

H Peter Lu

List of Publications by Year in descending order

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105
papers

3,606
citations

126858

33
h-index

143943

57
g-index

110
all docs

110
docs citations

110
times ranked

3763
citing authors

#	ARTICLE	IF	CITATIONS
1	Single-molecule spectral fluctuations at room temperature. <i>Nature</i> , 1997, 385, 143-146.	13.7	334
2	Single-molecule Enzymology. <i>Journal of Biological Chemistry</i> , 1999, 274, 15967-15970.	1.6	235
3	Extracellular Reduction of Hexavalent Chromium by Cytochromes MtrC and OmcA of <i>Shewanella oneidensis</i> MR-1. <i>Applied and Environmental Microbiology</i> , 2011, 77, 4035-4041.	1.4	140
4	Statistical Analyses and Theoretical Models of Single-Molecule Enzymatic Dynamics. <i>Journal of Physical Chemistry A</i> , 1999, 103, 10477-10488.	1.1	130
5	Single-Molecule Kinetics of Interfacial Electron Transfer. <i>Journal of Physical Chemistry B</i> , 1997, 101, 2753-2757.	1.2	129
6	Finite Element Method Simulation of the Field Distribution for AFM Tip-Enhanced Surface-Enhanced Raman Scanning Microscopy. <i>Journal of Physical Chemistry B</i> , 2003, 107, 1574-1584.	1.2	129
7	Probing Conformational Changes of Gramicidin Ion Channels by Single-Molecule Patch-Clamp Fluorescence Microscopy. <i>Biophysical Journal</i> , 2003, 85, 1826-1838.	0.2	114
8	Intermittent Single-Molecule Interfacial Electron Transfer Dynamics. <i>Journal of the American Chemical Society</i> , 2004, 126, 9374-9381.	6.6	102
9	Probing Single-Molecule T4 Lysozyme Conformational Dynamics by Intramolecular Fluorescence Energy Transfer. <i>Journal of Physical Chemistry B</i> , 2003, 107, 7947-7956.	1.2	92
10	Probing Single-Molecule Protein Conformational Dynamics. <i>Accounts of Chemical Research</i> , 2005, 38, 557-565.	7.6	89
11	Probing Single-Molecule Interfacial Electron Transfer Dynamics of Porphyrin on TiO ₂ Nanoparticles. <i>Journal of the American Chemical Society</i> , 2009, 131, 1479-1487.	6.6	81
12	Thickness-Controlled Synthesis of Colloidal PbS Nanosheets and Their Thickness-Dependent Energy Gaps. <i>Chemistry of Materials</i> , 2014, 26, 5433-5436.	3.2	73
13	Revealing Two-State Protein-Protein Interactions of Calmodulin by Single-Molecule Spectroscopy. <i>Journal of the American Chemical Society</i> , 2006, 128, 10034-10042.	6.6	69
14	Manipulating Protein Conformations by Single-Molecule AFM-FRET Nanoscopy. <i>ACS Nano</i> , 2012, 6, 1221-1229.	7.3	68
15	Sizing up single-molecule enzymatic conformational dynamics. <i>Chemical Society Reviews</i> , 2014, 43, 1118-1143.	18.7	61
16	Ratiometric Near-Infrared Fluorescent Probes Based On Through-Bond Energy Transfer and π -Conjugation Modulation between Tetraphenylethene and Hemicyanine Moieties for Sensitive Detection of pH Changes in Live Cells. <i>Bioconjugate Chemistry</i> , 2018, 29, 1406-1418.	1.8	61
17	Exploring the Mechanism of Flexible Biomolecular Recognition with Single Molecule Dynamics. <i>Physical Review Letters</i> , 2007, 98, 128105.	2.9	60
18	Correlated atomic force microscopy and fluorescence lifetime imaging of live bacterial cells. <i>Colloids and Surfaces B: Biointerfaces</i> , 2004, 34, 205-212.	2.5	56

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19	Single-Molecule Study of Protein-Protein Interaction Dynamics in a Cell Signaling System. <i>Journal of Physical Chemistry B</i> , 2004, 108, 737-744.	1.2	51
20	Combined Spectroscopic and Topographic Characterization of Nanoscale Domains and Their Distributions of a Redox Protein on Bacterial Cell Surfaces. <i>Langmuir</i> , 2007, 23, 1333-1338.	1.6	51
21	Energy Transfer from Fluorescent Proteins to Metal Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2011, 115, 17587-17593.	1.5	49
22	Probing nanoscale surface enhanced Raman-scattering fluctuation dynamics using correlated AFM and confocal ultramicroscopy. <i>Ultramicroscopy</i> , 2003, 97, 89-102.	0.8	47
23	Single-Molecule Conformational Dynamics of Fluctuating Noncovalent DNA-Protein Interactions in DNA Damage Recognition. <i>Journal of the American Chemical Society</i> , 2001, 123, 9184-9185.	6.6	46
24	Correlated topographic and spectroscopic imaging beyond diffraction limit by atomic force microscopy metallic tip-enhanced near-field fluorescence lifetime microscopy. <i>Review of Scientific Instruments</i> , 2003, 74, 3347-3355.	0.6	46
25	Combined Single-Molecule Photon-Stamping Spectroscopy and Femtosecond Transient Absorption Spectroscopy Studies of Interfacial Electron Transfer Dynamics. <i>Journal of the American Chemical Society</i> , 2010, 132, 1999-2004.	6.6	46
26	Probing Single-Molecule Enzyme Active-Site Conformational State Intermittent Coherence. <i>Journal of the American Chemical Society</i> , 2011, 133, 14389-14395.	6.6	45
27	Single-Cell Imaging and Spectroscopic Analyses of Cr(VI) Reduction on the Surface of Bacterial Cells. <i>Langmuir</i> , 2013, 29, 950-956.	1.6	44
28	Single-Molecule Nanosecond Anisotropy Dynamics of Tethered Protein Motions. <i>Journal of Physical Chemistry B</i> , 2003, 107, 618-626.	1.2	42
29	Single-molecule spectroscopy reveals how calmodulin activates NO synthase by controlling its conformational fluctuation dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 11835-11840.	3.3	42
30	Single-Molecule Dynamics Reveals Cooperative Binding-Folding in Protein Recognition. <i>PLoS Computational Biology</i> , 2006, 2, e78.	1.5	41
31	Molecular mechanism of multispecific recognition of Calmodulin through conformational changes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E3927-E3934.	3.3	37
32	Interrogating the activities of conformational deformed enzyme by single-molecule fluorescence-magnetic tweezers microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13904-13909.	3.3	34
33	Placing Single-Molecule T4 Lysozyme Enzymes on a Bacterial Cell Surface: Toward Probing Single-Molecule Enzymatic Reaction in Living Cells. <i>Biophysical Journal</i> , 2004, 87, 656-661.	0.2	33
34	Simultaneous Spectroscopic and Topographic Near-Field Imaging of TiO ₂ Single Surface States and Interfacial Electronic Coupling. <i>Nano Letters</i> , 2011, 11, 1490-1494.	4.5	33
35	Probing Single-Molecule Interfacial Geminate Electron-Cation Recombination Dynamics. <i>Journal of the American Chemical Society</i> , 2009, 131, 9020-9025.	6.6	32
36	Single-Molecule Interfacial Electron Transfer Dynamics of Porphyrin on TiO ₂ Nanoparticles: Dissecting the Complex Electronic Coupling Dependent Dynamics. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20209-20221.	1.5	32

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37	Single-Molecule Patch-Clamp FRET Microscopy Studies of NMDA Receptor Ion Channel Dynamics in Living Cells: Revealing the Multiple Conformational States Associated with a Channel at Its Electrical Off State. <i>Journal of the American Chemical Society</i> , 2014, 136, 12998-13005.	6.6	32
38	Bunching Effect in Single-Molecule T4 Lysozyme Nonequilibrium Conformational Dynamics under Enzymatic Reactions. <i>Journal of Physical Chemistry B</i> , 2010, 114, 6669-6674.	1.2	31
39	Tip-enhanced near-field Raman spectroscopy probing single dye-sensitized TiO ₂ nanoparticles. <i>Applied Physics Letters</i> , 2006, 88, 093121.	1.5	30
40	Probing nanosecond protein motions of calmodulin by single-molecule fluorescence anisotropy. <i>Applied Physics Letters</i> , 2004, 85, 2420-2422.	1.5	29
41	Probing Inhomogeneous Vibrational Reorganization Energy Barriers of Interfacial Electron Transfer. <i>Journal of Physical Chemistry B</i> , 2005, 109, 16390-16395.	1.2	29
42	Revealing the secondary structural changes of amyloid β peptide by probing the spectral fingerprint characters. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 670-674.	1.2	29
43	Raman Spectroscopic Signature Markers of Dopamine-Human Dopamine Transporter Interaction in Living Cells. <i>ACS Chemical Neuroscience</i> , 2017, 8, 1510-1518.	1.7	27
44	Single-Molecule Spectroscopy Studies of Conformational Change Dynamics in Enzymatic Reactions. <i>Current Pharmaceutical Biotechnology</i> , 2004, 5, 261-269.	0.9	26
45	Probing ion channel conformational dynamics using simultaneous single-molecule ultrafast spectroscopy and patch-clamp electric recording. <i>Applied Physics Letters</i> , 2004, 84, 1792-1794.	1.5	26
46	Single-molecule photon stamping FRET spectroscopy study of enzymatic conformational dynamics. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 770-775.	1.3	24
47	Probing Ground-State Single-Electron Self-Exchange across a Molecule-Metal Interface. <i>Journal of the American Chemical Society</i> , 2011, 133, 6989-6996.	6.6	23
48	Site-specific Raman spectroscopy and chemical dynamics of nanoscale interstitial systems. <i>Journal of Physics Condensed Matter</i> , 2005, 17, R333-R355.	0.7	22
49	Manipulating and probing enzymatic conformational fluctuations and enzyme-substrate interactions by single-molecule FRET-magnetic tweezers microscopy. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 13052-13058.	1.3	22
50	Single-molecule interfacial electron transfer dynamics of porphyrin on TiO ₂ nanoparticles: dissecting the interfacial electric field and electron accepting state density dependent dynamics. <i>Chemical Communications</i> , 2015, 51, 16821-16824.	2.2	22
51	Growth of colloidal PbS nanosheets and the enhancement of their photoluminescence. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 23303-23307.	1.3	20
52	Probing conformational dynamics of an enzymatic active site by an in situ single fluorogenic probe under piconewton force manipulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 15006-15011.	3.3	20
53	Probing Electric Field Effect on Covalent Interactions at a Molecule-Semiconductor Interface. <i>Journal of the American Chemical Society</i> , 2016, 138, 1536-1542.	6.6	20
54	Revealing time bunching effect in single-molecule enzyme conformational dynamics. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 6734.	1.3	18

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55	Suspended Lipid Bilayer for Optical and Electrical Measurements of Single Ion Channel Proteins. <i>Analytical Chemistry</i> , 2013, 85, 8951-8955.	3.2	18
56	Single-Molecule Enzymatic Conformational Dynamics: Spilling Out the Product Molecules. <i>Journal of Physical Chemistry B</i> , 2014, 118, 9128-9140.	1.2	18
57	Probing Protein Multidimensional Conformational Fluctuations by Single-Molecule Multiparameter Photon Stamping Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11943-11955.	1.2	18
58	Single-Molecule Patch-Clamp FRET Anisotropy Microscopy Studies of NMDA Receptor Ion Channel Activation and Deactivation under Agonist Ligand Binding in Living Cells. <i>Journal of the American Chemical Society</i> , 2016, 138, 8789-8801.	6.6	18
59	Single-Molecule Triplet-State Photon Antibunching at Room Temperature. <i>Journal of Physical Chemistry B</i> , 2005, 109, 9861-9864.	1.2	17
60	Tracking the Energy Flow on Nanoscale <i>in vivo</i> Sample-Transmitted Excitation Photoluminescence Spectroscopy. <i>ACS Nano</i> , 2017, 11, 4191-4197.	7.3	15
61	Diazirine-based photo-crosslinkers for defect free fabrication of solution processed organic light-emitting diodes. <i>Journal of Materials Chemistry C</i> , 2020, 8, 11988-11996.	2.7	15
62	Fluctuating Two-State Light Harvesting in a Photosynthetic Membrane. <i>Journal of Physical Chemistry C</i> , 2007, 111, 8948-8956.	1.5	14
63	2D Regional Correlation Analysis of Single-Molecule Time Trajectories. <i>Journal of Physical Chemistry B</i> , 2008, 112, 14920-14926.	1.2	14
64	Finite Element Method Simulations of the Near-Field Enhancement at the Vicinity of Fractal Rough Metallic Surfaces. <i>Journal of Physical Chemistry B</i> , 2004, 108, 2939-2947.	1.2	13
65	Probing Single-Molecule Protein Spontaneous Folding and Unfolding Conformational Fluctuation Dynamics: The Multiple-State and Multiple-Pathway Energy Landscape. <i>Journal of Physical Chemistry B</i> , 2015, 119, 6366-6378.	1.2	13
66	Tunneling Electron Induced Charging and Light Emission of Single Porphyrin Molecules. <i>Journal of Physical Chemistry C</i> , 2016, 120, 21099-21103.	1.5	13
67	Single-Molecule Protein Interaction Conformational Dynamics. <i>Current Pharmaceutical Biotechnology</i> , 2009, 10, 522-531.	0.9	10
68	Total internal reflection fluorescence microscopy imaging-guided confocal single-molecule fluorescence spectroscopy. <i>Review of Scientific Instruments</i> , 2012, 83, 013110.	0.6	10
69	Inhomogeneous and Complex Interfacial Electron-Transfer Dynamics: A Single-Molecule Perspective. <i>ACS Energy Letters</i> , 2016, 1, 773-791.	8.8	10
70	Single-Molecule Study of Protein-Protein and Protein-DNA Interaction Dynamics. <i>Journal of Physical Chemistry B</i> , 2005, 305, 385-414.		9
71	Simultaneous Spectroscopic and Topographic Imaging of Single-Molecule Interfacial Electron-Transfer Reactivity and Local Nanoscale Environment. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2221-2227.	2.1	9
72	Raman mode-selective spectroscopic imaging of coenzyme and enzyme redox states. <i>Journal of Raman Spectroscopy</i> , 2016, 47, 801-807.	1.2	9

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73	Probing Driving Force and Electron Accepting State Density Dependent Interfacial Electron Transfer Dynamics: Suppressed Fluorescence Blinking of Single Molecules on Indium Tin Oxide Semiconductor. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1685-1697.	1.2	9
74	Revealing Abrupt and Spontaneous Ruptures of Protein Native Structure under piconewton Compressive Force Manipulation. <i>ACS Nano</i> , 2018, 12, 2448-2454.	7.3	9
75	Raman spectroscopy probing of redox states and mechanism of flavin coenzyme. <i>Journal of Raman Spectroscopy</i> , 2018, 49, 1311-1322.	1.2	9
76	Effect of Bis-diazirine-Mediated Photo-Crosslinking on Polyvinylcarbazole and Solution-Processed Polymer LEDs. <i>ACS Applied Electronic Materials</i> , 2021, 3, 3365-3371.	2.0	9
77	Revealing Multiple Pathways in T4 Lysozyme Substep Conformational Motions by Single-Molecule Enzymology and Modeling. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5017-5024.	1.2	8
78	Raman Spectroscopic Analysis of Signaling Moleculesâ€™ Dopamine Receptors Interactions in Living Cells. <i>ACS Omega</i> , 2018, 3, 14849-14857.	1.6	8
79	Single-Molecule Spectroscopy Study of Crowding-Induced Protein Spontaneous Denature and Crowding-Perturbed Unfoldingâ€™Folding Conformational Fluctuation Dynamics. <i>Journal of Physical Chemistry B</i> , 2018, 122, 6724-6732.	1.2	8
80	Mode-Selective Raman Imaging of Dopamineâ€™Human Dopamine Transporter Interaction in Live Cells. <i>ACS Chemical Neuroscience</i> , 2018, 9, 3117-3127.	1.7	8
81	Enzymes in Coherent Motion. <i>Science</i> , 2012, 335, 300-301.	6.0	7
82	Revealing dynamically-organized receptor ion channel clusters in live cells by a correlated electric recording and super-resolution single-molecule imaging approach. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8088-8098.	1.3	7
83	Single-Molecule Spectroscopy Studies of Molecular Dynamics in Chemical and Biological Systems*. <i>Zeitschrift Fur Physikalische Chemie</i> , 1999, 212, 59-66.	1.4	6
84	Spontaneous Rupture and Entanglement of Human Neuronal Tau Protein Induced by Piconewton Compressive Force. <i>ACS Chemical Neuroscience</i> , 2019, 10, 4061-4067.	1.7	6
85	Revealing Linear Aggregates of Light Harvesting Antenna Proteins in Photosynthetic Membranes. <i>Langmuir</i> , 2010, 26, 307-313.	1.6	5
86	Chapter 19 Combined Singleâ€™Molecule Electrical Recording and Singleâ€™Molecule Spectroscopy Studies of Ion Channel Conformational Dynamics. <i>Methods in Cell Biology</i> , 2008, 90, 435-451.	0.5	4
87	Probing single-molecule electronâ€™hole transfer dynamics at a moleculeâ€™NiO semiconductor nanocrystalline interface. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 17216-17223.	1.3	4
88	Manipulating motions of targeted single cells in solution by an integrated double-ring magnetic tweezers imaging microscope. <i>Review of Scientific Instruments</i> , 2017, 88, 073703.	0.6	4
89	Probing Activated and Non-Activated Single Calmodulin Molecules under a Piconewton Compressive Force. <i>Biochemistry</i> , 2018, 57, 1945-1948.	1.2	4
90	Compressive-force induced activation of apo-calmodulin in protein signalling. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 1092-1096.	1.3	4

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91	Combined topographic, spectroscopic, and model analyses of inhomogeneous energetic coupling of linear light harvesting complex II aggregates in native photosynthetic membranes. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 5636.	1.3	3
92	Protein-fluctuation-induced water-pore formation in ion channel voltage-sensor translocation across a lipid bilayer membrane. <i>Physical Review E</i> , 2015, 92, 052719.	0.8	3
93	Electronic Couplingâ€“Decoupling-Dependent Single-Molecule Interfacial Electron Transfer Dynamics in Electrostatically Attached Porphyrin on TiO ₂ Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016, 120, 12313-12324.	1.5	3
94	Exploration of Multistate Conformational Dynamics upon Ligand Binding of a Monomeric Enzyme Involved in Pyrophosphoryl Transfer. <i>Journal of Physical Chemistry B</i> , 2018, 122, 1885-1897.	1.2	3
95	Unraveling the mechanism of tau protein aggregation in presence of zinc ion: The earliest step of tau aggregation. <i>Chemical Physics Impact</i> , 2022, 4, 100060.	1.7	2
96	Acquiring a nano-view of single molecules in actions. <i>Nano Reviews</i> , 2010, 1, 5052.	3.7	1
97	Probing Single-Molecule Ion Channel Conformational Dynamics in Living Cells. <i>Biophysical Journal</i> , 2016, 110, 6a.	0.2	1
98	Probing Dynamic Heterogeneity in Aggregated Ion Channels in Live Cells. <i>Journal of Physical Chemistry C</i> , 2018, 122, 13716-13723.	1.5	1
99	Oscillating Piconewton Force Manipulation on Single-Molecule Enzymatic Conformational and Reaction Dynamics. <i>Journal of Physical Chemistry B</i> , 2018, 122, 12312-12321.	1.2	1
100	Conformational States and Fluctuations in Endothelial Nitric Oxide Synthase under Calmodulin Regulation. <i>Biophysical Journal</i> , 2021, 120, 5196-5206.	0.2	1
101	Probing Functional Conformation-State Fluctuation Dynamics in Recognition Binding between Calmodulin and Target Peptide. <i>Journal of Chemical Physics</i> , 2022, 156, 055102.	1.2	1
102	AFM-Raman Imaging and Raman Spectral Fluctuation Analysis of Single-Molecule Interfacial Electron Transfer Dynamics. , 2010, , .		0
103	Correlated AFM-Spectroscopy Imaging of Linear Light Harvesting Protein Aggregates in Bacterial Native Photosynthetic Membrane. <i>Biophysical Journal</i> , 2012, 102, 166a-167a.	0.2	0
104	Ultra-sensitive lock-in amplifier coupled oscillatory magnetic tweezers for piconewton force manipulation applications. <i>Journal of Applied Physics</i> , 2021, 130, 014504.	1.1	0
105	Probing Proteinâ€“DNA Conformational Dynamics in DNA Damage Recognition: Xeroderma Pigmentosum Group A Stabilizes the Damaged DNA-RPA14 Complex by Controlling Conformational Fluctuation Dynamics. <i>Journal of Physical Chemistry B</i> , 2022, 126, 997-1003.	1.2	0