Latha Venkataraman

List of Publications by Year
in descending order

155 papers	14,606 citations	20797 60 h-index	19169 118 g-index
159 all docs	159 docs citations	159 times ranked	7941 citing authors

#	Article	IF	Citations
1	Dependence of single-molecule junction conductance on molecular conformation. Nature, 2006, 442, 904-907.	13.7	1,253
2	Single-Molecule Circuits with Well-Defined Molecular Conductance. Nano Letters, 2006, 6, 458-462.	4.5	734
3	Single-molecule junctions beyond electronic transport. Nature Nanotechnology, 2013, 8, 399-410.	15.6	725
4	Mechanically controlled binary conductance switching of a single-molecule junction. Nature Nanotechnology, 2009, 4, 230-234.	15.6	609
5	Amineâ˘Gold Linked Single-Molecule Circuits:â€‰ Experiment and Theory. Nano Letters, 2007, 7, 3477-3482.	4.5	447
6	Chemical principles of single-molecule electronics. Nature Reviews Materials, 2016, 1, .	23.3	442
7	Phonon modes in carbon nanotubules. Chemical Physics Letters, 1993, 209, 77-82.	1.2	407
8	Single-molecule diodes with high rectification ratios through environmental control. Nature Nanotechnology, 2015, 10, 522-527.	15.6	360
9	Contact Chemistry and Single-Molecule Conductance:â€‰ A Comparison of Phosphines, Methyl Sulfides, and Amines. Journal of the American Chemical Society, 2007, 129, 15768-15769.	6.6	352
10	Electronics and Chemistry:Â Varying Single-Molecule Junction Conductance Using Chemical Substituents. Nano Letters, 2007, 7, 502-506.	4.5	306
11	Probing the conductance superposition law in single-molecule circuits with parallel paths. Nature Nanotechnology, 2012, 7, 663-667.	15.6	302
12	Comprehensive suppression of single-molecule conductance using destructive Ïƒ-interference. Nature, 2018, 558, 415-419.	13.7	256
13	Simultaneous Determination of Conductance and Thermopower of Single Molecule Junctions. Nano Letters, 2012, 12, 354-358.	4.5	251
14	In situ formation of highly conducting covalent Auâ€“C contacts for single-molecule junctions. Nature Nanotechnology, 2011, 6, 353-357.	15.6	235
15	Formation and Evolution of Single-Molecule Junctions. Physical Review Letters, 2009, 102, 126803.	2.9	231
16	Non-chemisorbed goldâ€“sulfur binding prevails in self-assembled monolayers. Nature Chemistry, 2019, 11, 351-358.	6.6	202
17	Variability of Conductance in Molecular Junctions. Journal of Physical Chemistry B, 2006, 110, 2462-2466.	1.2	189
18	Conductance and Geometry of Pyridine-Linked Single-Molecule Junctions. Journal of the American Chemical Society, 2010, 132, 6817-6821.	6.6	186

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19	Van der Waals interactions at metal/organic interfaces at the single-molecule level. Nature Materials, 2012, 11, 872-876.	13.3	181
20	Single-Molecule Conductance through Multiple Ï€â^'Ï€-Stacked Benzene Rings Determined with Direct Electrode-to-Benzene Ring Connections. Journal of the American Chemical Society, 2011, 133, 2136-2139.	6.6	176
21	Stereoelectronic switching in single-molecule junctions. Nature Chemistry, 2015, 7, 215-220.	6.6	176
22	Highly Conducting Ï€-Conjugated Molecular Junctions Covalently Bonded to Gold Electrodes. Journal of the American Chemical Society, 2011, 133, 17160-17163.	6.6	169
23	Tuning Rectification in Single-Molecular Diodes. Nano Letters, 2013, 13, 6233-6237.	4.5	169
24	Dissecting Contact Mechanics from Quantum Interference in Single-Molecule Junctions of Stilbene Derivatives. Nano Letters, 2012, 12, 1643-1647.	4.5	161
25	Molecular length dictates the nature of charge carriers in single-molecule junctions of oxidized oligothiophenes. Nature Chemistry, 2015, 7, 209-214.	6.6	147
26	Aromaticity Decreases Single-Molecule Junction Conductance.. Journal of the American Chemical Society, 2014, 136, 918-920.	6.6	136
27	Mechanics and Chemistry: Single Molecule Bond Rupture Forces Correlate with Molecular Backbone Structure. Nano Letters, 2011, 11, 1518-1523.	4.5	129
28	Length-Dependent Conductance of Oligothiophenes. Journal of the American Chemical Society, 2014, 136, 10486-10492.	6.6	127
29	Length-Dependent Thermopower of Highly Conducting Auâ€"C Bonded Single Molecule Junctions. Nano Letters, 2013, 13, 2889-2894.	4.5	125
30	Linker Dependent Bond Rupture Force Measurements in Single-Molecule Junctions. Journal of the American Chemical Society, 2012, 134, 4003-4006.	6.6	121
31	Theory of Chirality Induced Spin Selectivity: Progress and Challenges. Advanced Materials, 2022, 34, e2106629.	11.1	119
32	Electron Transport in a Multichannel One-Dimensional Conductor: Molybdenum Selenide Nanowires. Physical Review Letters, 2006, 96, 076601.	2.9	118
33	Breakdown of Interference Rules in Azulene, a Nonalternant Hydrocarbon. Nano Letters, 2014, 14, 2941-2945.	4.5	113
34	Determination of Energy Level Alignment and Coupling Strength in 4,4â€²-Bipyridine Single-Molecule Junctions. Nano Letters, 2014, 14, 794-798.	4.5	112
35	A Single-Molecule Potentiometer. Nano Letters, 2011, 11, 1575-1579.	4.5	111
36	Flicker Noise as a Probe of Electronic Interaction at Metalâ€"Single Molecule Interfaces. Nano Letters, 2015, 15, 4143-4149.	4.5	109

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37	Quantifying through-space charge transfer dynamics in Ï€-coupled molecular systems. Nature Communications, 2012, 3, 1086.	5.8	108
38	Tunable Charge Transport in Single-Molecule Junctions via Electrolytic Gating. Nano Letters, 2014, 14, 1400-1404.	4.5	107
39	Molybdenum Selenide Molecular Wires as One-Dimensional Conductors. Physical Review Letters, 1999, 83, 5334-5337.	2.9	105
40	Environmental Control of Single-Molecule Junction Transport. Nano Letters, 2011, 11, 1988-1992.	4.5	103
41	Directing isomerization reactions of cumulenes with electric fields. Nature Communications, 2019, 10, 4482.	5.8	97
42	Silane and Germane Molecular Electronics. Accounts of Chemical Research, 2017, 50, 1088-1095.	7.6	96
43	Amine-linked single-molecule circuits: systematic trends across molecular families. Journal of Physics Condensed Matter, 2008, 20, 374115.	0.7	95
44	Relating Energy Level Alignment and Amine-Linked Single Molecule Junction Conductance. Nano Letters, 2010, 10, 2470-2474.	4.5	95
45	Charge transport and rectification in molecular junctions formed with carbon-based electrodes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10928-10932.	3.3	95
46	A reversible single-molecule switch based on activated antiaromaticity. Science Advances, 2017, 3, eaao2615.	4.7	94
47	Conductive Molecular Silicon. Journal of the American Chemical Society, 2012, 134, 4541-4544.	6.6	91
48	Frustrated Rotations in Single-Molecule Junctions. Journal of the American Chemical Society, 2009, 131, 10820-10821.	6.6	89
49	Conductance of Molecular Junctions Formed with Silver Electrodes. Nano Letters, 2013, 13, 3358-3364.	4.5	86
50	Control of Single-Molecule Junction Conductance of Porphyrins via a Transition-Metal Center. Nano Letters, 2014, 14, 5365-5370.	4.5	83
51	Probing the mechanism for graphene nanoribbon formation on gold surfaces through X-ray spectroscopy. Chemical Science, 2014, 5, 4419-4423.	3.7	81
52	Correlation Analysis of Atomic and Single-Molecule Junction Conductance. ACS Nano, 2012, 6, 3411-3423.	7.3	80
53	Importance of Direct Metalâ^'Ï€ Coupling in Electronic Transport Through Conjugated Single-Molecule Junctions. Journal of the American Chemical Society, 2012, 134, 20440-20445.	6.6	77
54	Single-Molecule Junction Conductance through Diaminoacenes. Journal of the American Chemical Society, 2007, 129, 6714-6715.	6.6	76

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55	Electronically Transparent Auâ€"N Bonds for Molecular Junctions. Journal of the American Chemical Society, 2017, 139, 14845-14848.	6.6	76
56	Room-temperature current blockade in atomically defined single-cluster junctions. Nature Nanotechnology, 2017, 12, 1050-1054.	15.6	75
57	Quantitative Currentâ€"Voltage Characteristics in Molecular Junctions from First Principles. Nano Letters, 2012, 12, 6250-6254.	4.5	72
58	Impact of Electrode Density of States on Transport through Pyridine-Linked Single Molecule Junctions. Nano Letters, 2015, 15, 3716-3722.	4.5	68
59	Electric Field Breakdown in Single Molecule Junctions. Journal of the American Chemical Society, 2015, 137, 5028-5033.	6.6	67
60	Structureâ€"Property Relationships in Atomic-Scale Junctions: Histograms and Beyond. Accounts of Chemical Research, 2016, 49, 452-460.	7.6	65
61	Determination of the structure and geometry of N-heterocyclic carbenes on Au(111) using high-resolution spectroscopy. Chemical Science, 2019, 10, 930-935.	3.7	64
62	Electronic and mechanical characteristics of stacked dimer molecular junctions. Nanoscale, 2018, 10, 3362-3368.	2.8	62
63	Oxidation Potentials Correlate with Conductivities of Aromatic Molecular Wires. Journal of the American Chemical Society, 2007, 129, 12376-12377.	6.6	58
64	Mapping the Transmission Functions of Single-Molecule Junctions. Nano Letters, 2016, 16, 3949-3954.	4.5	58
65	Impact of Molecular Symmetry on Single-Molecule Conductance. Journal of the American Chemical Society, 2013, 135, 11724-11727.	6.6	57
66	Highly nonlinear transport across single-molecule junctions via destructive quantum interference. Nature Nanotechnology, 2021, 16, 313-317.	15.6	56
67	In Situ Formation of N-Heterocyclic Carbene-Bound Single-Molecule Junctions. Journal of the American Chemical Society, 2018, 140, 8944-8949.	6.6	54
68	The Environment-Dependent Behavior of the Blatter Radical at the Metalâ€"Molecule Interface. Nano Letters, 2019, 19, 2543-2548.	4.5	54
69	Mechanically Tunable Quantum Interference in Ferrocene-Based Single-Molecule Junctions. Nano Letters, 2020, 20, 6381-6386.	4.5	52
70	Correlating Structure, Conductance, and Mechanics of Silver Atomic-Scale Contacts. ACS Nano, 2013, 7, 3706-3712.	7.3	51
71	Molecular wires. Chemical Society Reviews, 2015, 44, 842-844.	18.7	50
72	Resonant Transport in Single Diketopyrrolopyrrole Junctions. Journal of the American Chemical Society, 2018, 140, 13167-13170.	6.6	50

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73	Symmetry properties of chiral carbon nanotubes. Physical Review B, 1995, 51, 11176-11179.	1.1	49
74	Electronic transport and mechanical stability of carboxyl linked single-molecule junctions. Physical Chemistry Chemical Physics, 2012, 14, 13841.	1.3	48
75	Cumulene Wires Display Increasing Conductance with Increasing Length. Nano Letters, 2020, 20, 8415-8419.	4.5	47
76	Near Length-Independent Conductance in Polymethine Molecular Wires. Nano Letters, 2018, 18, 6387-6391.	4.5	45
77	Too Hot for Photon-Assisted Transport: Hot-Electrons Dominate Conductance Enhancement in Illuminated Single-Molecule Junctions. Nano Letters, 2017, 17, 1255-1261.	4.5	44
78	Visualizing Quantum Interference in Molecular Junctions. Nano Letters, 2020, 20, 2843-2848.	4.5	44
79	Measurement of voltage-dependent electronic transport across amine-linked single-molecular-wire junctions. Nanotechnology, 2009, 20, 434009.	1.3	43
80	Single-Molecule Conductance in Atomically Precise Germanium Wires. Journal of the American Chemical Society, 2015, 137, 12400-12405.	6.6	43
81	Probing the Conductance of the Ïƒ-System of Bipyridine Using Destructive Interference. Journal of Physical Chemistry Letters, 2016, 7, 4825-4829.	2.1	43
82	Silicon Ring Strain Creates High-Conductance Pathways in Single-Molecule Circuits. Journal of the American Chemical Society, 2013, 135, 18331-18334.	6.6	42
83	Conductance of Single Cobalt Chalcogenide Cluster Junctions. Journal of the American Chemical Society, 2011, 133, 8455-8457.	6.6	41
84	The Role of Through-Space Interactions in Modulating Constructive and Destructive Interference Effects in Benzene. Nano Letters, 2017, 17, 4436-4442.	4.5	41
85	Reliable Formation of Single Molecule Junctions with Air-Stable Diphenylphosphine Linkers. Journal of Physical Chemistry Letters, 2010, 1, 2114-2119.	2.1	38
86	Evaluating atomic components in fluorene wires. Chemical Science, 2014, 5, 1561.	3.7	38
87	Probing Charge Transport through Peptide Bonds. Journal of Physical Chemistry Letters, 2018, 9, 763-767.	2.1	38
88	Enhanced coupling through Ï€-stacking in imidazole-based molecular junctions. Chemical Science, 2019, 10, 9998-10002.	3.7	38
89	Highly conducting single-molecule topological insulators based on mono- and di-radical cations. Nature Chemistry, 2022, 14, 1061-1067.	6.6	38
90	Quantum Soldering of Individual Quantum Dots. Angewandte Chemie - International Edition, 2012, 51, 12473-12476.	7.2	37

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91	Ultrafast Charge Transfer through Noncovalent Auâ€“N Interactions in Molecular Systems. Journal of Physical Chemistry C, 2013, 117, 16477-16482.	1.5	36
92	The Electrical Properties of Biphenylenes. Organic Letters, 2010, 12, 4114-4117.	2.4	34
93	Adsorption-Induced Solvent-Based Electrostatic Gating of Charge Transport through Molecular Junctions. Nano Letters, 2015, 15, 4498-4503.	4.5	34
94	Computational Design of Intrinsic Molecular Rectifiers Based on Asymmetric Functionalization of <i>N</i>-Phenylbenzamide. Journal of Chemical Theory and Computation, 2015, 11, 5888-5896.	2.3	34
95	Controlling the rectification properties of molecular junctions through moleculeâ€“electrode coupling. Nanoscale, 2016, 8, 16357-16362.	2.8	33
96	The Influence of Linkers on Quantum Interference: A Linker Theorem. Journal of Physical Chemistry C, 2017, 121, 14451-14462.	1.5	33
97	Extreme Conductance Suppression in Molecular Siloxanes. Journal of the American Chemical Society, 2017, 139, 10212-10215.	6.6	33
98	Breaking Down Resonance: Nonlinear Transport and the Breakdown of Coherent Tunneling Models in Single Molecule Junctions. Nano Letters, 2019, 19, 2555-2561.	4.5	32
99	Solvent-dependent conductance decay constants in single cluster junctions. Chemical Science, 2016, 7, 2701-2705.	3.7	31
100	Goldâ€“Carbon Contacts from Oxidative Addition of Aryl Iodides. Journal of the American Chemical Society, 2020, 142, 7128-7133.	6.6	31
101	Molecular diodes enabled by quantum interference. Faraday Discussions, 2014, 174, 79-89.	1.6	29
102	Mechanism for Siâ€“Si Bond Rupture in Single Molecule Junctions. Journal of the American Chemical Society, 2016, 138, 16159-16164.	6.6	29
103	Permethylation Introduces Destructive Quantum Interference in Saturated Silanes. Journal of the American Chemical Society, 2019, 141, 15471-15476.	6.6	28
104	Transport properties of individual C60-molecules. Journal of Chemical Physics, 2013, 139, 234701.	1.2	27
105	Tuning Conductance in Ï€â€“Ïƒâ€“Ï€ Single-Molecule Wires. Journal of the American Chemical Society, 2016, 138, 7791-7795.	6.6	27
106	Large Variations in the Single-Molecule Conductance of Cyclic and Bicyclic Silanes. Journal of the American Chemical Society, 2018, 140, 15080-15088.	6.6	27
107	Resolving the Unpairedâ€Electron Orbital Distribution in a Stable Organic Radical by Kondo Resonance Mapping. Angewandte Chemie - International Edition, 2019, 58, 11063-11067.	7.2	27
108	Using Deep Learning to Identify Molecular Junction Characteristics. Nano Letters, 2020, 20, 3320-3325.	4.5	27

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109	Efficacy of Auâˆ'Au Contacts for Scanning Tunneling Microscopy Molecular Conductance Measurements. Journal of Physical Chemistry C, 2007, 111, 17635-17639.	1.5	25
110	Trimethyltin-Mediated Covalent Goldâ€"Carbon Bond Formation. Journal of the American Chemical Society, 2014, 136, 12556-12559.	6.6	25
111	Voltage-Induced Single-Molecule Junction Planarization. Nano Letters, 2021, 21, 673-679.	4.5	25
112	Conformations of cyclopentasilane stereoisomers control molecular junction conductance. Chemical Science, 2016, 7, 5657-5662.	3.7	24
113	A single-molecule blueprint for synthesis. Nature Reviews Chemistry, 2021, 5, 695-710.	13.8	24
114	Tuning the polarity of charge carriers using electron deficient thiophenes. Chemical Science, 2017, 8, 3254-3259.	3.7	23
115	Temperature dependent tunneling conductance of single molecule junctions. Journal of Chemical Physics, 2017, 146, .	1.2	23
116	In Situ Coupling of Single Molecules Driven by Goldâ€Catalyzed Electrooxidation. Angewandte Chemie - International Edition, 2019, 58, 16008-16012.	7.2	23
117	Single-Molecule Junction Formation in Break-Junction Measurements. Journal of Physical Chemistry Letters, 2021, 12, 10802-10807.	2.1	23
118	Seeing is believing. Nature Nanotechnology, 2008, 3, 187-188.	15.6	21
119	Unsupervised feature recognition in single-molecule break junction data. Nanoscale, 2020, 12, 8355-8363.	2.8	21
120	High-Conductance Pathways in Ring-Strained Disilanes by Way of Direct Ïƒ-Siâ€"Si to Au Coordination. Journal of the American Chemical Society, 2016, 138, 11505-11508.	6.6	20
121	Silver Makes Better Electrical Contacts to Thiolâ€Terminated Silanes than Gold. Angewandte Chemie - International Edition, 2017, 56, 14145-14148.	7.2	19
122	Quantitative Bond Energetics in Atomic-Scale Junctions. ACS Nano, 2014, 8, 7522-7530.	7.3	17
123	Ultrafast Bidirectional Charge Transport and Electron Decoherence at Molecule/Surface Interfaces: A Comparison of Gold, Graphene, and Graphene Nanoribbon Surfaces. Nano Letters, 2015, 15, 8316-8321.	4.5	17
124	Solitonics with Polyacetylenes. Nano Letters, 2020, 20, 2615-2619.	4.5	17
125	Destructive quantum interference in heterocyclic alkanes: the search for ultra-short molecular insulators. Chemical Science, 2021, 12, 10299-10305.	3.7	17
126	Single-Electron Currents in Designer Single-Cluster Devices. Journal of the American Chemical Society, 2020, 142, 14924-14932.	6.6	16

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127	Reply to â€œComment on â€˜Breakdown of Interference Rules in Azulene, a Nonalternant Hydrocarbonâ€™â€. Nano Letters, 2015, 15, 7177-7178.	4.5	14
128	Molecular conductance versus inductive effects of axial ligands on the electrocatalytic activity of self-assembled iron phthalocyanines: The oxygen reduction reaction. Electrochimica Acta, 2019, 327, 134996.	2.6	14
129	Too Cool for Blackbody Radiation: Overbias Photon Emission in Ambient STM Due to Multielectron Processes. Nano Letters, 2020, 20, 8912-8918.	4.5	14
130	Preface: Special Topic on Frontiers in Molecular Scale Electronics. Journal of Chemical Physics, 2017, 146, .	1.2	13
131	Ultrafast electron injection into photo-excited organic molecules. Physical Chemistry Chemical Physics, 2016, 18, 22140-22145.	1.3	11
132	Cyclopropenylidenes as Strong Carbene Anchoring Groups on Au Surfaces. Journal of the American Chemical Society, 2020, 142, 19902-19906.	6.6	11
133	Structure and Energy Level Alignment of Tetramethyl Benzenediamine on Au(111). Journal of Physical Chemistry C, 2011, 115, 12625-12630.	1.5	10
134	Gap Size-Dependent Plasmonic Enhancement in Electroluminescent Tunnel Junctions. ACS Photonics, 2022, 9, 688-693.	3.2	10
135	Computational Study of Amino Mediated Molecular Interaction Evidenced in N 1s NEXAFS: 1,4-Diaminobenzene on Au (111). Journal of Physical Chemistry C, 2015, 119, 1988-1995.	1.5	9
136	Single-molecule conductance in a unique cross-conjugated tetra(aminoaryl)ethene. Chemical Communications, 2021, 57, 591-594.	2.2	9
137	Ï€-Conjugated redox-active two-dimensional polymers as organic cathode materials. Chemical Science, 2022, 13, 3533-3538.	3.7	9
138	Increased Molecular Conductance in Oligo[<i>n</i>]phenylene Wires by Thermally Enhanced Dihedral Planarization. Nano Letters, 2022, 22, 4919-4924.	4.5	9
139	Tight-binding analysis of helical states in carbyne. Journal of Chemical Physics, 2020, 153, 124304.	1.2	8
140	Structureâ€"function relationships in single molecule rectification by N-phenylbenzamide derivatives. New Journal of Chemistry, 2016, 40, 7373-7378.	1.4	7
141	The importance of intramolecular conductivity in three dimensional molecular solids. Chemical Science, 2019, 10, 9339-9344.	3.7	7
142	Reversible on-surface wiring of resistive circuits. Chemical Science, 2017, 8, 4340-4346.	3.7	5
143	Molecular electronics: general discussion. Faraday Discussions, 2014, 174, 125-151.	1.6	4
144	Tuning ultrafast electron injection dynamics at organic-graphene/metal interfaces. Nanoscale, 2018, 10, 8014-8022.	2.8	4

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145	Synthesis and electronic properties of pyridine end-capped cyclopentadithiophene-vinylene oligomers. RSC Advances, 2020, 10, 41264-41271.	1.7	4
146	In Situ Coupling of Single Molecules Driven by Goldâ€Catalyzed Electrooxidation. Angewandte Chemie, 2019, 131, 16154-16158.	1.6	3
147	Benzene provides the missing link in molecular junctions. Physics Magazine, 2008, 1, .	0.1	2
148	Silver Makes Better Electrical Contacts to Thiolâ€Terminated Silanes than Gold. Angewandte Chemie, 2017, 129, 14333-14336.	1.6	2
149	Abbildung des Orbitals des ungepaarten Elektrons in einem stabilen, organischen Radikal anhand seiner Kondoâ€Resonanz. Angewandte Chemie, 2019, 131, 11179-11183.	1.6	1
150	Monte Carlo simulation of energy dissipation of recombining hydrogen in a maze. Journal of Low Temperature Physics, 1995, 101, 739-742.	0.6	0
151	Molecule Nanoelectronics. International Power Modulator Symposium and High-Voltage Workshop, 2008, , .	0.0	0
152	InnenrÃ¼cktitelbild: Quantum Soldering of Individual Quantum Dots (Angew. Chem. 50/2012). Angewandte Chemie, 2012, 124, 12797-12797.	1.6	0
153	Simultaneous Measurement of Force and Conductance Across Single Molecule Junctions. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 75-84.	0.3	0
154	Quantum Transport Properties of Pi-Conjugated Linear Molecular Junctions. , 0, , .		0
155	Quantum Transport Properties of Pi-Conjugated Linear Molecular Junctions. , 0, , .		0