Yuan Cheng

List of Publications by Citations

89 papers	3,400 citations	30 h-index	56 g-index
95 ext. papers	4,262 ext. citations	7.5 avg, IF	5.57 L-index

#	Paper	IF	Citations
89	Structures, mechanical properties and applications of silk fibroin materials. *Progress in Polymer Science*, **2015**, 46, 86-110	29.6	558
88	Protein Induces Layer-by-Layer Exfoliation of Transition Metal Dichalcogenides. *Journal of the American Chemical Society*, **2015**, 137, 6152-5	16.4	303
87	Mechanical properties of bilayer graphene sheets coupled by sp3 bonding. *Carbon*, **2011**, 49, 4511-4517	10.4	191
86	Plasticizing Silk Protein for On-Skin Stretchable Electrodes. *Advanced Materials*, **2018**, 30, e1800129	24	160
85	Moisture Sensitive Smart Yarns and Textiles from Self-Balanced Silk Fiber Muscles. *Advanced Functional Materials*, **2019**, 29, 1808241	15.6	119
84	Size-dependent phononic thermal transport in low-dimensional nanomaterials. *Physics Reports*, **2020**, 860, 1-26	27.7	110
83	Tunable water channels with carbon nanoscrolls. *Small*, **2010**, 6, 739-44	11	105
82	On the strength of β-sheet crystallites of Bombyx mori silk fibroin. *Journal of the Royal Society Interface*, **2014**, 11, 20140305	4.1	103
81	Thermal conductivity of defective graphene. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2012**, 376, 3668-3672	2.3	78
80	A translational nanoactuator based on carbon nanoscrolls on substrates. *Applied Physics Letters*, **2010**, 96, 053115	3.4	77
79	Exceptional Optical Absorption of Buckled Arsenene Covering a Broad Spectral Range by Molecular Doping. *ACS Omega*, **2018**, 3, 8514-8520	3.9	73
78	Thermal Conductivity of Amorphous Materials. *Advanced Functional Materials*, **2020**, 30, 1903829	15.6	73
77	2D Boron Sheets: Structure, Growth, and Electronic and Thermal Transport Properties. *Advanced Functional Materials*, **2020**, 30, 1904349	15.6	69
76	From brittle to ductile: a structure dependent ductility of diamond nanothread. *Nanoscale*, **2016**, 8, 11177-84	7.7	65
75	On intrinsic brittleness and ductility of intergranular fracture along symmetrical tilt grain boundaries in copper. *Acta Materialia*, **2010**, 58, 2293-2299	8.4	59
74	Peptide-Graphene Interactions Enhance the Mechanical Properties of Silk Fibroin. *ACS Applied Materials & Interfaces*, **2015**, 7, 21787-96	9.5	55
73	Gigahertz breathing oscillators based on carbon nanoscrolls. *Applied Physics Letters*, **2009**, 95, 163113	3.4	55

72	A direct Z-scheme PtS/arsenene van der Waals heterostructure with high photocatalytic water splitting efficiency. *Nanoscale*, **2020**, 12, 17281-17289	7.7	51
71	Diamond Nanothread as a New Reinforcement for Nanocomposites. *Advanced Functional Materials*, **2016**, 26, 5279-5283	15.6	49
70	Electrostatic-Driven Exfoliation and Hybridization of 2D Nanomaterials. *Advanced Materials*, **2017**, 29, 1700326	24	46
69	A supertough electro-tendon based on spider silk composites. *Nature Communications*, **2020**, 11, 1332	17.4	42
68	A molecular dynamics study on thermal and mechanical properties of graphene–paraffin nanocomposites. *RSC Advances*, **2015**, 5, 82638-82644	3.7	40
67	Material platforms for defect qubits and single-photon emitters. *Applied Physics Reviews*, **2020**, 7, 031308	17.3	37
66	Computational analysis of binding free energies between peptides and single-walled carbon nanotubes. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 367, 293-304	3.3	35
65	A STUDY ON SELF-INSERTION OF PEPTIDES INTO SINGLE-WALLED CARBON NANOTUBES BASED ON MOLECULAR DYNAMICS SIMULATION. *International Journal of Modern Physics C*, **2005**, 16, 1239-1250	1.1	35
64	Integrated Optic Disc and Cup Segmentation with Deep Learning **2015**,		34
63	Structure-based design of carbon nanotubes as HIV-1 protease inhibitors: atomistic and coarse-grained simulations. *Journal of Molecular Graphics and Modelling*, **2010**, 29, 171-7	2.8	33
62	A Compliant Ionic Adhesive Electrode with Ultralow Bioelectronic Impedance. *Advanced Materials*, **2020**, 32, e2003723	24	33
61	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer PtSe: A First-Principles Study. *ACS Omega*, **2017**, 2, 8640-8648	3.9	31
60	Correcting over-exposure in photographs **2010**,		30
59	Pulling out a peptide chain from ({upbeta })-sheet crystallite: Propagation of instability of H-bonds under shear force. *Acta Mechanica Sinica/Lixue Xuebao*, **2015**, 31, 416-424	2	28
58	Thermo-mechanical correlation in two-dimensional materials. *Nanoscale*, **2021**, 13, 1425-1442	7.7	27
57	Thermal conductivity of penta-graphene: The role of chemical functionalization. *Computational Materials Science*, **2017**, 137, 195-200	3.2	23
56	Molecular dynamics study on DNA oligonucleotide translocation through carbon nanotubes. *Journal of Chemical Physics*, **2008**, 129, 125101	3.9	23
55	Atomistic simulation study on key factors dominating dislocation nucleation from a crack tip in two FCC materials: Cu and Al. *International Journal of Solids and Structures*, **2012**, 49, 3345-3354	3.1	21

54	Single-Atom Nanozymes Linked Immunosorbent Assay for Sensitive Detection of A 1-40: A Biomarker of Alzheimer's Disease. *Research*, **2020**, 2020, 4724505	7.8	21
53	Remarkable Reduction of Interfacial Thermal Resistance in Nanophononic Heterostructures. *Advanced Functional Materials*, **2020**, 30, 2004003	15.6	21
52	Highly Thermal-Wet Comfortable and Conformal Silk-Based Electrodes for On-Skin Sensors with Sweat Tolerance. *ACS Nano*, **2021**, 15, 9955-9966	16.7	21
51	Continuum transport model of Ogston sieving in patterned nanofilter arrays for separation of rod-like biomolecules. *Electrophoresis*, **2008**, 29, 329-39	3.6	20
50	Multiscale modeling of keratin, collagen, elastin and related human diseases: Perspectives from atomistic to coarse-grained molecular dynamics simulations. *Extreme Mechanics Letters*, **2018**, 20, 112-124	3.9	19
49	Enhancing adsorption capacity while maintaining specific recognition performance of mesoporous silica: a novel imprinting strategy with amphiphilic ionic liquid as surfactant. *Nanotechnology*, **2018**, 29, 375604	3.4	19
48	Substrate-supported carbon nanoscroll oscillator. *Physica E: Low-Dimensional Systems and Nanostructures*, **2012**, 44, 955-959	3	19
47	Thermodynamic analysis of protein sequence-structure relationships in monomer and dimer forms. *Physica A: Statistical Mechanics and Its Applications*, **2005**, 354, 381-392	3.3	19
46	Carbon nanoscroll-silk crystallite hybrid structures with controllable hydration and mechanical properties. *Nanoscale*, **2017**, 9, 9181-9189	7.7	18
45	High-Level Incorporation of Silver in Gold Nanoclusters: Fluorescence Redshift upon Interaction with Hydrogen Peroxide and Fluorescence Enhancement with Herbicide. *Chemistry - A European Journal*, **2016**, 22, 1675-81	4.8	18
44	From two-dimensional nano-sheets to roll-up structures: expanding the family of nanoscroll. *Nanotechnology*, **2017**, 28, 385704	3.4	18
43	A molecular dynamics investigation on mechanical properties of hydrogenated graphynes. *Journal of Applied Physics*, **2013**, 114, 073504	2.5	18
42	Molecular-dynamics studies of competitive replacement in peptide-nanotube assembly for control of drug release. *Nanotechnology*, **2009**, 20, 145101	3.4	18
41	Two-dimensional heterostructures for photocatalytic water splitting: a review of recent progress. *Nano Futures*, **2020**, 4, 032006	3.6	18
40	Anisotropic Wetting Characteristics of Water Droplets on Phosphorene: Roles of Layer and Defect Engineering. *Journal of Physical Chemistry C*, **2018**, 122, 4622-4627	3.8	17
39	Design of the Hybrid Metal□Organic Frameworks as Potential Supramolecular Piezo-/Ferroelectrics. *Journal of Physical Chemistry C*, **2019**, 123, 3122-3129	3.8	16
38	Adsorption Mechanism of Amyloid Fibrils to Graphene Nanosheets and Their Structural Destruction. *Journal of Physical Chemistry C*, **2019**, 123, 897-906	3.8	13
37	Concentrating synthetic estrogen 17□ethinylestradiol using microporous polyethersulfone hollow fiber membranes: Experimental exploration and molecular simulation. *Chemical Engineering Journal* , **2017**, 314, 80-87	14.7	12

36	Large diffusion anisotropy and orientation sorting of phosphorene nanoflakes under a temperature gradient. *Nanoscale*, **2018**, 10, 1660-1666	7.7	12
35	BSA-caged metal clusters to exfoliate MoS nanosheets towards their hybridized functionalization. *Nanoscale*, **2018**, 10, 10911-10917	7.7	12
34	Atomistic simulation of dislocation□oid interactions under cyclic loading. *Modelling and Simulation in Materials Science and Engineering*, **2010**, 18, 025006	2	12
33	Surface-Mediated Chemical Dissolution of Two-Dimensional Nanomaterials toward Hole Creation. *Chemistry of Materials*, **2018**, 30, 5108-5115	9.6	12
32	Synergetically understanding the interaction between nano/microspheres and peptide for controllable drug loading via experimental and theoretical approaches. *Materials Science and Engineering C*, **2018**, 83, 169-176	8.3	11
31	Dense Correspondence of Skull Models by Automatic Detection of Anatomical Landmarks. *Lecture Notes in Computer Science*, **2013**, 229-236	0.9	10
30	DEFORMATION OF GRAPHENE INDUCED BY ADSORPTION OF PEPTIDES: A MOLECULAR DYNAMICS STUDY. *International Journal of Applied Mechanics*, **2013**, 05, 1350007	2.4	9
29	Background Recovery by Fixed-Rank Robust Principal Component Analysis. *Lecture Notes in Computer Science*, **2013**, 54-61	0.9	9
28	A Stretchable and Transparent Electrode Based on PEGylated Silk Fibroin for In Vivo Dual-Modal Neural-Vascular Activity Probing. *Advanced Materials*, **2021**, 33, e2100221	24	8
27	Adsorption and Conformational Evolution of Alpha-Helical BSA Segments on Graphene: A Molecular Dynamics Study. *International Journal of Applied Mechanics*, **2016**, 08, 1650021	2.4	8
26	Toward rational algorithmic design of collagen-based biomaterials through multiscale computational modeling. *Current Opinion in Chemical Engineering*, **2019**, 24, 79-87	5.4	7
25	Insight into the structure-capacity relationship in biomass derived carbon for high-performance sodium-ion batteries. *Journal of Energy Chemistry*, **2021**, 62, 497-504	12	7
24	Destabilization of Thiolated Gold Clusters for the Growth of Single-Crystalline Gold Nanoparticles and Their Self-Assembly for SERS Detection. *Particle and Particle Systems Characterization*, **2015**, 32, 588-595	3.1	6
23	Automatic identification of Frankfurt plane and mid-sagittal plane of skull **2012**,		6
22	Surface Energy-Controlled Self-Collapse of Carbon Nanotube Bundles With Large and Reversible Volumetric Deformation. *Journal of Applied Mechanics, Transactions ASME*, **2013**, 80,	2.7	6
21	How Does Nature Evade the "Larger is Weaker" Fate of Ultralong Silk □Sheet Nanocrystallites. *Nano Letters*, **2020**, 20, 8516-8523	11.5	6
20	Magnetic order-dependent phonon properties in 2D magnet CrI. *Nanoscale*, **2021**, 13, 10882-10890	7.7	6
19	Spontaneous directional motion of water molecules in single-walled carbon nanotubes with a stiffness gradient. *Nanoscale Advances*, **2019**, 1, 1175-1180	5.1	5

18	Tuning the structure of monomeric amyloid beta peptide by the curvature of carbon nanotubes. *Carbon*, **2019**, 153, 717-724	10.4	5
17	Analytical description of Ogston-regime biomolecule separation using nanofilters and nanopores. *Physical Review E*, **2009**, 80, 041911	2.4	5
16	A thermodynamic study of peptides binding to carbon nanotubes based on a hydrophobic-polar lattice model using Monte Carlo simulations. *Journal Physics D: Applied Physics*, **2008**, 41, 055308	3	5
15	Performance Analysis of Active Shape Reconstruction of Fractured, Incomplete Skulls. *Lecture Notes in Computer Science*, **2015**, 312-324	0.9	5
14	Effects of molecular adsorption on the spin-wave spectrum and magnon relaxation in two-dimensional CrGeTe. *Physical Chemistry Chemical Physics*, **2020**, 22, 22047-22054	3.6	5
13	Dual-targeted carbon-dot-drugs nanoassemblies for modulating Alzheimer's related amyloid-aggregation and inhibiting fungal infection.. *Materials Today Bio*, **2021**, 12, 100167	9.9	4
12	2D Materials Meet Biomacromolecules: Opportunities and Challenges. *Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica*, **2019**, 35, 1078-1089	3.8	4
11	Magnon relaxation time in ferromagnetic Cr2Ge2Te6 monolayer governed by magnon-phonon interaction. *Applied Physics Letters*, **2021**, 118, 023102	3.4	4
10	Bottom-Up Formation of Carbon-Based Magnetic Honeycomb Material from Metal-Organic Framework-Guest Polyhedra for the Capture of Rhodamine B. *ACS Omega*, **2019**, 4, 5578-5585	3.9	3
9	Deep insights into interface engineering by buffer layer for efficient perovskite solar cells: a first-principles study. *Science China Materials*, **2020**, 63, 1588-1596	7.1	3
8	Molecular simulation on the interaction of Ethinylestradiol (EE2) with polymer membranes in wastewater purification. *Molecular Simulation*, **2018**, 44, 638-647	2	3
7	Effect of surface functionality of molecularly imprinted composite nanospheres on specific recognition of proteins. *Materials Science and Engineering C*, **2020**, 116, 111076	8.3	1
6	Chapter 4:Ionic Liquid Electrolytes for Graphene-based Supercapacitors with an Ultrahigh Energy Density. *RSC Smart Materials*, **2019**, 95-128	0.6	1
5	Application of Graphene in Coating Silk Fibril for Tunable Infrared Absorption. *Journal of Electronic Materials*, **2021**, 50, 592-597	1.9	1
4	Enhanced Stability and Mechanical Properties of a Graphene-Protein Nanocomposite Film by a Facile Non-Covalent Self-Assembly Approach.. *Nanomaterials*, **2022**, 12,	5.4	1
3	Chain substitution caused sub-fibril level differences in electromechanical structure and property of wild-type and oim/oim collagen fibers. *Journal of Applied Physics*, **2020**, 128, 235111	2.5	0
2	On the interface between biomaterials and two-dimensional materials for biomedical applications.. *Advanced Drug Delivery Reviews*, **2022**, 186, 114314	18.5	0
1	Plane-Fitting Robust Registration for Complex 3D Models. *Lecture Notes in Computer Science*, **2015**, 640-651		