Jiang Li

List of Publications by Year
in descending order

104 papers	5,635 citations	66234 42 h-index	82410 72 g-index
107 all docs	107 docs citations	107 times ranked	5196 citing authors

#	Article	IF	Citations
1	Multistep nucleation of nanocrystals in aqueous solution. Nature Chemistry, 2017, 9, 77-82.	6.6	312
2	Molecular Rectification in Metalâ^'SAMâ^'Metal Oxideâ^'Metal Junctions. Journal of the American Chemical Society, 2009, 131, 17814-17827.	6.6	257
3	Robust resistive memory devices using solution-processable metal-coordinated azoÂaromatics. Nature Materials, 2017, 16, 1216-1224.	13.3	244
4	Molecular diodes with rectification ratios exceeding 105 driven by electrostatic interactions. Nature Nanotechnology, 2017, 12, 797-803.	15.6	224
5	Charge Transport and Rectification in Arrays of SAM-Based Tunneling Junctions. Nano Letters, 2010, 10, 3611-3619.	4.5	213
6	Mechanism of Rectification in Tunneling Junctions Based on Molecules with Asymmetric Potential Drops. Journal of the American Chemical Society, 2010, 132, 18386-18401.	6.6	205
7	Electrical Resistance of Ag^{TS}â€"S(CH₂)_{<i>n</i>â^'1}CH₃//Ga₂O₃/EGaIn Tunneling Junctions. Journal of Physical Chemistry C, 2012, 116, 10848-10860.	1.5	197
8	Controlling the direction of rectification in a molecular diode. Nature Communications, 2015, 6, 6324.	5.8	197
9	The SAM, Not the Electrodes, Dominates Charge Transport in Metal-Monolayer//Ga₂O₃/Galliumâ€"Indium Eutectic Junctions. ACS Nano, 2012, 6, 4806-4822.	7.3	130
10	Highly efficient on-chip direct electronicâ€"plasmonic transducers. Nature Photonics, 2017, 11, 623-627.	15.6	124
11	Electric-field-driven dual-functional molecular switches in tunnel junctions. Nature Materials, 2020, 19, 843-848.	13.3	124
12	Binding Control and Stoichiometry of Ferrocenyl Dendrimers at a Molecular Printboard. Journal of the American Chemical Society, 2004, 126, 12266-12267.	6.6	119
13	A Molecular Diode with a Statistically Robust Rectification Ratio of Three Orders of Magnitude. Nano Letters, 2015, 15, 5506-5512.	4.5	118
14	On-chip molecular electronic plasmon sources based on self-assembled monolayer tunnel junctions. Nature Photonics, 2016, 10, 274-280.	15.6	110
15	Statistical Tools for Analyzing Measurements of Charge Transport. Journal of Physical Chemistry C, 2012, 116, 6714-6733.	1.5	109
16	A Molecular Half-Wave Rectifier. Journal of the American Chemical Society, 2011, 133, 15397-15411.	6.6	102
17	On the Remarkable Role of Surface Topography of the Bottom Electrodes in Blocking Leakage Currents in Molecular Diodes. Journal of the American Chemical Society, 2014, 136, 6554-6557.	6.6	98
18	Transition from direct to inverted charge transport Marcus regions in molecular junctions via molecular orbital gating. Nature Nanotechnology, 2018, 13, 322-329.	15.6	98

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19	Encapsulated Annealing: Enhancing the Plasmon Quality Factor in Lithographicallyâ€“Defined Nanostructures. Scientific Reports, 2014, 4, 5537.	1.6	96
20	A Black Phosphorus Carbide Infrared Phototransistor. Advanced Materials, 2018, 30, 1705039.	11.1	95
21	Equivalent Circuits of a Self-Assembled Monolayer-Based Tunnel Junction Determined by Impedance Spectroscopy. Journal of the American Chemical Society, 2014, 136, 11134-11144.	6.6	94
22	Multivalent Dendrimers at Molecular Printboards:â€‰ Influence of Dendrimer Structure on Binding Strength and Stoichiometry and Their Electrochemically Induced Desorption. Langmuir, 2005, 21, 7866-7876.	1.6	85
23	Reversible Soft Topâ€Contacts to Yield Molecular Junctions with Precise and Reproducible Electrical Characteristics. Advanced Functional Materials, 2014, 24, 4442-4456.	7.8	84
24	Giant enhancement in vertical conductivity of stacked CVD graphene sheets by self-assembled molecular layers. Nature Communications, 2014, 5, 5461.	5.8	83
25	Controlling Leakage Currents: The Role of the Binding Group and Purity of the Precursors for Self-Assembled Monolayers in the Performance of Molecular Diodes. Journal of the American Chemical Society, 2014, 136, 1982-1991.	6.6	83
26	Longâ€Range Tunneling Processes across Ferritinâ€Based Junctions. Advanced Materials, 2016, 28, 1824-1830.	11.1	79
27	Dependency of the Tunneling Decay Coefficient in Molecular Tunneling Junctions on the Topography of the Bottom Electrodes. Angewandte Chemie - International Edition, 2014, 53, 3377-3381.	7.2	78
28	A Single-Level Tunnel Model to Account for Electrical Transport through Single Molecule- and Self-Assembled Monolayer-based Junctions. Scientific Reports, 2016, 6, 26517.	1.6	70
29	Even the Odd Numbers Help: Failure Modes of SAM-Based Tunnel Junctions Probed via Odd-Even Effects Revealed in Synchrotrons and Supercomputers. Accounts of Chemical Research, 2016, 49, 2061-2069.	7.6	68
30	Real-Time Dynamics of Galvanic Replacement Reactions of Silver Nanocubes and Au Studied by Liquid-Cell Transmission Electron Microscopy. ACS Nano, 2016, 10, 7689-7695.	7.3	67
31	Comparison of DC and AC Transport in 1.5â€“7.5 nm Oligophenylene Imine Molecular Wires across Two Junction Platforms: Eutectic Gaâ€“In versus Conducting Probe Atomic Force Microscope Junctions. Journal of the American Chemical Society, 2016, 138, 7305-7314.	6.6	64
32	The Origin of the Oddâ€“Even Effect in the Tunneling Rates across EGaIn Junctions with Self-Assembled Monolayers (SAMs) of <i>n</i>-Alkanethiolates. Journal of the American Chemical Society, 2015, 137, 10659-10667.	6.6	63
33	Controlling the Supramolecular Assembly of Redox-Active Dendrimers at Molecular Printboards by Scanning Electrochemical Microscopy. Langmuir, 2006, 22, 9770-9775.	1.6	60
34	Defect Scaling with Contact Area in EGaIn-Based Junctions: Impact on Quality, Joule Heating, and Apparent Injection Current. Journal of Physical Chemistry C, 2015, 119, 960-969.	1.5	56
35	Real-Time Imaging of the Formation of Auâ€“Ag Coreâ€“Shell Nanoparticles. Journal of the American Chemical Society, 2016, 138, 5190-5193.	6.6	55
36	Tuning the Rectification Ratio by Changing the Electronic Nature (Open-Shell and Closed-Shell) in Donorâ€“Acceptor Self-Assembled Monolayers. Journal of the American Chemical Society, 2017, 139, 4262-4265.	6.6	51

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37	One-Nanometer Thin Monolayers Remove the Deleterious Effect of Substrate Defects in Molecular Tunnel Junctions. Nano Letters, 2015, 15, 6643-6649.	4.5	50
38	Chemical control over the energy-level alignment in a two-terminal junction. Nature Communications, 2016, 7, 12066.	5.8	50
39	Supramolecular vs Electronic Structure: The Effect of the Tilt Angle of the Active Group in the Performance of a Molecular Diode. Journal of the American Chemical Society, 2016, 138, 5769-5772.	6.6	49
40	Noncovalent Selfâ€Assembled Monolayers on Graphene as a Highly Stable Platform for Molecular Tunnel Junctions. Advanced Materials, 2016, 28, 631-639.	11.1	48
41	Redox-Controlled Interaction of Biferrocenyl-Terminated Dendrimers with Î²-Cyclodextrin Molecular Printboards. Chemistry - A European Journal, 2007, 13, 69-80.	1.7	47
42	Bias induced transition from an ohmic to a non-ohmic interface in supramolecular tunneling junctions with Ga₂O₃/EGaIn top electrodes. Nanoscale, 2014, 6, 11246-11258.	2.8	41
43	Surface and buried interface layer studies on challenging structures as studied by ARXPS. Surface and Interface Analysis, 2017, 49, 1309-1315.	0.8	40
44	Control over Near-Ballistic Electron Transport through Formation of Parallel Pathways in a Single-Molecule Wire. Journal of the American Chemical Society, 2019, 141, 240-250.	6.6	39
45	Arrays of high quality SAM-based junctions and their application in molecular diode based logic. Nanoscale, 2015, 7, 19547-19556.	2.8	38
46	Rectification Ratio and Tunneling Decay Coefficient Depend on the Contact Geometry Revealed by in Situ Imaging of the Formation of EGaIn Junctions. ACS Applied Materials & Interfaces, 2019, 11, 21018-21029.	4.0	37
47	Electrostatic control over temperature-dependent tunnelling across a single-molecule junction. Nature Communications, 2016, 7, 11595.	5.8	35
48	Stable Molecular Diodes Based on Ï€â€"Ï€ Interactions of the Molecular Frontier Orbitals with Graphene Electrodes. Advanced Materials, 2018, 30, 1706322.	11.1	35
49	Tuning the Tunneling Rate and Dielectric Response of SAMâ€Based Junctions via a Single Polarizable Atom. Advanced Materials, 2015, 27, 6689-6695.	11.1	34
50	Electrically-Excited Surface Plasmon Polaritons with Directionality Control. ACS Photonics, 2015, 2, 385-391.	3.2	34
51	Ultrasmooth and Photoresistâ€Free Microporeâ€Based EGaIn Molecular Junctions: Fabrication and How Roughness Determines Voltage Response. Advanced Functional Materials, 2019, 29, 1904452.	7.8	34
52	Solid-State Protein Junctions: Cross-Laboratory Study Shows Preservation of Mechanism at Varying Electronic Coupling. IScience, 2020, 23, 101099.	1.9	30
53	Oddâ€"Even Effects in Charge Transport through Self-Assembled Monolayer of Alkanethiolates. Journal of Physical Chemistry C, 2015, 119, 5657-5662.	1.5	29
54	Protective Layers Based on Carbon Paint To Yield High-Quality Large-Area Molecular Junctions with Low Contact Resistance. Journal of the American Chemical Society, 2020, 142, 3513-3524.	6.6	29

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55	Probing the nature and resistance of the moleculeâ€"electrode contact in SAM-based junctions. Nanoscale, 2015, 7, 12061-12067.	2.8	28
56	The Drive Force of Electrical Breakdown of Largeâ€Area Molecular Tunnel Junctions. Advanced Functional Materials, 2018, 28, 1801710.	7.8	28
57	Functional Redoxâ€Active Molecular Tunnel Junctions. Chemistry - an Asian Journal, 2020, 15, 3752-3770.	1.7	28
58	Interplay of Collective Electrostatic Effects and Level Alignment Dictates the Tunneling Rates across Halogenated Aromatic Monolayer Junctions. Journal of Physical Chemistry Letters, 2019, 10, 4142-4147.	2.1	25
59	Room-Temperature Single-Electron Tunneling in Dendrimer-Stabilized Gold Nanoparticles Anchored at a Molecular Printboard. Small, 2006, 2, 1422-1426.	5.2	24
60	Temperature dependent charge transport across tunnel junctions of single-molecules and self-assembled monolayers: a comparative study. Dalton Transactions, 2016, 45, 17153-17159.	1.6	22
61	Directional Excitation of Surface Plasmon Polaritons via Molecular Through-Bond Tunneling across Double-Barrier Tunnel Junctions. Nano Letters, 2019, 19, 4634-4640.	4.5	21
62	Reversal of the Direction of Rectification Induced by Fermi Level Pinning at Moleculeâ€"Electrode Interfaces in Redox-Active Tunneling Junctions. ACS Applied Materials & Interfaces, 2020, 12, 55044-55055.	4.0	21
63	Design principles of dual-functional molecular switches in solid-state tunnel junctions. Applied Physics Letters, 2020, 117, .	1.5	20
64	Role of Order in the Mechanism of Charge Transport across Single-Stranded and Double-Stranded DNA Monolayers in Tunnel Junctions. Journal of the American Chemical Society, 2021, 143, 20309-20319.	6.6	19
65	Fabrication of ultra-flat silver surfaces with sub-micro-meter scale grains. Thin Solid Films, 2015, 593, 26-39.	0.8	18
66	Large Increase in the Dielectric Constant and Partial Loss of Coherence Increases Tunneling Rates across Molecular Wires. ACS Applied Materials & Interfaces, 2020, 12, 45111-45121.	4.0	18
67	Charge transfer plasmon resonances across silverâ€"moleculeâ€"silver junctions: estimating the terahertz conductance of molecules at near-infrared frequencies. RSC Advances, 2016, 6, 70884-70894.	1.7	17
68	A single atom change turns insulating saturated wires into molecular conductors. Nature Communications, 2021, 12, 3432.	5.8	16
69	Supramolecular Structure of the Monolayer Triggers Oddâ€"Even Effects in the Tunneling Rates across Noncovalent Junctions on Graphene. Journal of Physical Chemistry C, 2017, 121, 4172-4180.	1.5	15
70	Molecular Coatings for Stabilizing Silver and Gold Nanocubes under Electron Beam Irradiation. Langmuir, 2017, 33, 1189-1196.	1.6	14
71	Biasâ€Polarityâ€Dependent Direct and Inverted Marcus Charge Transport Affecting Rectification in a Redoxâ€Active Molecular Junction. Advanced Science, 2021, 8, e2100055.	5.6	14
72	Cavity Plasmonics in Tunnel Junctions: Outcoupling and the Role of Surface Roughness. Physical Review Applied, 2020, 14, .	1.5	12

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73	Preparation of metalâ€"SAMâ€"dendrimerâ€"SAMâ€"metal junctions by supramolecular metal transfer printing. New Journal of Chemistry, 2008, 32, 652.	1.4	11
74	Luminescent acetylthiol derivative tripodal osmium(II) and iridium(III) complexes: Spectroscopy in solution and on surfaces. Pure and Applied Chemistry, 2011, 83, 779-799.	0.9	11
75	Unraveling the Failure Modes of Molecular Diodes: The Importance of the Monolayer Formation Protocol and Anchoring Group to Minimize Leakage Currents. Journal of Physical Chemistry C, 2019, 123, 19759-19767.	1.5	11
76	Silicon-Based Quantum Mechanical Tunnel Junction for Plasmon Excitation from Low-Energy Electron Tunneling. ACS Photonics, 2021, 8, 1951-1960.	3.2	11
77	The supramolecular structure and van der Waals interactions affect the electronic structure of ferrocenyl-alkanethiolate SAMs on gold and silver electrodes. Nanoscale Advances, 2019, 1, 1991-2002.	2.2	10
78	The Unusual Dielectric Response of Large Area Molecular Tunnel Junctions Probed with Impedance Spectroscopy. Advanced Electronic Materials, 2022, 8, 2100495.	2.6	10
79	Stable Universal 1â€•and 2â€Input Singleâ€Molecule Logic Gates. Advanced Materials, 2022, 34, e2202135.	11.1	10
80	Functionalized 1â€²-Substituted Iodoferrocenes and Their Pd-Catalyzed Heck Cross-Coupling Reactions. European Journal of Inorganic Chemistry, 2016, 2016, 1314-1318.	1.0	9
81	Fabrication of ultra-smooth and oxide-free molecule-ferromagnetic metal interfaces for applications in molecular electronics under ordinary laboratory conditions. RSC Advances, 2017, 7, 14544-14551.	1.7	9
82	Bottom-electrode induced defects in self-assembled monolayer (SAM)-based tunnel junctions affect only the SAM resistance, not the contact resistance or SAM capacitance. RSC Advances, 2018, 8, 19939-19949.	1.7	9
83	CMOSâ€Compatible Electronicâ€"Plasmonic Transducers Based on Plasmonic Tunnel Junctions and Schottky Diodes. Small, 2022, 18, e2105684.	5.2	9
84	Optical Anisotropy in van der Waals materials: Impact on Direct Excitation of Plasmons and Photons by Quantum Tunneling. Light: Science and Applications, 2021, 10, 230.	7.7	7
85	Preventing the Capillary-Induced Collapse of Vertical Nanostructures. ACS Applied Materials & Interfaces, 2022, 14, 5537-5544.	4.0	7
86	Spatial Control over Stable Lightâ€Emission from ACâ€Driven CMOSâ€Compatible Quantum Mechanical Tunnel Junctions. Laser and Photonics Reviews, 2022, 16, .	4.4	7
87	Switching of the mechanism of charge transport induced by phase transitions in tunnel junctions with large biomolecular cages. Journal of Materials Chemistry C, 2021, 9, 10768-10776.	2.7	6
88	Improving Orientation, Packing Density, and Molecular Arrangement in Self-Assembled Monolayers of Bianchoring Ferroceneâ€"Triazole Derivatives by â€œClickâ€•Chemistry. Langmuir, 2022, 38, 3585-3596.	1.6	6
89	Interplay between Interfacial Energy, Contact Mechanics, and Capillary Forces in EGaIn Droplets. ACS Applied Materials & Interfaces, 2022, 14, 28074-28084.	4.0	6
90	Enhancing Reproducibility and Nonlocal Effects in Filmâ€Coupled Nanoantennas. Advanced Optical Materials, 2018, 6, 1801177.	3.6	5

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91	The energy level alignment of the ferroceneâ€“EGaIn interface studied with photoelectron spectroscopy. Physical Chemistry Chemical Physics, 2021, 23, 13458-13467.	1.3	5
92	Room-temperature tunnel magnetoresistance across biomolecular tunnel junctions based on ferritin. JPhys Materials, 2021, 4, 035003.	1.8	5
93	Separation of superparamagnetic particles through ratcheted Brownian motion and periodically switching magnetic fields. Biomicrofluidics, 2016, 10, 064105.	1.2	4
94	Molecular Electronics: Noncovalent Selfâ€Assembled Monolayers on Graphene as a Highly Stable Platform for Molecular Tunnel Junctions (Adv. Mater. 4/2016). Advanced Materials, 2016, 28, 784-784.	11.1	3
95	Self-Assembly and Electrochemical Characterization of Ferrocene-based Molecular Diodes for Solar Rectenna Device. MRS Advances, 2020, 5, 3185-3194.	0.5	3
96	Coherence Between Different Propagating Surface Plasmon Polariton Modes Excited by Quantum Mechanical Tunnel Junctions. Advanced Optical Materials, 2022, 10, .	3.6	3
97	Molecular Electronic Plasmonics: In Operando Characterization and Control over Intermittent Light Emission from Molecular Tunnel Junctions via Molecular Backbone Rigidity (Adv. Sci. 20/2019). Advanced Science, 2019, 6, 1970122.	5.6	2
98	Energy-Level Alignment and Orbital-Selective Femtosecond Charge Transfer Dynamics of Redox-Active Molecules on Au, Ag, and Pt Metal Surfaces. Journal of Physical Chemistry C, 2021, 125, 18474-18482.	1.5	2
99	Geometric Control Over the Edge Diffraction of Electrically Excited Surface Plasmon Polaritons by Tunnel Junctions. ACS Photonics, 2021, 8, 3591-3598.	3.2	2
100	Phase Matching via Plasmonic Modal Dispersion for Third Harmonic Generation. Advanced Science, 2022, 9, .	5.6	2
101	Charge Transport: Longâ€Range Tunneling Processes across Ferritinâ€Based Junctions (Adv. Mater. 9/2016). Advanced Materials, 2016, 28, 1900-1900.	11.1	1
102	Molecular Electronics: The Drive Force of Electrical Breakdown of Large-Area Molecular Tunnel Junctions (Adv. Funct. Mater. 28/2018). Advanced Functional Materials, 2018, 28, 1870192.	7.8	1
103	Biomolecular control over local gating in bilayer graphene induced by ferritin. IScience, 2022, 25, 104128.	1.9	1
104	Molecular Diodes: Stable Molecular Diodes Based on Ï€â€“Ï€ Interactions of the Molecular Frontier Orbitals with Graphene Electrodes (Adv. Mater. 10/2018). Advanced Materials, 2018, 30, 1870069.	11.1	0