Peng Chen

List of Publications by Year in Descending Order

78 papers	6,091 citations	40 h-index	78 g-index
90 ext. papers	6,778 ext. citations	14.4 avg, IF	5.81 L-index

#	Paper	IF	Citations
78	Scanning Electrochemical and Photoelectrochemical Microscopy on Finder Grids: Toward Correlative Multitechnique Imaging of Surfaces. *Analytical Chemistry*, **2021**, 93, 5377-5382	7.8	0
77	Real-Time Single-Polymer Growth towards Single-Monomer Resolution. *Trends in Chemistry*, **2021**, 3, 318-331	14.8	0
76	Nanoscale cooperative adsorption for materials control. *Nature Communications*, **2021**, 12, 4287	17.4	6
75	Stochastic Kinetics of Nanocatalytic Systems. *Physical Review Letters*, **2021**, 126, 126001	7.4	1
74	Single-chain polymerization dynamics and conformational mechanics of conjugated polymers. *CheM* , **2021**, 7, 2175-2189	16.2	4
73	Inter-facet junction effects on particulate photoelectrodes.. *Nature Materials*, **2021**,	27	6
72	Metal-induced sensor mobilization turns on affinity to activate regulator for metal detoxification in live bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 13248-13255	11.5	2
71	Exploring Plasmonic Photocatalysis via Single-Molecule Reaction Imaging. *Nano Letters*, **2020**, 20, 2939-2940	11.5	6
70	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. *Nature Nanotechnology*, **2020**, 15, 272-276	28.7	32
69	Biphasic unbinding of a metalloregulator from DNA for transcription (de)repression in Live Bacteria. *Nucleic Acids Research*, **2020**, 48, 2199-2208	20.1	2
68	Heterogeneous integration of single-crystalline complex-oxide membranes. *Nature*, **2020**, 578, 75-81	50.4	107
67	Analogy between Enzyme and Nanoparticle Catalysis: A Single-Molecule Perspective. *ACS Catalysis*, **2019**, 9, 1985-1992	13.1	19
66	Correlated Single-Molecule Reaction Imaging and Photocurrent Measurements Reveal Underlying Rate Processes in Photoelectrochemical Water Splitting. *Journal of the Electrochemical Society*, **2019**, 166, H3286-H3293	3.9	5
65	Super-resolution imaging of non-fluorescent reactions via competition. *Nature Chemistry*, **2019**, 11, 687-694	17.6	37
64	Mechanical stress compromises multicomponent efflux complexes in bacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 25462-25467	11.5	9
63	Quantifying Photocurrent Loss of a Single Particle-Particle Interface in Nanostructured Photoelectrodes. *Nano Letters*, **2019**, 19, 958-962	11.5	8
62	Facilitated Unbinding via Multivalency-Enabled Ternary Complexes: New Paradigm for Protein-DNA Interactions. *Accounts of Chemical Research*, **2018**, 51, 860-868	24.3	27

61	Cooperative communication within and between single nanocatalysts. *Nature Chemistry*, **2018**, 10, 607-614	17.6	56
60	Charge Carrier Activity on Single-Particle Photo(electro)catalysts: Toward Function in Solar Energy Conversion. *Journal of the American Chemical Society*, **2018**, 140, 6729-6740	16.4	35
59	Imaging Catalytic Hotspots on Single Plasmonic Nanostructures via Correlated Super-Resolution and Electron Microscopy. *ACS Nano*, **2018**, 12, 5570-5579	16.7	56
58	Adaptor protein mediates dynamic pump assembly for bacterial metal efflux. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 6694-6699	11.5	19
57	Single polymer growth dynamics. *Science*, **2017**, 358, 352-355	33.3	42
56	Bimetallic Effect of Single Nanocatalysts Visualized by Super-Resolution Catalysis Imaging. *ACS Central Science*, **2017**, 3, 1189-1197	16.8	47
55	Single-molecule dynamics of the molecular chaperone trigger factor in living cells. *Molecular Microbiology*, **2016**, 102, 992-1003	4.1	6
54	Distinguishing Direct and Indirect Photoelectrocatalytic Oxidation Mechanisms Using Quantitative Single-Molecule Reaction Imaging and Photocurrent Measurements. *Journal of Physical Chemistry C* , **2016**, 120, 20668-20676	3.8	37
53	Sub-particle reaction and photocurrent mapping to optimize catalyst-modified photoanodes. *Nature*, **2016**, 530, 77-80	50.4	241
52	Concentration- and chromosome-organization-dependent regulator unbinding from DNA for transcription regulation in living cells. *Nature Communications*, **2015**, 6, 7445	17.4	61
51	Strategies for enhancing the sensitivity of plasmonic nanosensors. *Nano Today*, **2015**, 10, 213-239	17.9	283
50	Metalloregulator CueR biases RNA polymerase's kinetic sampling of dead-end or open complex to repress or activate transcription. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 13467-72	11.5	21
49	Quantifying Multistate Cytoplasmic Molecular Diffusion in Bacterial Cells via Inverse Transform of Confined Displacement Distribution. *Journal of Physical Chemistry B*, **2015**, 119, 14451-9	3.4	9
48	Approaches to single-nanoparticle catalysis. *Annual Review of Physical Chemistry*, **2014**, 65, 395-422	15.7	118
47	Spatiotemporal catalytic dynamics within single nanocatalysts revealed by single-molecule microscopy. *Chemical Society Reviews*, **2014**, 43, 1107-17	58.5	110
46	Single-Molecule Kinetics Reveals a Hidden Surface Reaction Intermediate in Single-Nanoparticle Catalysis. *Journal of Physical Chemistry C*, **2014**, 118, 26902-26911	3.8	41
45	Single Turnover Measurements of Nanoparticle Catalysis Analyzed with Dwell Time Correlation Functions and Constrained Mean Dwell Times. *Journal of Physical Chemistry C*, **2013**, 117, 19074-19081	3.8	10
44	Single-molecule dynamics and mechanisms of metalloregulators and metallochaperones. *Biochemistry*, **2013**, 52, 7170-83	3.2	11

43	Single-molecule catalysis mapping quantifies site-specific activity and uncovers radial activity gradient on single 2D nanocrystals. *Journal of the American Chemical Society*, **2013**, 135, 1845-52	16.4	160
42	Scalable Parallel Screening of Catalyst Activity at the Single-Particle Level and Subdiffraction Resolution. *ACS Catalysis*, **2013**, 3, 1448-1453	13.1	53
41	How does a single Pt nanocatalyst behave in two different reactions? A single-molecule study. *Nano Letters*, **2012**, 12, 1253-9	11.5	84
40	Dynamic multibody protein interactions suggest versatile pathways for copper trafficking. *Journal of the American Chemical Society*, **2012**, 134, 8934-43	16.4	24
39	Quantitative super-resolution imaging uncovers reactivity patterns on single nanocatalysts. *Nature Nanotechnology*, **2012**, 7, 237-41	28.7	219
38	Controlled photonic manipulation of proteins and other nanomaterials. *Nano Letters*, **2012**, 12, 1633-7	11.5	142
37	Direct substitution and assisted dissociation pathways for turning off transcription by a MerR-family metalloregulator. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 15121-6	11.5	55
36	Relating dynamic protein interactions of metallochaperones with metal transfer at the single-molecule level. *Faraday Discussions*, **2011**, 148, 71-82; discussion 97-108	3.6	17
35	Interpreting single turnover catalysis measurements with constrained mean dwell times. *Journal of Chemical Physics*, **2011**, 135, 174509	3.9	12
34	Single Molecule Fluorescence Methods in Enzymology **2010**, 751-769		1
33	Nanovesicle trapping for studying weak protein interactions by single-molecule FRET. *Methods in Enzymology*, **2010**, 472, 41-60	1.7	19
32	Size-dependent catalytic activity and dynamics of gold nanoparticles at the single-molecule level. *Journal of the American Chemical Society*, **2010**, 132, 138-46	16.4	422
31	Single-molecule fluorescence imaging of nanocatalytic processes. *Chemical Society Reviews*, **2010**, 39, 4560-70	58.5	121
30	Tackling metal regulation and transport at the single-molecule level. *Natural Product Reports*, **2010**, 27, 757-67	15.1	10
29	Single-molecule nanoscale electrocatalysis. *Physical Chemistry Chemical Physics*, **2010**, 12, 6555-63	3.6	34
28	Single Molecule Fluorescence Methods in Enzymology **2010**, 353-367		
27	Single-molecule electrocatalysis by single-walled carbon nanotubes. *Nano Letters*, **2009**, 9, 3968-73	11.5	92
26	Single-molecule kinetics of nanoparticle catalysis. *Nano Research*, **2009**, 2, 911-922	10	39

25	Single-nanoparticle catalysis at single-turnover resolution. *Chemical Physics Letters*, **2009**, 470, 151-157	2.5	53
24	Single-molecule study of metalloregulator CueR-DNA interactions using engineered Holliday junctions. *Biophysical Journal*, **2009**, 97, 844-52	2.9	20
23	Single-Molecule Kinetic Theory of Heterogeneous and Enzyme Catalysis. *Journal of Physical Chemistry C*, **2009**, 113, 2393-2404	3.8	74
22	Probing the catalytic activity and heterogeneity of Au-nanoparticles at the single-molecule level. *Physical Chemistry Chemical Physics*, **2009**, 11, 2767-78	3.6	73
21	Single-molecule nanocatalysis reveals heterogeneous reaction pathways and catalytic dynamics. *Nature Materials*, **2008**, 7, 992-6	27	351
20	Probing transient copper chaperone-Wilson disease protein interactions at the single-molecule level with nanovesicle trapping. *Journal of the American Chemical Society*, **2008**, 130, 2446-7	16.4	49
19	Single-molecule fluorescence studies from a bioinorganic perspective. *Inorganica Chimica Acta*, **2008**, 361, 809-819	2.7	11
18	Engineered holliday junctions as single-molecule reporters for protein-DNA interactions with application to a MerR-family regulator. *Journal of the American Chemical Society*, **2007**, 129, 12461-7	16.4	19
17	Observation of individual microtubule motor steps in living cells with endocytosed quantum dots. *Journal of Physical Chemistry B*, **2005**, 109, 24220-4	3.4	142
16	An exceptionally selective lead(II)-regulatory protein from Ralstonia metallidurans: development of a fluorescent lead(II) probe. *Angewandte Chemie - International Edition*, **2005**, 44, 2715-2719	16.4	137
15	O2 activation by binuclear Cu sites: noncoupled versus exchange coupled reaction mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 13105-10	11.5	141
14	N2O reduction by the mu4-sulfide-bridged tetranuclear CuZ cluster active site. *Angewandte Chemie - International Edition*, **2004**, 43, 4132-40	16.4	97
13	Reduktion von N2O an einem 4-sulfidverbrückten vierkernigen aktiven CuZ-Zentrum. *Angewandte Chemie*, **2004**, 116, 4224-4233	3.6	19
12	Oxygen activation by the noncoupled binuclear copper site in peptidylglycine alpha-hydroxylating monooxygenase. Spectroscopic definition of the resting sites and the putative CuIIM-OOH intermediate. *Biochemistry*, **2004**, 43, 5735-47	3.2	72
11	Oxygen activation by the noncoupled binuclear copper site in peptidylglycine alpha-hydroxylating monooxygenase. Reaction mechanism and role of the noncoupled nature of the active site. *Journal of the American Chemical Society*, **2004**, 126, 4991-5000	16.4	236
10	A general strategy to convert the MerR family proteins into highly sensitive and selective fluorescent biosensors for metal ions. *Journal of the American Chemical Society*, **2004**, 126, 728-9	16.4	263
9	Spectroscopy and bonding in side-on and end-on Cu2(S2) cores: comparison to peroxide analogues. *Journal of the American Chemical Society*, **2003**, 125, 6394-408	16.4	40
8	Reaction of elemental sulfur with a copper(I) complex forming a trans-mu-1,2 end-on disulfide complex: new directions in copper-sulfur chemistry. *Journal of the American Chemical Society*, **2003**, 125, 1160-1	16.4	74

7	Activation of N2O reduction by the fully reduced micro4-sulfide bridged tetranuclear Cu Z cluster in nitrous oxide reductase. *Journal of the American Chemical Society*, **2003**, 125, 15708-9	16.4	91
6	Spectroscopic and electronic structure studies of the diamagnetic side-on CuII-superoxo complex Cu(O2)[HB(3-R-5-iPrpz)3]: antiferromagnetic coupling versus covalent delocalization. *Journal of the American Chemical Society*, **2003**, 125, 466-74	16.4	147
5	Frontier molecular orbital analysis of Cu(n)-O(2) reactivity. *Journal of Inorganic Biochemistry*, **2002**, 88, 368-74	4.2	19
4	Spectroscopic and electronic structure studies of the mu(4)-sulfide bridged tetranuclear Cu(Z) cluster in N(2)O reductase: molecular insight into the catalytic mechanism. *Journal of the American Chemical Society*, **2002**, 124, 10497-507	16.4	83
3	Electronic structure description of the mu(4)-sulfide bridged tetranuclear Cu(Z) center in N(2)O reductase. *Journal of the American Chemical Society*, **2002**, 124, 744-5	16.4	70
2	Oxygen Binding, Activation, and Reduction to Water by Copper Proteins. *Angewandte Chemie - International Edition*, **2001**, 40, 4570-4590	16.4	691
1	Spectroscopic and Theoretical Studies of Mononuclear Copper(II) Alkyl- and Hydroperoxo Complexes:Electronic Structure Contributions to Reactivity. *Journal of the American Chemical Society*, **2000**, 122, 10177-10193	16.4	128