

Latha Venkataraman

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149
papers

11,665
citations

54
h-index

106
g-index

159
ext. papers

13,179
ext. citations

13.1
avg. IF

6.44
L-index

#	Paper	IF	Citations
149	Dependence of single-molecule junction conductance on molecular conformation. <i>Nature</i> , 2006 , 442, 904-7	50.4	1100
148	Single-molecule circuits with well-defined molecular conductance. <i>Nano Letters</i> , 2006 , 6, 458-62	11.5	671
147	Single-molecule junctions beyond electronic transport. <i>Nature Nanotechnology</i> , 2013 , 8, 399-410	28.7	617
146	Mechanically controlled binary conductance switching of a single-molecule junction. <i>Nature Nanotechnology</i> , 2009 , 4, 230-4	28.7	515
145	Amine-gold linked single-molecule circuits: experiment and theory. <i>Nano Letters</i> , 2007 , 7, 3477-82	11.5	403
144	Phonon modes in carbon nanotubes. <i>Chemical Physics Letters</i> , 1993 , 209, 77-82	2.5	372
143	Chemical principles of single-molecule electronics. <i>Nature Reviews Materials</i> , 2016 , 1,	73.3	308
142	Contact chemistry and single-molecule conductance: a comparison of phosphines, methyl sulfides, and amines. <i>Journal of the American Chemical Society</i> , 2007 , 129, 15768-9	16.4	299
141	Electronics and chemistry: varying single-molecule junction conductance using chemical substituents. <i>Nano Letters</i> , 2007 , 7, 502-6	11.5	281
140	Single-molecule diodes with high rectification ratios through environmental control. <i>Nature Nanotechnology</i> , 2015 , 10, 522-7	28.7	278
139	Probing the conductance superposition law in single-molecule circuits with parallel paths. <i>Nature Nanotechnology</i> , 2012 , 7, 663-7	28.7	258
138	Simultaneous determination of conductance and thermopower of single molecule junctions. <i>Nano Letters</i> , 2012 , 12, 354-8	11.5	217
137	In situ formation of highly conducting covalent Au-C contacts for single-molecule junctions. <i>Nature Nanotechnology</i> , 2011 , 6, 353-7	28.7	206
136	Formation and evolution of single-molecule junctions. <i>Physical Review Letters</i> , 2009 , 102, 126803	7.4	197
135	Variability of conductance in molecular junctions. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 2462-6	3.4	174
134	Comprehensive suppression of single-molecule conductance using destructive interference. <i>Nature</i> , 2018 , 558, 415-419	50.4	162
133	Conductance and geometry of pyridine-linked single-molecule junctions. <i>Journal of the American Chemical Society</i> , 2010 , 132, 6817-21	16.4	160

132	Tuning rectification in single-molecular diodes. <i>Nano Letters</i> , 2013 , 13, 6233-7	11.5	152
131	Van der Waals interactions at metal/organic interfaces at the single-molecule level. <i>Nature Materials</i> , 2012 , 11, 872-6	27	151
130	Highly conducting π -conjugated molecular junctions covalently bonded to gold electrodes. <i>Journal of the American Chemical Society</i> , 2011 , 133, 17160-3	16.4	149
129	Dissecting contact mechanics from quantum interference in single-molecule junctions of stilbene derivatives. <i>Nano Letters</i> , 2012 , 12, 1643-7	11.5	142
128	Single-molecule conductance through multiple π -stacked benzene rings determined with direct electrode-to-benzene ring connections. <i>Journal of the American Chemical Society</i> , 2011 , 133, 2136-9	16.4	141
127	Stereoelectronic switching in single-molecule junctions. <i>Nature Chemistry</i> , 2015 , 7, 215-20	17.6	134
126	Molecular length dictates the nature of charge carriers in single-molecule junctions of oxidized oligothiophenes. <i>Nature Chemistry</i> , 2015 , 7, 209-14	17.6	119
125	Non-chemisorbed gold-sulfur binding prevails in self-assembled monolayers. <i>Nature Chemistry</i> , 2019 , 11, 351-358	17.6	113
124	Aromaticity decreases single-molecule junction conductance. <i>Journal of the American Chemical Society</i> , 2014 , 136, 918-20	16.4	113
123	Mechanics and chemistry: single molecule bond rupture forces correlate with molecular backbone structure. <i>Nano Letters</i> , 2011 , 11, 1518-23	11.5	113
122	Length-dependent thermopower of highly conducting Au-C bonded single molecule junctions. <i>Nano Letters</i> , 2013 , 13, 2889-94	11.5	109
121	Length-dependent conductance of oligothiophenes. <i>Journal of the American Chemical Society</i> , 2014 , 136, 10486-92	16.4	107
120	Electron transport in a multichannel one-dimensional conductor: molybdenum selenide nanowires. <i>Physical Review Letters</i> , 2006 , 96, 076601	7.4	103
119	Breakdown of interference rules in azulene, a nonalternant hydrocarbon. <i>Nano Letters</i> , 2014 , 14, 2941-5	11.5	99
118	A single-molecule potentiometer. <i>Nano Letters</i> , 2011 , 11, 1575-9	11.5	98
117	Linker dependent bond rupture force measurements in single-molecule junctions. <i>Journal of the American Chemical Society</i> , 2012 , 134, 4003-6	16.4	96
116	Molybdenum Selenide Molecular Wires as One-Dimensional Conductors. <i>Physical Review Letters</i> , 1999 , 83, 5334-5337	7.4	94
115	Determination of energy level alignment and coupling strength in 4,Sbipyridine single-molecule junctions. <i>Nano Letters</i> , 2014 , 14, 794-8	11.5	93

114	Relating energy level alignment and amine-linked single molecule junction conductance. <i>Nano Letters</i> , 2010 , 10, 2470-4	11.5	92
113	Environmental control of single-molecule junction transport. <i>Nano Letters</i> , 2011 , 11, 1988-92	11.5	91
112	Quantifying through-space charge transfer dynamics in coupled molecular systems. <i>Nature Communications</i> , 2012 , 3, 1086	17.4	85
111	Amine-linked single-molecule circuits: systematic trends across molecular families. <i>Journal of Physics Condensed Matter</i> , 2008 , 20, 374115	1.8	85
110	Tunable charge transport in single-molecule junctions via electrolytic gating. <i>Nano Letters</i> , 2014 , 14, 1400-4	11.5	84
109	Conductance of molecular junctions formed with silver electrodes. <i>Nano Letters</i> , 2013 , 13, 3358-64	11.5	77
108	Frustrated rotations in single-molecule junctions. <i>Journal of the American Chemical Society</i> , 2009 , 131, 10820-1	16.4	77
107	Probing the mechanism for graphene nanoribbon formation on gold surfaces through X-ray spectroscopy. <i>Chemical Science</i> , 2014 , 5, 4419-4423	9.4	74
106	Charge transport and rectification in molecular junctions formed with carbon-based electrodes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 10928-32	11.5	74
105	Conductive molecular silicon. <i>Journal of the American Chemical Society</i> , 2012 , 134, 4541-4	16.4	74
104	Control of single-molecule junction conductance of porphyrins via a transition-metal center. <i>Nano Letters</i> , 2014 , 14, 5365-70	11.5	70
103	Single-molecule junction conductance through diaminoacenes. <i>Journal of the American Chemical Society</i> , 2007 , 129, 6714-5	16.4	67
102	Correlation analysis of atomic and single-molecule junction conductance. <i>ACS Nano</i> , 2012 , 6, 3411-23	16.7	64
101	Silane and Germane Molecular Electronics. <i>Accounts of Chemical Research</i> , 2017 , 50, 1088-1095	24.3	63
100	A reversible single-molecule switch based on activated antiaromaticity. <i>Science Advances</i> , 2017 , 3, eaao2615	11.5	63
99	Importance of direct metal-coupling in electronic transport through conjugated single-molecule junctions. <i>Journal of the American Chemical Society</i> , 2012 , 134, 20440-5	16.4	62
98	Quantitative current-voltage characteristics in molecular junctions from first principles. <i>Nano Letters</i> , 2012 , 12, 6250-4	11.5	62
97	Impact of Electrode Density of States on Transport through Pyridine-Linked Single Molecule Junctions. <i>Nano Letters</i> , 2015 , 15, 3716-22	11.5	56

96	Flicker Noise as a Probe of Electronic Interaction at Metal-Single Molecule Interfaces. <i>Nano Letters</i> , 2015 , 15, 4143-9	11.5	54
95	Oxidation potentials correlate with conductivities of aromatic molecular wires. <i>Journal of the American Chemical Society</i> , 2007 , 129, 12376-7	16.4	54
94	Electronically Transparent Au-N Bonds for Molecular Junctions. <i>Journal of the American Chemical Society</i> , 2017 , 139, 14845-14848	16.4	52
93	Structure-Property Relationships in Atomic-Scale Junctions: Histograms and Beyond. <i>Accounts of Chemical Research</i> , 2016 , 49, 452-60	24.3	51
92	Electric field breakdown in single molecule junctions. <i>Journal of the American Chemical Society</i> , 2015 , 137, 5028-33	16.4	50
91	Impact of molecular symmetry on single-molecule conductance. <i>Journal of the American Chemical Society</i> , 2013 , 135, 11724-7	16.4	49
90	Room-temperature current blockade in atomically defined single-cluster junctions. <i>Nature Nanotechnology</i> , 2017 , 12, 1050-1054	28.7	49
89	Symmetry properties of chiral carbon nanotubes. <i>Physical Review B</i> , 1995 , 51, 11176-11179	3.3	48
88	Directing isomerization reactions of cumulenes with electric fields. <i>Nature Communications</i> , 2019 , 10, 4482	17.4	47
87	Correlating structure, conductance, and mechanics of silver atomic-scale contacts. <i>ACS Nano</i> , 2013 , 7, 3706-12	16.7	46
86	Mapping the Transmission Functions of Single-Molecule Junctions. <i>Nano Letters</i> , 2016 , 16, 3949-54	11.5	43
85	Measurement of voltage-dependent electronic transport across amine-linked single-molecular-wire junctions. <i>Nanotechnology</i> , 2009 , 20, 434009	3.4	39
84	Silicon ring strain creates high-conductance pathways in single-molecule circuits. <i>Journal of the American Chemical Society</i> , 2013 , 135, 18331-4	16.4	38
83	Electronic transport and mechanical stability of carboxyl linked single-molecule junctions. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 13841-5	3.6	37
82	Probing the Conductance of the π -System of Bipyridine Using Destructive Interference. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 4825-4829	6.4	36
81	Evaluating atomic components in fluorene wires. <i>Chemical Science</i> , 2014 , 5, 1561	9.4	36
80	Determination of the structure and geometry of N-heterocyclic carbenes on Au(111) using high-resolution spectroscopy. <i>Chemical Science</i> , 2019 , 10, 930-935	9.4	35
79	In Situ Formation of N-Heterocyclic Carbene-Bound Single-Molecule Junctions. <i>Journal of the American Chemical Society</i> , 2018 , 140, 8944-8949	16.4	35

78	Ultrafast Charge Transfer through Noncovalent Au π Interactions in Molecular Systems. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 16477-16482	3.8	34
77	Reliable Formation of Single Molecule Junctions with Air-Stable Diphenylphosphine Linkers. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 2114-2119	6.4	34
76	Quantum soldering of individual quantum dots. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 12473-6	16.4	33
75	Conductance of single cobalt chalcogenide cluster junctions. <i>Journal of the American Chemical Society</i> , 2011 , 133, 8455-7	16.4	33
74	The Role of Through-Space Interactions in Modulating Constructive and Destructive Interference Effects in Benzene. <i>Nano Letters</i> , 2017 , 17, 4436-4442	11.5	32
73	Resonant Transport in Single Diketopyrrolopyrrole Junctions. <i>Journal of the American Chemical Society</i> , 2018 , 140, 13167-13170	16.4	32
72	Single-molecule conductance in atomically precise germanium wires. <i>Journal of the American Chemical Society</i> , 2015 , 137, 12400-5	16.4	31
71	Adsorption-Induced Solvent-Based Electrostatic Gating of Charge Transport through Molecular Junctions. <i>Nano Letters</i> , 2015 , 15, 4498-503	11.5	30
70	Near Length-Independent Conductance in Polymethine Molecular Wires. <i>Nano Letters</i> , 2018 , 18, 6387-6391	11.5	30
69	Computational Design of Intrinsic Molecular Rectifiers Based on Asymmetric Functionalization of N-Phenylbenzamide. <i>Journal of Chemical Theory and Computation</i> , 2015 , 11, 5888-96	6.4	29
68	Electronic and mechanical characteristics of stacked dimer molecular junctions. <i>Nanoscale</i> , 2018 , 10, 3362-3368	7.7	29
67	Too Hot for Photon-Assisted Transport: Hot-Electrons Dominate Conductance Enhancement in Illuminated Single-Molecule Junctions. <i>Nano Letters</i> , 2017 , 17, 1255-1261	11.5	28
66	Controlling the rectification properties of molecular junctions through molecule-electrode coupling. <i>Nanoscale</i> , 2016 , 8, 16357-16362	7.7	28
65	The electrical properties of biphenylenes. <i>Organic Letters</i> , 2010 , 12, 4114-7	6.2	27
64	Molecular diodes enabled by quantum interference. <i>Faraday Discussions</i> , 2014 , 174, 79-89	3.6	26
63	Transport properties of individual C ₆₀ -molecules. <i>Journal of Chemical Physics</i> , 2013 , 139, 234701	3.9	26
62	Breaking Down Resonance: Nonlinear Transport and the Breakdown of Coherent Tunneling Models in Single Molecule Junctions. <i>Nano Letters</i> , 2019 , 19, 2555-2561	11.5	25
61	The Environment-Dependent Behavior of the Blatter Radical at the Metal-Molecule Interface. <i>Nano Letters</i> , 2019 , 19, 2543-2548	11.5	24

60	Efficacy of Au-Au Contacts for Scanning Tunneling Microscopy Molecular Conductance Measurements. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 17635-17639	3.8	24
59	Solvent-dependent conductance decay constants in single cluster junctions. <i>Chemical Science</i> , 2016 , 7, 2701-2705	9.4	24
58	Probing Charge Transport through Peptide Bonds. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 763-767	6.4	22
57	Mechanism for Si-Si Bond Rupture in Single Molecule Junctions. <i>Journal of the American Chemical Society</i> , 2016 , 138, 16159-16164	16.4	21
56	Tuning Conductance in Single-Molecule Wires. <i>Journal of the American Chemical Society</i> , 2016 , 138, 7791-5	16.4	20
55	Trimethyltin-mediated covalent gold-carbon bond formation. <i>Journal of the American Chemical Society</i> , 2014 , 136, 12556-9	16.4	20
54	Extreme Conductance Suppression in Molecular Siloxanes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 10212-10215	16.4	20
53	The Influence of Linkers on Quantum Interference: A Linker Theorem. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 14451-14462	3.8	19
52	Conformations of cyclopentasilane stereoisomers control molecular junction conductance. <i>Chemical Science</i> , 2016 , 7, 5657-5662	9.4	19
51	Large Variations in the Single-Molecule Conductance of Cyclic and Bicyclic Silanes. <i>Journal of the American Chemical Society</i> , 2018 , 140, 15080-15088	16.4	19
50	Tuning the polarity of charge carriers using electron deficient thiophenes. <i>Chemical Science</i> , 2017 , 8, 3254-3259	9.4	18
49	Enhanced coupling through π -stacking in imidazole-based molecular junctions. <i>Chemical Science</i> , 2019 , 10, 9998-10002	9.4	18
48	Temperature dependent tunneling conductance of single molecule junctions. <i>Journal of Chemical Physics</i> , 2017 , 146, 092311	3.9	16
47	Permethylation Introduces Destructive Quantum Interference in Saturated Silanes. <i>Journal of the American Chemical Society</i> , 2019 , 141, 15471-15476	16.4	16
46	Resolving the Unpaired-Electron Orbital Distribution in a Stable Organic Radical by Kondo Resonance Mapping. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 11063-11067	16.4	16
45	Visualizing Quantum Interference in Molecular Junctions. <i>Nano Letters</i> , 2020 , 20, 2843-2848	11.5	16
44	Quantitative bond energetics in atomic-scale junctions. <i>ACS Nano</i> , 2014 , 8, 7522-30	16.7	16
43	Mechanically Tunable Quantum Interference in Ferrocene-Based Single-Molecule Junctions. <i>Nano Letters</i> , 2020 , 20, 6381-6386	11.5	16

42	Gold-Carbon Contacts from Oxidative Addition of Aryl Iodides. <i>Journal of the American Chemical Society</i> , 2020 , 142, 7128-7133	16.4	15
41	High-Conductance Pathways in Ring-Strained Disilanes by Way of Direct Si-Si to Au Coordination. <i>Journal of the American Chemical Society</i> , 2016 , 138, 11505-8	16.4	15
40	Cumulene Wires Display Increasing Conductance with Increasing Length. <i>Nano Letters</i> , 2020 , 20, 8415-8419	11.5	15
39	Theory of Chirality Induced Spin Selectivity: Progress and Challenges.. <i>Advanced Materials</i> , 2022 , e2106622	11.5	14
38	Highly nonlinear transport across single-molecule junctions via destructive quantum interference. <i>Nature Nanotechnology</i> , 2021 , 16, 313-317	28.7	14
37	Ultrafast Bidirectional Charge Transport and Electron Decoherence at Molecule/Surface Interfaces: A Comparison of Gold, Graphene, and Graphene Nanoribbon Surfaces. <i>Nano Letters</i> , 2015 , 15, 8316-21	11.5	13
36	Preface: Special Topic on Frontiers in Molecular Scale Electronics. <i>Journal of Chemical Physics</i> , 2017 , 146, 092101	3.9	12
35	Unsupervised feature recognition in single-molecule break junction data. <i>Nanoscale</i> , 2020 , 12, 8355-8363	11.5	12
34	In Situ Coupling of Single Molecules Driven by Gold-Catalyzed Electrooxidation. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 16008-16012	16.4	11
33	Reply to "Comment on Breakdown of Interference Rules in Azulene, a Nonalternant Hydrocarbon". <i>Nano Letters</i> , 2015 , 15, 7177-8	11.5	11
32	Using Deep Learning to Identify Molecular Junction Characteristics. <i>Nano Letters</i> , 2020 , 20, 3320-3325	11.5	10
31	Silver Makes Better Electrical Contacts to Thiol-Terminated Silanes than Gold. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 14145-14148	16.4	10
30	Ultrafast electron injection into photo-excited organic molecules. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 22140-5	3.6	10
29	Voltage-Induced Single-Molecule Junction Planarization. <i>Nano Letters</i> , 2021 , 21, 673-679	11.5	10
28	Structure and Energy Level Alignment of Tetramethyl Benzenediamine on Au(111). <i>Journal of Physical Chemistry C</i> , 2011 , 115, 12625-12630	3.8	9
27	Solitronics with Polyacetylenes. <i>Nano Letters</i> , 2020 , 20, 2615-2619	11.5	8
26	Molecular conductance versus inductive effects of axial ligands on the electrocatalytic activity of self-assembled iron phthalocyanines: The oxygen reduction reaction. <i>Electrochimica Acta</i> , 2019 , 327, 134996	6.7	8
25	Computational Study of Amino Mediated Molecular Interaction Evidenced in N 1s NEXAFS: 1,4-Diaminobenzene on Au (111). <i>Journal of Physical Chemistry C</i> , 2015 , 119, 1988-1995	3.8	8

24	Structure-function relationships in single molecule rectification by N-phenylbenzamide derivatives. <i>New Journal of Chemistry</i> , 2016 , 40, 7373-7378	3.6	6
23	Tight-binding analysis of helical states in carbyne. <i>Journal of Chemical Physics</i> , 2020 , 153, 124304	3.9	5
22	Reversible on-surface wiring of resistive circuits. <i>Chemical Science</i> , 2017 , 8, 4340-4346	9.4	4
21	Molecular electronics: general discussion. <i>Faraday Discussions</i> , 2014 , 174, 125-51	3.6	4
20	Cyclopropenylidenes as Strong Carbene Anchoring Groups on Au Surfaces. <i>Journal of the American Chemical Society</i> , 2020 , 142, 19902-19906	16.4	4
19	Too Cool for Blackbody Radiation: Overbias Photon Emission in Ambient STM Due to Multielectron Processes. <i>Nano Letters</i> , 2020 , 20, 8912-8918	11.5	4
18	Single-Electron Currents in Designer Single-Cluster Devices. <i>Journal of the American Chemical Society</i> , 2020 , 142, 14924-14932	16.4	4
17	Destructive quantum interference in heterocyclic alkanes: the search for ultra-short molecular insulators. <i>Chemical Science</i> , 2021 , 12, 10299-10305	9.4	4
16	The importance of intramolecular conductivity in three dimensional molecular solids. <i>Chemical Science</i> , 2019 , 10, 9339-9344	9.4	3
15	Tuning ultrafast electron injection dynamics at organic-graphene/metal interfaces. <i>Nanoscale</i> , 2018 , 10, 8014-8022	7.7	3
14	Quantum Soldering of Individual Quantum Dots. <i>Angewandte Chemie</i> , 2012 , 124, 12641-12644	3.6	3
13	Single-Molecule Junction Formation in Break-Junction Measurements. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 10802-10807	6.4	3
12	A single-molecule blueprint for synthesis. <i>Nature Reviews Chemistry</i> ,	34.6	3
11	Magnetic Skyrmions Could Act as Qubits. <i>Physics Magazine</i> , 2008 , 1,	1.1	2
10	Single-molecule conductance in a unique cross-conjugated tetra(aminoaryl)ethene. <i>Chemical Communications</i> , 2021 , 57, 591-594	5.8	2
9	Gap Size-Dependent Plasmonic Enhancement in Electroluminescent Tunnel Junctions. <i>ACS Photonics</i> ,	6.3	1
8	Synthesis and electronic properties of pyridine end-capped cyclopentadithiophene-vinylene oligomers.. <i>RSC Advances</i> , 2020 , 10, 41264-41271	3.7	1
7	Conjugated redox-active two-dimensional polymers as organic cathode materials.. <i>Chemical Science</i> , 2022 , 13, 3533-3538	9.4	1

6	Silver Makes Better Electrical Contacts to Thiol-Terminated Silanes than Gold. <i>Angewandte Chemie</i> , 2017 , 129, 14333-14336	3.6	o
5	Abbildung des Orbitals des ungepaarten Elektrons in einem stabilen, organischen Radikal anhand seiner Kondo-Resonanz. <i>Angewandte Chemie</i> , 2019 , 131, 11179-11183	3.6	o
4	In Situ Coupling of Single Molecules Driven by Gold-Catalyzed Electrooxidation. <i>Angewandte Chemie</i> , 2019 , 131, 16154-16158	3.6	o
3	Innenrücktitelbild: Quantum Soldering of Individual Quantum Dots (Angew. Chem. 50/2012). <i>Angewandte Chemie</i> , 2012 , 124, 12797-12797	3.6	
2	Simultaneous Measurement of Force and Conductance Across Single Molecule Junctions. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 75-84	0.3	
1	Monte Carlo simulation of energy dissipation of recombining hydrogen in a maze. <i>Journal of Low Temperature Physics</i> , 1995 , 101, 739-742	1.3	