer, 2005, 46, 9544-9548.	1.8	85
13	Emerging Technologies for Assembly of Microscale Hydrogels. Advanced Healthcare Materials, 2012, 1, 149-158.	3.9	83
14	Tunable thermal transport and reversible thermal conductivity switching in topologically networked bio-inspired materials. Nature Nanotechnology, 2018, 13, 959-964.	15.6	81
15	Controlling the Wettability and Adhesion of Nanostructured Poly-(p-xylylene) Films. Langmuir, 2007, 23, 11391-11395.	1.6	74
16	Ultrasensitive detection of a protein by optical trapping in a photonicâ€plasmonic microcavity. Journal of Biophotonics, 2012, 5, 629-638.	1.1	69
17	Surfaceâ€Enhanced Raman Detection on Metalized Nanostructured Poly(pâ€xylylene) Films. Advanced Materials, 2008, 20, 3562-3565.	11.1	68
18	Molecular tandem repeat strategy for elucidating mechanical properties of high-strength proteins. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6478-6483.	3.3	63

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19	Responsive Microgrooves for the Formation of Harvestable Tissue Constructs. Langmuir, 2011, 27, 5671-5679.	1.6	57
20	Highly swellable free-standing hydrogel nanotube forests. Soft Matter, 2010, 6, 1635.	1.2	55
21	Bio-organism sensing via surface enhanced Raman spectroscopy on controlled metal/polymer nanostructured substrates. Biointerphases, 2009, 4, 35-41.	0.6	50
22	Self-Healing Textile: Enzyme Encapsulated Layer-by-Layer Structural Proteins. ACS Applied Materials & Interfaces, 2016, 8, 20371-20378.	4.0	49
23	Emergent properties of spatially organized poly(p-xylylene) films fabricated by vapor deposition. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 321, 121-124.	2.3	46
24	Squid-Inspired Tandem Repeat Proteins: Functional Fibers and Films. Frontiers in Chemistry, 2019, 7, 69.	1.8	46
25	Catalytic activity of cobalt deposited on nanostructured poly(p-xylylene) films. Journal of Power Sources, 2008, 182, 323-328.	4.0	45
26	Control of Protein Adsorption onto Coreâ^'Shell Tubular and Vesicular Structures of Diphenylalanine/Parylene. Langmuir, 2010, 26, 1460-1463.	1.6	44
27	Materials Fabrication from Native and Recombinant Thermoplastic Squid Proteins. Advanced Functional Materials, 2014, 24, 7401-7409.	7.8	44
28	Recent Advances in Nanoscale Bioinspired Materials. Macromolecular Bioscience, 2015, 15, 300-311.	2.1	43
29	Programmable Proton Conduction in Stretchable and Self-Healing Proteins. Chemistry of Materials, 2018, 30, 898-905.	3.2	43
30	Fibroblast cell attachment and growth on nanoengineered sculptured thin films. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 81B, 219-223.	1.6	42
31	Growth of nanostructured thin films of poly(p-xylylene) derivatives by vapor deposition. Polymer, 2007, 48, 4130-4134.	1.8	40
32	Quantitative analysis of creatinine in urine by metalized nanostructured parylene. Journal of Biomedical Optics, 2010, 15, 027004.	1.4	40
33	Segmented molecular design of self-healing proteinaceous materials. Scientific Reports, 2015, 5, 13482.	1.6	40
34	A stimuli-responsive coaxial nanofilm for burst release. Soft Matter, 2011, 7, 638-643.	1.2	39
35	Pressure Sensitive Adhesion of an Elastomeric Protein Complex Extracted From Squid Ring Teeth. Advanced Functional Materials, 2014, 24, 6227-6233.	7.8	38
36	Composites of Proteins and 2D Nanomaterials. Advanced Functional Materials, 2018, 28, 1704990.	7.8	38

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37	Transport of a soft cargo on a nanoscale ratchet. Applied Physics Letters, 2011, 99, 063703.	1.5	37
38	Fabrication and Use of Electroless Plated Polymer Surface-Enhanced Raman Spectroscopy Substrates for Viral Gene Detection. Journal of Physical Chemistry C, 2010, 114, 10730-10738.	1.5	35
39	Noncovalent Deposition of Nanoporous Ni Membranes on Spatially Organized Poly(pâ€xylylene) Film Templates. Advanced Materials, 2007, 19, 4495-4499.	11.1	34
40	Relating structure to function through the dominant slow modes of motion of DNA topoisomerase II. International Journal of Quantum Chemistry, 1999, 75, 301-312.	1.0	32
41	Powerâ€law scaling of structured poly(pâ€xylylene) films deposited by oblique angle. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 640-648.	2.4	32
42	Spatially Organized Free-Standing Poly(p-xylylene) Nanowires Fabricated by Vapor Deposition. Langmuir, 2007, 23, 5861-5863.	1.6	31
43	Template-based and template-free preparation of nanostructured parylene via oblique angle polymerization. Thin Solid Films, 2010, 518, 4252-4255.	0.8	28
44	Modeling microstructure evolution in three dimensions with Grain3D and LaGriT. Computational Materials Science, 2003, 28, 199-208.	1.4	27
45	Mechanical anisotropy of nanostructured parylene films during sliding contact. Journal Physics D: Applied Physics, 2010, 43, 045403.	1.3	27
46	Neuronal alignment on asymmetric textured surfaces. Applied Physics Letters, 2012, 101, 143701.	1.5	27
47	Programmable molecular composites of tandem proteins with graphene oxide for efficient bimorph actuators. Carbon, 2017, 118, 404-412.	5.4	27
48	Anisotropic wetting on structured surfaces. MRS Bulletin, 2013, 38, 391-396.	1.7	26
49	Mechanical Properties of Tandem-Repeat Proteins Are Governed by Network Defects. ACS Biomaterials Science and Engineering, 2018, 4, 884-891.	2.6	26
50	Effects of Surface Asymmetry on Neuronal Growth. PLoS ONE, 2014, 9, e106709.	1.1	26
51	Remote calorimetric detection of urea via flow injection analysis. Analyst, The, 2015, 140, 8033-8040.	1.7	22
52	Liquid phase deposition of titania onto nanostructured poly-p-xylylene thin films. Journal of Materials Chemistry, 2009, 19, 4796.	6.7	21
53	Structural Protein-Based Whispering Gallery Mode Resonators. ACS Photonics, 2017, 4, 2179-2186.	3.2	21
54	Six Emerging Directions in Sculptured-Thin-Film Research. , 2008, , 295-307.		19

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55	Self-Assembly of Topologically Networked Proteinâ€“Ti3C2Tx MXene Composites. ACS Nano, 2020, 14, 6956-6967.	7.3	19
56	Protein Interactions and Fluctuations in a Proteomic Network using an Elastic Network Model. Journal of Biomolecular Structure and Dynamics, 2005, 22, 381-386.	2.0	18
57	Research Update: Programmable tandem repeat proteins inspired by squid ring teeth. APL Materials, 2018, 6, .	2.2	18
58	Noncovalent Mechanism for the Conformal Metallization of Nanostructured Parylene Films. Langmuir, 2010, 26, 4382-4391.	1.6	17
59	Linking Experimental Characterization and Computational Modeling of Grain Growth in Al-Foil. Journal of Materials Science, 2002, 10, 137-141.	1.2	16
60	Molecular Forces in Antibody Maturation. Physical Review Letters, 2005, 95, 208106.	2.9	15
61	Highly Conductive Self-Healing Biocomposites Based on Protein Mediated Self-Assembly of PEDOT:PSS Films. ACS Applied Bio Materials, 2020, 3, 2507-2515.	2.3	14
62	Catalytic activity of cobalt on nanotextured polymer films for hydrogen production. Journal of Power Sources, 2011, 196, 8553-8560.	4.0	11
63	Dielectrophoretic separation of randomly shaped protein particles. Separation and Purification Technology, 2021, 262, 118280.	3.9	11
64	High resolution deformation and damage detection using fluorescent dyes. Journal of Micromechanics and Microengineering, 2007, 17, 2324-2327.	1.5	9
65	Fibroblast adhesion on unidirectional polymeric nanofilms. Biointerphases, 2011, 6, 158-163.	0.6	9
66	Squid Ring Teethâ€“coated Mesh Improves Abdominal Wall Repair. Plastic and Reconstructive Surgery - Global Open, 2018, 6, e1881.	0.3	8
67	DYNAMICS OF DISORDERED STRUCTURES: EFFECT OF NON-LINEARITY ON THE LOCALIZATION. Journal of Sound and Vibration, 1997, 205, 372-379.	2.1	7
68	Bridging Experiments and Simulations in Oblique Angle Polymerization. Chemical Vapor Deposition, 2009, 15, 101-105.	1.4	7
69	Ultrafast laser-probing spectroscopy for studying molecular structure of protein aggregates. Analyst, The, 2017, 142, 1434-1441.	1.7	7
70	How do insertions affect green fluorescent protein?. Chemical Physics Letters, 2006, 419, 48-54.	1.2	6
71	Surface biofunctionalization of nanostructured GeSbSe chalcogenide glass thin films. Journal of Non-Crystalline Solids, 2009, 355, 208-212.	1.5	5
72	A fluidic device with polymeric textured ratchets. Polymer, 2015, 58, 30-35.	1.8	4

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73	Hydration-Induced Structural Transitions in Biomimetic Tandem Repeat Proteins. Journal of Physical Chemistry B, 2021, 125, 2134-2145.	1.2	4
74	Diffusive Dynamic Modes of Recombinant Squid Ring Teeth Proteins by Neutron Spectroscopy. Biomacromolecules, 2022, 23, 3165-3173.	2.6	4
75	Protein-based flexible whispering gallery mode resonators. Proceedings of SPIE, 2016, , .	0.8	3
76	Biomimicry of the Manduca Sexta Forewing Using SRT Protein Complex for FWMAV Development. Lecture Notes in Computer Science, 2015, , 86-91.	1.0	3
77	Novel Nanostructured Hydroxyl-Paracyclophane Thin Films. ECS Transactions, 2007, 3, 17-20.	0.3	2
78	Statistical mechanics of Fermi-Pasta-Ulam chains with the canonical ensemble. Physical Review E, 1997, 55, 3727-3730.	0.8	1
79	Clustering and diversity of fluctuations for proteins. Nanomedicine: Nanotechnology, Biology, and Medicine, 2005, 1, 41-46.	1.7	1
80	Stimuli Responsive Release of Metalic Nanoparticles on Semiconductor Substrates. Langmuir, 2012, 28, 5975-5980.	1.6	1
81	Enhancing sustainability and elasticity of synthetic fibers by tandem repeat proteins. Smart Materials and Structures, 0, , .	1.8	1
82	Comparison of Experimental and Computational Aspects of Grain Growth in Al-Foil. Materials Research Society Symposia Proceedings, 2000, 652, 1.	0.1	0
83	Large Scale Statistics for Computational Verification of Grain Growth Simulations with Experiments. Materials Research Society Symposia Proceedings, 2002, 731, 6101.	0.1	0
84	Directed Evolution of Structural Proteins using a High Throughput Approach. Biophysical Journal, 2020, 118, 516a.	0.2	0
85	Functional Nanostructured Polymerâ€“Metal Interfaces. , 2009, , 357-369.		0