Diannan Lu

List of Publications by Year
in descending order

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104 papers	2,472 citations	201385 27 h-index	223531 46 g-index
105 all docs	105 docs citations	105 times ranked	3113 citing authors

#	Article	IF	Citations
1	Recent advances in nanostructured biocatalysts. Biochemical Engineering Journal, 2009, 44, 53-59.	1.8	149
2	Photo-induced ultrafast active ion transport through graphene oxide membranes. Nature Communications, 2019, 10, 1171.	5.8	146
3	Valorization of food waste into biofertiliser and its field application. Journal of Cleaner Production, 2018, 187, 273-284.	4.6	118
4	How PEGylation Enhances the Stability and Potency of Insulin: A Molecular Dynamics Simulation. Biochemistry, 2011, 50, 2585-2593.	1.2	117
5	Lipase Nanogel Catalyzed Transesterification in Anhydrous Dimethyl Sulfoxide. Biomacromolecules, 2009, 10, 1612-1618.	2.6	105
6	Fabrication of Single Carbonic Anhydrase Nanogel against Denaturation and Aggregation at High Temperature. Biomacromolecules, 2007, 8, 560-565.	2.6	92
7	Molecular Fundamentals of Enzyme Nanogels. Journal of Physical Chemistry B, 2008, 112, 14319-14324.	1.2	79
8	Lightâ€Driven Active Proton Transport through Photoacidâ€•and Photobaseâ€Doped Janus Graphene Oxide Membranes. Advanced Materials, 2019, 31, e1903029.	11.1	70
9	Temperature-responsive enzymeâ€“polymer nanoconjugates with enhanced catalytic activities in organic media. Chemical Communications, 2013, 49, 6090.	2.2	65
10	Electricâ€Fieldâ€Induced Ionic Sieving at Planar Graphene Oxide Heterojunctions for Miniaturized Water Desalination. Advanced Materials, 2020, 32, e1903954.	11.1	64
11	Protein Refolding Assisted by Periodic Mesoporous Organosilicas. Langmuir, 2007, 23, 5735-5739.	1.6	55
12	Bioadsorption and biostabilization of cadmium by Enterobacter cloacae TU. Chemosphere, 2017, 173, 622-629.	4.2	54
13	Magnetic enzyme nanogel (MENG): a universal synthetic route for biocatalysts. Chemical Communications, 2012, 48, 3315.	2.2	46
14	Hyperbranched polymer conjugated lipase with enhanced activity and stability. Biochemical Engineering Journal, 2007, 36, 93-99.	1.8	44
15	How Hydrophobicity and the Glycosylation Site of Glycans Affect Protein Folding and Stability: A Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2012, 116, 390-400.	1.2	44
16	Dextran-grafted-PNIPAAm as an artificial chaperone for protein refolding. Biochemical Engineering Journal, 2006, 27, 336-343.	1.8	43
17	Substrate imprinted lipase nanogel for one-step synthesis of chloramphenicol palmitate. Green Chemistry, 2013, 15, 1155.	4.6	43
18	Ecological and enzymatic responses to petroleum contamination. Environmental Sciences: Processes and Impacts, 2014, 16, 1501-1509.	1.7	42

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19	Highly Efficient Ionic Photocurrent Generation through WS₂â€Based 2D Nanofluidic Channels. Small, 2019, 15, e1905355.	5.2	41
20	Enzymatic Synthesis of Highâ€Molecularâ€Weight Poly(butylene succinate) and its Copolymers. Macromolecular Chemistry and Physics, 2015, 216, 636-640.	1.1	39
21	How CTAB assists the refolding of native and recombinant lysozyme. Biochemical Engineering Journal, 2005, 24, 269-277.	1.8	37
22	Nanobiocatalysis in Organic Media: Opportunities for Enzymes in Nanostructures. Topics in Catalysis, 2012, 55, 1070-1080.	1.3	37
23	A Lipaseâ€Responsive Vehicle Using Amphipathic Polymer Synthesized with the Lipase as Catalyst. Macromolecular Rapid Communications, 2011, 32, 546-550.	2.0	36
24	The mechanism of PNIPAAm-assisted refolding of lysozyme denatured by urea. Biochemical Engineering Journal, 2005, 24, 55-64.	1.8	35
25	Structural Transitions of Confined Model Proteins: Molecular Dynamics Simulation and Experimental Validation. Biophysical Journal, 2006, 90, 3224-3238.	0.2	35
26	Uniform polymerâ€“protein conjugate by aqueous AGET ATRP using protein as a macroinitiator. Acta Biomaterialia, 2011, 7, 2131-2138.	4.1	32
27	How native proteins aggregate in solution: A dynamic Monte Carlo simulation. Biophysical Chemistry, 2008, 133, 71-80.	1.5	31
28	Preparation of uniform magnetic iron oxide nanoparticles by co-precipitation in a helical module microchannel reactor. Journal of Environmental Chemical Engineering, 2017, 5, 303-309.	3.3	29
29	Graphene oxide enabled long-term enzymatic transesterification in an anhydrous gas flux. Nature Communications, 2019, 10, 2684.	5.8	28
30	Protein refolding assisted by an artificial chaperone using temperature stimuli responsive polymer as the stripper. Biochemical Engineering Journal, 2005, 25, 141-149.	1.8	27
31	Accelerating water transport through a charged SWCNT: a molecular dynamics simulation. Physical Chemistry Chemical Physics, 2013, 15, 14447.	1.3	27
32	Molecular Theory for Electrokinetic Transport in pH-Regulated Nanochannels. Journal of Physical Chemistry Letters, 2014, 5, 3015-3020.	2.1	26
33	Dynamic Redox Environment-Intensified Disulfide Bond Shuffling for Protein Refolding in Vitro: Molecular Simulation and Experimental Validation. Journal of Physical Chemistry B, 2008, 112, 15127-15133.	1.2	23
34	Isolation and characterization of a quinclorac-degrading Actinobacteria Streptomyces sp. strain AH-B and its implication on microecology in contaminated soil. Chemosphere, 2018, 199, 210-217.	4.2	23
35	Photoinduced Directional Proton Transport through Printed Asymmetric Graphene Oxide Superstructures: A New Driving Mechanism under Fullâ€Area Light Illumination. Advanced Functional Materials, 2020, 30, 1907549.	7.8	23
36	Lightâ€Powered Directional Nanofluidic Ion Transport in Kirigamiâ€Made Asymmetric Photonicâ€Ionic Devices. Small, 2020, 16, e1905557.	5.2	23

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37	How Serratia marcescens HB-4 absorbs cadmium and its implication on phytoremediation. Ecotoxicology and Environmental Safety, 2019, 185, 109723.	2.9	22
38	Increased stability and intracellular antioxidant activity of chlorogenic acid depend on its molecular interaction with wheat gluten hydrolysate. Food Chemistry, 2020, 325, 126873.	4.2	20
39	Reversible encapsulation of lysozyme within mPEG-b-PMAA: experimental observation and molecular dynamics simulation. Soft Matter, 2013, 9, 8723.	1.2	18
40	Molecular dynamics for the charging behavior of nanostructured electric double layer capacitors containing room temperature ionic liquids. Nano Research, 2015, 8, 931-940.	5.8	18
41	Kinetic and multidimensional profiling of accelerated degradation of oil sludge by biostimulation. Environmental Sciences: Processes and Impacts, 2015, 17, 763-774.	1.7	17
42	Italicized carbon nanotube facilitating water transport: a molecular dynamics simulation. Science Bulletin, 2015, 60, 1580-1586.	4.3	17
43	Laterally Heterogeneous 2D Layered Materials as an Artificial Lightâ€Harvesting Proton Pump. Advanced Functional Materials, 2020, 30, 2001549.	7.8	17
44	Dynamic control of protein conformation transition in chromatographic separation based on hydrophobic interactions. Journal of Chromatography A, 2009, 1216, 2483-2490.	1.8	16
45	A molecular theory for optimal blue energy extraction by electrical double layer expansion. Physical Chemistry Chemical Physics, 2015, 17, 23970-23976.	1.3	16
46	Molecular simulation of surfactant-assisted protein refolding. Journal of Chemical Physics, 2005, 122, 134902.	1.2	15
47	Enriched Microbial Community in Bioaugmentation of Petroleum-Contaminated Soil in the Presence of Wheat Straw. Applied Biochemistry and Biotechnology, 2011, 164, 1071-1082.	1.4	15
48	Single-molecule level dynamic observation of disassembly of the apo-ferritin cage in solution. Physical Chemistry Chemical Physics, 2020, 22, 18562-18572.	1.3	14
49	Design and synthesis of lipase nanogel with interpenetrating polymer networks for enhanced catalysis: Molecular simulation and experimental validation. Journal of Molecular Catalysis B: Enzymatic, 2013, 88, 60-68.	1.8	13
50	Oscillatory Molecular Driving Force for Protein Folding at High Concentration:â€‰ A Molecular Simulation. Journal of Physical Chemistry B, 2008, 112, 2686-2693.	1.2	12
51	Refolding of Inclusion Body Proteins from E. coli. Methods of Biochemical Analysis, 2011, 54, 319-338.	0.2	12
52	A multi-scale molecular dynamics simulation of PMAL facilitated delivery of siRNA. RSC Advances, 2015, 5, 68227-68233.	1.7	12
53	Spreading of a Unilamellar Liposome on Charged Substrates: A Coarse-Grained Molecular Simulation. Langmuir, 2016, 32, 3785-3793.	1.6	12
54	Recent progresses in the accumulation of metal ions into the apo-ferritin cage: Experimental and theoretical perspectives. Polyhedron, 2019, 172, 104-111.	1.0	12

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55	Molecular dynamics for surfactant-assisted protein refolding. Journal of Chemical Physics, 2007, 126, 064906.	1.2	11
56	Dynamic Control of Protein Folding Pathway with a Polymer of Tunable Hydrophobicity. Journal of Physical Chemistry B, 2007, 111, 12303-12309.	1.2	11
57	Strengthening intersubunit hydrogen bonds for enhanced stability of recombinant urate oxidase from Aspergillus flavus: molecular simulations and experimental validation. Physical Chemistry Chemical Physics, 2009, 11, 333-340.	1.3	11
58	Surface tension effects on the phase transition of a DPPC bilayer with and without protein: a molecular dynamics simulation. Physical Chemistry Chemical Physics, 2014, 16, 8434-8440.	1.3	11
59	Kinetics of CO₂ diffusion in human carbonic anhydrase: a study using molecular dynamics simulations and the Markov-state model. Physical Chemistry Chemical Physics, 2017, 19, 11690-11697.	1.3	11
60	Activation and stabilization of a lipase nanogel using GMA for acryloylation. Soft Matter, 2012, 8, 2036.	1.2	10
61	Biodegradation of chlorothalonil by Enterobacter cloacae TUAH-1. International Biodeterioration and Biodegradation, 2017, 121, 122-130.	1.9	9
62	A molecular theory for predicting the thermodynamic efficiency of electrokinetic energy conversion in slit nanochannels. Journal of Chemical Physics, 2018, 148, 084701.	1.2	9
63	Coordination design of cadmium ions at the 4-fold axis channel of the apo-ferritin cage. Dalton Transactions, 2019, 48, 9759-9764.	1.6	9
64	Computational screening and design of nanoporous membranes for efficient carbon isotope separation. Green Energy and Environment, 2020, 5, 364-373.	4.7	9
65	Virtual Screening of Nanoporous Materials for Noble Gas Separation. ACS Applied Nano Materials, 2022, 5, 3701-3711.	2.4	9
66	Strengthening the Stability of a Tunnel-Shaped Homotetramer Protein with Nanogels. Journal of Physical Chemistry B, 2011, 115, 8875-8882.	1.2	8
67	Pathways for Degrading TNT by Thu-Z: a Pantoea sp. Strain. Applied Biochemistry and Biotechnology, 2012, 168, 1976-1988.	1.4	8
68	Electrokinetic desalination using honeycomb carbon nanotubes (HC-CNTs): a conceptual study by molecular simulation. Physical Chemistry Chemical Physics, 2014, 16, 18941-18948.	1.3	8
69	Molecular dynamics simulations reveal how graphene oxide stabilizes and activates lipase in an anhydrous gas. Physical Chemistry Chemical Physics, 2019, 21, 25425-25430.	1.3	7
70	Design of Multinuclear Gold Binding Site at the Two-fold Symmetric Interface of the Ferritin Cage. Chemistry Letters, 2020, 49, 840-844.	0.7	7
71	Multiscale simulation of surfactantâ€“aquaporin complex formation and water permeability. RSC Advances, 2014, 4, 37592-37599.	1.7	6
72	Predicting hydration free energies of amphetamine-type stimulants with a customized molecular model. Journal of Physics Condensed Matter, 2016, 28, 344001.	0.7	6

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73	The mechanism for the complexation and dissociation between siRNA and PMAL: a molecular dynamics simulation study based on a coarse-grained model. Molecular Simulation, 2017, 43, 1385-1393.	0.9	6
74	Intensification of chemical separation engineering by nanostructured channels and nanofluidics: From theories to applications. Chinese Journal of Chemical Engineering, 2019, 27, 1439-1448.	1.7	6
75	Global and Kinetic Profiles of Substrate Diffusion in Candida antarctica Lipase B: Molecular Dynamics with the Markov-State Model. ACS Omega, 2020, 5, 9806-9812.	1.6	6
76	Importance of the Subunitâ€“Subunit Interface in Ferritin Disassembly: A Molecular Dynamics Study. Langmuir, 2022, 38, 1106-1113.	1.6	6
77	Molecular simulation of polymer assisted protein refolding. Journal of Chemical Physics, 2005, 123, 134903.	1.2	5
78	Studies of protein folding pathways. Annual Reports on the Progress of Chemistry Section C, 2010, 106, 259.	4.4	5
79	Uniform mPEGâ€bâ€PMETAC enables pHâ€responsive delivery of insulin. Journal of Applied Polymer Science, 2015, 132, .	1.3	5
80	How ABA block polymers activate cytochrome c in toluene: molecular dynamics simulation and experimental observation. Physical Chemistry Chemical Physics, 2015, 17, 10708-10714.	1.3	5
81	How pressure affects confine water inside different nanoslits. RSC Advances, 2019, 9, 19086-19094.	1.7	5
82	Recent progress in enzymatic functionalization of carbon-hydrogen bonds for the green synthesis of chemicals. Chinese Journal of Chemical Engineering, 2020, 28, 2499-2506.	1.7	5
83	How Small Molecules Affect the Thermo-Oxidative Aging Mechanism of Polypropylene: A Reactive Molecular Dynamics Study. Polymers, 2021, 13, 1243.	2.0	5
84	Design of a gold clustering site in an engineered apo-ferritin cage. Communications Chemistry, 2022, 5, .	2.0	5
85	Preparation and Antibacterial Function of Quaternary Ammonium Salts Grafted Cellulose Fiber Initiated by Fe2 +-H2O2Redox. Journal of Macromolecular Science - Pure and Applied Chemistry, 2009, 46, 560-565.	1.2	4
86	Restoration of taxonomic and functional genes after bioaugmentation of petroleum contaminated soil. Journal of Environmental Monitoring, 2011, 13, 2904.	2.1	4
87	Detachment of HCO₃^{â€} from the Active Site of Carbonic Anhydrase: Molecular Dynamics Simulation and Machine Learning. Journal of Physical Chemistry C, 2018, 122, 20539-20549.	1.5	4
88	A Multiscale Procedure for Predicting the Hydration Free Energies of Polycyclic Aromatic Hydrocarbons. Journal of Chemical & Engineering Data, 2020, 65, 2206-2211.	1.0	4
89	Theoretical insights on the hydration of quinones as catholytes in aqueous redox flow batteries. Chinese Journal of Chemical Engineering, 2021, 37, 72-78.	1.7	4
90	Markov-state model for CO2 binding with carbonic anhydrase under confinement. Journal of Chemical Physics, 2018, 148, 035101.	1.2	3

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91	An improved batch fluidized drying experimental design based on digital sensors and a minicomputer. Engineering Reports, 2021, 3, e12366.	0.9	3
92	Ecological Response in the Integrated Process of Biostimulation and Bioaugmentation of Diesel-Contaminated Soil. Applied Sciences (Switzerland), 2021, 11, 6305.	1.3	3
93	The Mechanism for siRNA Transmembrane Assisted by PMAL. Molecules, 2018, 23, 1586.	1.7	2
94	The synergistic mechanisms of apo-ferritin structural transitions and Au(<scp>iii</scp>) ion transportation: molecular dynamics simulations with the Markov state model. Physical Chemistry Chemical Physics, 2021, 23, 17158-17165.	1.3	2
95	Ion effects on the extraction of cesium (I) by 1,3-Diisopropoxycalix [4] arenecrown-6(BPC6) and the highly efficient extraction under neutral conditions. Solvent Extraction and Ion Exchange, 2022, 40, 333-348.	0.8	2
96	A distal regulatory strategy of enzymes: from local to global conformational dynamics. Physical Chemistry Chemical Physics, 2021, 23, 22451-22465.	1.3	2
97	A Coreâ€Shell Cascade of Chloroperoxidase and Gold Nanoclusters for Asymmetric Hydroxylation of Ethylbenzene. ChemCatChem, 2022, 14, .	1.8	2
98	A theoretical study on the morphological phase diagram of supported lipid bilayers. Physical Chemistry Chemical Physics, 2017, 19, 16897-16903.	1.3	1
99	Magnetic Multienzyme Nanoparticles Catalyzed Degradation of Aqueous Tributyltin. Catalysis Letters, 2018, 148, 3732-3740.	1.4	1
100	A hybrid theoretical method for predicting electrokinetic energy conversion in nanochannels. Physical Chemistry Chemical Physics, 2020, 22, 9110-9116.	1.3	1
101	PROTEIN REFOLDING IN VITRO USING LOW CONCENTRATION CTAB. , 2004, , .		0
102	Ionic Transport Triggered by Asymmetric Illumination on 2D Nano-Membrane. Molecules, 2021, 26, 7078.	1.7	0
103	Glucose Induces Heme Leakage and Suppresses H2O2 Uptake of Chloroperoxidase in the Asymmetric Hydroxylation of Ethylbenzene. ChemCatChem, 0, , .	1.8	0
104	Diffusion and Entropy of Supercooled Water in Nanoslit. Chemical Engineering Journal, 2022, 446, 136672.	6.6	0