Ruhong Zhou

List of Publications by Citations

312 papers	18,147 citations	67 h-index	126 g-index
338 ext. papers	20,858 ext. citations	8.1 avg, IF	7 L-index

#	Paper	IF	Citations
312	Destructive extraction of phospholipids from Escherichia coli membranes by graphene nanosheets. *Nature Nanotechnology*, **2013**, 8, 594-601	28.7	1008
311	Binding of blood proteins to carbon nanotubes reduces cytotoxicity. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 16968-73	11.5	738
310	Patient HLA class I genotype influences cancer response to checkpoint blockade immunotherapy. *Science*, **2018**, 359, 582-587	33.3	500
309	The free energy landscape for beta hairpin folding in explicit water. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 14931-6	11.5	458
308	Hydrophobic collapse in multidomain protein folding. *Science*, **2004**, 305, 1605-9	33.3	441
307	Urea denaturation by stronger dispersion interactions with proteins than water implies a 2-stage unfolding. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 16928-33	11.5	424
306	Dewetting and hydrophobic interaction in physical and biological systems. *Annual Review of Physical Chemistry*, **2009**, 60, 85-103	15.7	383
305	Observation of a dewetting transition in the collapse of the melittin tetramer. *Nature*, **2005**, 437, 159-62	50.4	333
304	Trp-cage: folding free energy landscape in explicit water. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 13280-5	11.5	319
303	Can a continuum solvent model reproduce the free energy landscape of a beta -hairpin folding in water?. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 12777-82	11.5	308
302	Development of a polarizable force field for proteins via ab initio quantum chemistry: first generation model and gas phase tests. *Journal of Computational Chemistry*, **2002**, 23, 1515-31	3.5	276
301	Electrostatic gating of a nanometer water channel. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 3687-92	11.5	274
300	Free energy landscape of protein folding in water: explicit vs. implicit solvent. *Proteins: Structure, Function and Bioinformatics*, **2003**, 53, 148-61	4.2	270
299	Overcoming the crystallization and designability issues in the ultrastable zirconium phosphonate framework system. *Nature Communications*, **2017**, 8, 15369	17.4	266
298	Identifying the Recognition Site for Selective Trapping of TcO in a Hydrolytically Stable and Radiation Resistant Cationic Metal-Organic Framework. *Journal of the American Chemical Society*, **2017**, 139, 14873-14876	16.4	263
297	Urea's action on hydrophobic interactions. *Journal of the American Chemical Society*, **2009**, 131, 1535-41	16.4	261
296	Differential Pd-nanocrystal facets demonstrate distinct antibacterial activity against Gram-positive and Gram-negative bacteria. *Nature Communications*, **2018**, 9, 129	17.4	260

295	Comprehensive interrogation of natural TALE DNA-binding modules and transcriptional repressor domains. *Nature Communications*, **2012**, 3, 968	17.4	257
294	Highly Sensitive and Selective Uranium Detection in Natural Water Systems Using a Luminescent Mesoporous Metal-Organic Framework Equipped with Abundant Lewis Basic Sites: A Combined Batch, X-ray Absorption Spectroscopy, and First Principles Simulation Investigation. *Environmental Science & Technology*, **2017**, 51, 3911-3921	10.3	246
293	Fluctuating Charge, Polarizable Dipole, and Combined Models: Parameterization from ab Initio Quantum Chemistry. *Journal of Physical Chemistry B*, **1999**, 103, 4730-4737	3.4	239
292	Parametrizing a polarizable force field from ab initio data. I. The fluctuating point charge model. *Journal of Chemical Physics*, **1999**, 110, 741-754	3.9	225
291	Reduced Cytotoxicity of Graphene Nanosheets Mediated by Blood-Protein Coating. *ACS Nano*, **2015**, 9, 5713-24	16.7	216
290	Probing the self-assembly mechanism of diphenylalanine-based peptide nanovesicles and nanotubes. *ACS Nano*, **2012**, 6, 3907-18	16.7	213
289	A mesoporous cationic thorium-organic framework that rapidly traps anionic persistent organic pollutants. *Nature Communications*, **2017**, 8, 1354	17.4	211
288	Role of water in mediating the assembly of Alzheimer amyloid-beta Abeta16-22 protofilaments. *Journal of the American Chemical Society*, **2008**, 130, 11066-72	16.4	180
287	Molecular mechanism of pancreatic tumor metastasis inhibition by Gd@C82(OH)22 and its implication for de novo design of nanomedicine. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 15431-6	11.5	177
286	Blue Gene: A vision for protein science using a petaflop supercomputer. *IBM Systems Journal*, **2001**, 40, 310-327		175
285	Tunable, Strain-Controlled Nanoporous MoS Filter for Water Desalination. *ACS Nano*, **2016**, 10, 1829-35	16.7	174
284	Adsorption of Villin Headpiece onto Graphene, Carbon Nanotube, and C60: Effect of Contacting Surface Curvatures on Binding Affinity. *Journal of Physical Chemistry C*, **2011**, 115, 23323-23328	3.8	162
283	Describing Protein Folding Kinetics by Molecular Dynamics Simulations. 2. Example Applications to Alanine Dipeptide and a Hairpin Peptide *Journal of Physical Chemistry B*, **2004**, 108, 6582-6594	3.4	159
282	Protein corona mitigates the cytotoxicity of graphene oxide by reducing its physical interaction with cell membrane. *Nanoscale*, **2015**, 7, 15214-24	7.7	157
281	Plugging into proteins: poisoning protein function by a hydrophobic nanoparticle. *ACS Nano*, **2010**, 4, 7508-14	16.7	155
280	Potential toxicity of graphene to cell functions via disrupting protein-protein interactions. *ACS Nano*, **2015**, 9, 663-9	16.7	143
279	Degradable Carbon Dots with Broad-Spectrum Antibacterial Activity. *ACS Applied Materials & Interfaces*, **2018**, 10, 26936-26946	9.5	143
278	Half a century of amyloids: past, present and future. *Chemical Society Reviews*, **2020**, 49, 5473-5509	58.5	142

277	Unique Proton Transportation Pathway in a Robust Inorganic Coordination Polymer Leading to Intrinsically High and Sustainable Anhydrous Proton Conductivity. *Journal of the American Chemical Society*, **2018**, 140, 6146-6155	16.4	133
276	Exceptional Perrhenate/Pertechnetate Uptake and Subsequent Immobilization by a Low-Dimensional Cationic Coordination Polymer: Overcoming the Hofmeister Bias Selectivity. *Environmental Science and Technology Letters*, **2017**, 4, 316-322	11	131
275	PEGylated graphene oxide elicits strong immunological responses despite surface passivation. *Nature Communications*, **2017**, 8, 14537	17.4	120
274	PoissonBoltzmann Analytical Gradients for Molecular Modeling Calculations. *Journal of Physical Chemistry B*, **1999**, 103, 3057-3061	3.4	120
273	New Linear Interaction Method for Binding Affinity Calculations Using a Continuum Solvent Model. *Journal of Physical Chemistry B*, **2001**, 105, 10388-10397	3.4	116
272	Interactions between proteins and carbon-based nanoparticles: exploring the origin of nanotoxicity at the molecular level. *Small*, **2013**, 9, 1546-56	11	113
271	Towards understanding of nanoparticle-protein corona. *Archives of Toxicology*, **2015**, 89, 519-39	5.8	112
270	Successful Decontamination of TcO in Groundwater at Legacy Nuclear Sites by a Cationic Metal-Organic Framework with Hydrophobic Pockets. *Angewandte Chemie - International Edition*, **2019**, 58, 4968-4972	16.4	111
269	Water-mediated signal multiplication with Y-shaped carbon nanotubes. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 18120-4	11.5	109
268	Efficient multiple time step method for use with Ewald and particle mesh Ewald for large biomolecular systems. *Journal of Chemical Physics*, **2001**, 115, 2348-2358	3.9	104
267	Opening Lids: Modulation of Lipase Immobilization by Graphene Oxides. *ACS Catalysis*, **2016**, 6, 4760-4768	13.1	103
266	Aggregation of □crystallins associated with human cataracts via domain swapping at the C-terminal β□strands. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 10514-9	11.5	100
265	Large scale simulation of macromolecules in solution: Combining the periodic fast multipole method with multiple time step integrators. *Journal of Chemical Physics*, **1997**, 106, 9835-9849	3.9	98
264	Mechanism unravelling for ultrafast and selective TcO uptake by a radiation-resistant cationic covalent organic framework: a combined radiological experiment and molecular dynamics simulation study. *Chemical Science*, **2019**, 10, 4293-4305	9.4	96
263	Replica exchange with solute tempering: efficiency in large scale systems. *Journal of Physical Chemistry B*, **2007**, 111, 5405-10	3.4	95
262	Dynamics of water confined in the interdomain region of a multidomain protein. *Journal of Physical Chemistry B*, **2006**, 110, 3704-11	3.4	88
261	Molecular dynamics with multiple time scales: The selection of efficient reference system propagators. *Journal of Chemical Physics*, **1996**, 105, 1426-1436	3.9	88
260	Wettability and friction of water on a MoS2 nanosheet. *Applied Physics Letters*, **2016**, 108, 131601	3.4	86

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258	Surface Curvature Relation to Protein Adsorption for Carbon-based Nanomaterials. *Scientific Reports*, **2015**, 5, 10886	4.9	84
257	Destruction of amyloid fibrils by graphene through penetration and extraction of peptides. *Nanoscale*, **2015**, 7, 18725-37	7.7	84
256	Triphenylalanine peptides self-assemble into nanospheres and nanorods that are different from the nanovesicles and nanotubes formed by diphenylalanine peptides. *Nanoscale*, **2014**, 6, 2800-11	7.7	83
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254	Amino acid analogues bind to carbon nanotube via π interactions: comparison of molecular mechanical and quantum mechanical calculations. *Journal of Chemical Physics*, **2012**, 136, 025103	3.9	82
253	The role of basic residues in the adsorption of blood proteins onto the graphene surface. *Scientific Reports*, **2015**, 5, 10873	4.9	80
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250	Hydrophobic aided replica exchange: an efficient algorithm for protein folding in explicit solvent. *Journal of Physical Chemistry B*, **2006**, 110, 19018-22	3.4	71
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246	A Peptide-Coated Gold Nanocluster Exhibits Unique Behavior in Protein Activity Inhibition. *Journal of the American Chemical Society*, **2015**, 137, 8412-8	16.4	67
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222	Graphene Oxide Nanosheets Retard Cellular Migration via Disruption of Actin Cytoskeleton. *Small*, **2017**, 13, 1602133	11	49
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207	Highly Sensitive Detection of UV Radiation Using a Uranium Coordination Polymer. *ACS Applied Materials & Interfaces*, **2018**, 10, 4844-4850	9.5	38
206	Stability of Ligands on Nanoparticles Regulating the Integrity of Biological Membranes at the Nano-Lipid Interface. *ACS Nano*, **2019**, 13, 8680-8693	16.7	38

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