Hatef Sadeghi

List of Publications by Year
in descending order

120	4,049	101384 36	133063 59
papers	citations	h-index	g-index

123	123	123	3588
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	GOLLUM: a next-generation simulation tool for electron, thermal and spin transport. New Journal of Physics, 2014, 16, 093029.	1.2	269
2	Magnetic edge states and coherent manipulation of graphene nanoribbons. Nature, 2018, 557, 691-695.	13.7	232
3	Anti-resonance features of destructive quantum interference in single-molecule thiophene junctions achieved by electrochemical gating. Nature Materials, 2019, 18, 364-369.	13.3	198
4	A quantum circuit rule for interference effects in single-molecule electrical junctions. Nature Communications, 2015, 6, 6389.	5.8	164
5	Functionalization mediates heat transport in graphene nanoflakes. Nature Communications, 2016, 7, 11281.	5.8	123
6	Gating of Quantum Interference in Molecular Junctions by Heteroatom Substitution. Angewandte Chemie - International Edition, 2017, 56, 173-176.	7.2	120
7	Magic Ratios for Connectivity-Driven Electrical Conductance of Graphene-like Molecules. Journal of the American Chemical Society, 2015, 137, 4469-4476.	6.6	101
8	Conductance enlargement in picoscale electroburnt graphene nanojunctions. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2658-2663.	3.3	98
9	Graphene-porphyrin single-molecule transistors. Nanoscale, 2015, 7, 13181-13185.	2.8	97
10	Bottom-up Synthesis of Nitrogen-Doped Porous Graphene Nanoribbons. Journal of the American Chemical Society, 2020, 142, 12568-12573.	6.6	97
11	Redox-Dependent Franckâ€“Condon Blockade and Avalanche Transport in a Grapheneâ€“Fullerene Single-Molecule Transistor. Nano Letters, 2016, 16, 170-176.	4.5	93
12	Oligoyne Molecular Junctions for Efficient Room Temperature Thermoelectric Power Generation. Nano Letters, 2015, 15, 7467-7472.	4.5	88
13	Searching the Hearts of Graphene-like Molecules for Simplicity, Sensitivity, and Logic. Journal of the American Chemical Society, 2015, 137, 11425-11431.	6.6	84
14	Bias-Driven Conductance Increase with Length in Porphyrin Tapes. Journal of the American Chemical Society, 2018, 140, 12877-12883.	6.6	84
15	Enhanced Thermoelectric Efficiency of Porous Silicene Nanoribbons. Scientific Reports, 2015, 5, 9514.	1.6	83
16	Quantum Interference in Graphene Nanoconstrictions. Nano Letters, 2016, 16, 4210-4216.	4.5	70
17	Enhancing the thermoelectric figure of merit in engineered graphene nanoribbons. Beilstein Journal of Nanotechnology, 2015, 6, 1176-1182.	1.5	60
18	Theory of electron, phonon and spin transport in nanoscale quantum devices. Nanotechnology, 2018, 29, 373001.	1.3	60

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19	Protonation tuning of quantum interference in azulene-type single-molecule junctions. Chemical Science, 2017, 8, 7505-7509.	3.7	58
20	Exploring quantum interference in heteroatom-substituted graphene-like molecules. Nanoscale, 2016, 8, 13199-13205.	2.8	56
21	Thermal Transport through Single-Molecule Junctions. Nano Letters, 2019, 19, 7614-7622.	4.5	55
22	Anchor Groups for Grapheneâ€Porphyrin Singleâ€Molecule Transistors. Advanced Functional Materials, 2018, 28, 1803629.	7.8	52
23	The Conductance of Porphyrin-Based Molecular Nanowires Increases with Length. Nano Letters, 2018, 18, 4482-4486.	4.5	52
24	Robust graphene-based molecular devices. Nature Nanotechnology, 2019, 14, 957-961.	15.6	50
25	Reversible Switching between Destructive and Constructive Quantum Interference Using Atomically Precise Chemical Gating of Single-Molecule Junctions. Journal of the American Chemical Society, 2021, 143, 9385-9392.	6.6	50
26	Silicene-based DNA nucleobase sensing. Applied Physics Letters, 2014, 104, .	1.5	49
27	Distinguishing Lead and Molecule States in Graphene-Based Single-Electron Transistors. ACS Nano, 2017, 11, 5325-5331.	7.3	48
28	Heteroatom-Induced Molecular Asymmetry Tunes Quantum Interference in Charge Transport through Single-Molecule Junctions. Journal of Physical Chemistry C, 2018, 122, 14965-14970.	1.5	46
29	Controlled Quantum Dot Formation in Atomically Engineered Graphene Nanoribbon Field-Effect Transistors. ACS Nano, 2020, 14, 5754-5762.	7.3	46
30	Atomically defined angstrom-scale all-carbon junctions. Nature Communications, 2019, 10, 1748.	5.8	44
31	Graphene Sculpturene Nanopores for DNA Nucleobase Sensing. Journal of Physical Chemistry B, 2014, 118, 6908-6914.	1.2	43
32	Inherently multifunctional geopolymeric cementitious composite as electrical energy storage and self-sensing structural material. Composite Structures, 2018, 201, 766-778.	3.1	43
33	Toward High Thermoelectric Performance of Thiophene and Ethylenedioxythiophene (EDOT) Molecular Wires. Advanced Functional Materials, 2018, 28, 1703135.	7.8	42
34	Turning the Tap: Conformational Control of Quantum Interference to Modulate Singleâ€Molecule Conductance. Angewandte Chemie - International Edition, 2019, 58, 18987-18993.	7.2	42
35	Cross-plane transport in a single-molecule two-dimensional van der Waals heterojunction. Science Advances, 2020, 6, eaba6714.	4.7	42
36	Unusual Length Dependence of the Conductance in Cumulene Molecular Wires. Angewandte Chemie - International Edition, 2019, 58, 8378-8382.	7.2	39

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37	Robust Molecular Anchoring to Graphene Electrodes. Nano Letters, 2017, 17, 4611-4618.	4.5	38
38	High-performance thermoelectricity in edge-over-edge zinc-porphyrin molecular wires. Nanoscale, 2017, 9, 5299-5304.	2.8	37
39	Folding a Single-Molecule Junction. Nano Letters, 2020, 20, 7980-7986.	4.5	35
40	Quantum-interference-enhanced thermoelectricity in single molecules and molecular films. Comptes Rendus Physique, 2016, 17, 1084-1095.	0.3	34
41	Cross-plane enhanced thermoelectricity and phonon suppression in graphene/MoS ₂ van der Waals heterostructures. 2D Materials, 2017, 4, 015012.	2.0	34
42	Tuning the thermoelectric properties of metallo-porphyrins. Nanoscale, 2016, 8, 2428-2433.	2.8	33
43	Thermoelectric Enhancement in Single Organic Radical Molecules. Nano Letters, 2022, 22, 948-953.	4.5	28
44	Suppression of Phonon Transport in Molecular Christmas Trees. ChemPhysChem, 2017, 18, 1234-1241.	1.0	27
45	Electron and heat transport in porphyrin-based single-molecule transistors with electro-burnt graphene electrodes. Beilstein Journal of Nanotechnology, 2015, 6, 1413-1420.	1.5	26
46	Connectivity-driven bi-thermoelectricity in heteroatom-substituted molecular junctions. Physical Chemistry Chemical Physics, 2018, 20, 9630-9637.	1.3	26
47	Hemilabile Ligands as Mechanosensitive Electrode Contacts for Molecular Electronics. Angewandte Chemie - International Edition, 2019, 58, 16583-16589.	7.2	26
48	Gateway state-mediated, long-range tunnelling in molecular wires. Nanoscale, 2018, 10, 3060-3067.	2.8	25
49	Cross-conjugation increases the conductance of <i>meta</i>-connected fluorenones. Nanoscale, 2019, 11, 13720-13724.	2.8	25
50	Redoxâ€Addressable Singleâ€Molecule Junctions Incorporating a Persistent Organic Radical**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	25
51	Thermoelectric Properties of Pristine Graphyne and the BN-Doped Graphyne Family. ACS Omega, 2021, 6, 20149-20157.	1.6	24
52	Radical enhancement of molecular thermoelectric efficiency. Nanoscale Advances, 2020, 2, 1031-1035.	2.2	23
53	<i>In situ</i> formation of H-bonding imidazole chains in break-junction experiments. Nanoscale, 2020, 12, 7914-7920.	2.8	23
54	Gating of Quantum Interference in Molecular Junctions by Heteroatom Substitution. Angewandte Chemie, 2017, 129, 179-182.	1.6	22

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55	Low-Frequency Noise in Graphene Tunnel Junctions. ACS Nano, 2018, 12, 9451-9460.	7.3	22
56	Carbazoleâ€Based Tetrapodal Anchor Groups for Gold Surfaces: Synthesis and Conductance Properties. Angewandte Chemie - International Edition, 2020, 59, 882-889.	7.2	22
57	Tuning thermoelectric properties of graphene/boron nitride heterostructures. Nanotechnology, 2015, 26, 475401.	1.3	21
58	Electrical Transport Model of Silicene as a Channel of Field Effect Transistor. Journal of Nanoscience and Nanotechnology, 2014, 14, 4178-4184.	0.9	20
59	High cross-plane thermoelectric performance of metallo-porphyrin molecular junctions. Physical Chemistry Chemical Physics, 2017, 19, 17356-17359.	1.3	20
60	A single-molecule porphyrin-based switch for graphene nano-gaps. Nanoscale, 2018, 10, 6524-6530.	2.8	20
61	Optical probes of molecules as nano-mechanical switches. Nature Communications, 2020, 11, 5905.	5.8	20
62	Probing Lewis acidâ€"base interactions in single-molecule junctions. Nanoscale, 2018, 10, 18131-18134.	2.8	17
63	Quantum and Phonon Interference-Enhanced Molecular-Scale Thermoelectricity. Journal of Physical Chemistry C, 2019, 123, 12556-12562.	1.5	17
64	Exploiting the extended Ï€-system of perylene bisimide for label-free single-molecule sensing. Journal of Materials Chemistry C, 2015, 3, 2101-2106.	2.7	16
65	Solvent-molecule interaction induced gating of charge transport through single-molecule junctions. Science Bulletin, 2020, 65, 944-950.	4.3	16
66	Tuning the Seebeck coefficient of naphthalenediimide by electrochemical gating and doping. Nanoscale, 2017, 9, 4819-4825.	2.8	15
67	Thermoelectricity in vertical graphene-C60-graphene architectures. Scientific Reports, 2017, 7, 11680.	1.6	15
68	Breakdown of Curly Arrow Rules in Anthraquinone. Angewandte Chemie - International Edition, 2018, 57, 15065-15069.	7.2	15
69	Nanoscale Thermal Transport in 2D Nanostructures from Cryogenic to Room Temperature. Advanced Electronic Materials, 2019, 5, 1900331.	2.6	15
70	Exploring the thermoelectric properties of oligo(phenylene-ethynylene) derivatives. Nanoscale, 2020, 12, 15150-15156.	2.8	14
71	Design and Analysis of a New Carbon Nanotube Full Adder Cell. Journal of Nanomaterials, 2011, 2011, 1-6.	1.5	13
72	Sensing single molecules with carbonâ€"boron-nitride nanotubes. Journal of Materials Chemistry C, 2015, 3, 10273-10276.	2.7	13

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73	Thermoelectric properties of oligoglycine molecular wires. Nanoscale, 2019, 11, 3567-3573.	2.8	13
74	Ballistic Conductance Model of Bilayer Graphene Nanoribbon (BGN). Journal of Computational and Theoretical Nanoscience, 2011, 8, 1993-1998.	0.4	12
75	Stable-radicals increase the conductance and Seebeck coefficient of graphene nanoconstrictions. Nanoscale, 2018, 10, 19220-19223.	2.8	12
76	Turning the Tap: Conformational Control of Quantum Interference to Modulate Singleâ€Molecule Conductance. Angewandte Chemie, 2019, 131, 19163-19169.	1.6	12
77	2,7- and 4,9-Dialkynyldihydropyrene Molecular Switches: Syntheses, Properties, and Charge Transport in Single-Molecule Junctions. Journal of the American Chemical Society, 2022, 144, 12698-12714.	6.6	12
78	Unusual Length Dependence of the Conductance in Cumulene Molecular Wires. Angewandte Chemie, 2019, 131, 8466-8470.	1.6	11
79	Vibrational Stark Effects: Ionic Influence on Local Fields. Journal of Physical Chemistry Letters, 2022, 13, 4905-4911.	2.1	11
80	CHANNEL CONDUCTANCE OF ABA STACKING TRILAYER GRAPHENE NANORIBBON FIELD-EFFECT TRANSISTOR. Modern Physics Letters B, 2012, 26, 1250047.	1.0	10
81	Hexagonal-boron nitride substrates for electroburnt graphene nanojunctions. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 82, 12-15.	1.3	10
82	The Effect of Anchor Group on the Phonon Thermal Conductance of Single Molecule Junctions. Applied Sciences (Switzerland), 2021, 11, 1066.	1.3	10
83	Heteroatom Effects on Quantum Interference in Molecular Junctions: Modulating Antiresonances by Molecular Design. Journal of Physical Chemistry C, 2021, 125, 17385-17391.	1.5	10
84	MoS2 nano flakes with self-adaptive contacts for efficient thermoelectric energy harvesting. Nanoscale, 2018, 10, 7575-7580.	2.8	9
85	Selective Anchoring Groups for Molecular Electronic Junctions with ITO Electrodes. ACS Sensors, 2021, 6, 530-537.	4.0	8
86	Selective sensing of 2,4,6-trinitrotoluene and triacetone triperoxide using carbon/boron nitride heteronanotubes. Materials Today Communications, 2021, 28, 102739.	0.9	8
87	Bilayer Graphene Nanoribbon Carrier Statistic in Degenerate and Non Degenerate Limit. Journal of Computational and Theoretical Nanoscience, 2011, 8, 2029-2032.	0.4	7
88	An analytical approach to calculate effective channel length in graphene nanoribbon field effect transistors. Microelectronics Reliability, 2013, 53, 540-543.	0.9	7
89	On the resilience of magic number theory for conductance ratios of aromatic molecules. Scientific Reports, 2019, 9, 3478.	1.6	7
90	Schottky Current in Carbon Nanotube-Metal Contact. Journal of Computational and Theoretical Nanoscience, 2012, 9, 1554-1557.	0.4	6

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91	Discriminating Seebeck sensing of molecules. Physical Chemistry Chemical Physics, 2019, 21, 2378-2381.	1.3	6
92	Carbazoleâ€Based Tetrapodal Anchor Groups for Gold Surfaces: Synthesis and Conductance Properties. Angewandte Chemie, 2020, 132, 892-899.	1.6	6
93	Single-atom control of electrical conductance and thermopower through single-cluster junctions. Nanoscale, 2021, 13, 12594-12601.	2.8	6
94	Thermoelectric properties of organic thin films enhanced by Ï€â€"Ï€ stacking. JPhys Energy, 2022, 4, 024002.	2.3	6
95	Multifunctional semiconductor micro-Hall devices for magnetic, electric, and photo-detection. Applied Physics Letters, 2015, 107, .	1.5	5
96	CARBON NANOTUBE CAPACITANCE MODEL IN DEGENERATE AND NONDEGENERATE REGIMES. , 2011, , .		4
97	BILAYER GRAPHENE NANORIBBON CARRIER STATISTICS IN THE DEGENERATE REGIME. , 2011, , .		4
98	Classic and Quantum Capacitances in Bernal Bilayer and Trilayer Graphene Field Effect Transistor. Journal of Nanomaterials, 2013, 2013, 1-7.	1.5	4
99	Negative differential electrical resistance of a rotational organic nanomotor. Beilstein Journal of Nanotechnology, 2015, 6, 2332-2337.	1.5	4
100	Low thermal conductivity in franckeite heterostructures. Nanoscale, 2022, 14, 2593-2598.	2.8	4
101	Trilayer graphene nanoribbon carrier statistics in degenerate and non degenerate limits. , 2012, , .		3
102	Hemilabile Ligands as Mechanosensitive Electrode Contacts for Molecular Electronics. Angewandte Chemie, 2019, 131, 16736-16742.	1.6	3
103	Study the effect of applied voltage on propagation delay of bilayer graphene nanoribbon transistor. , 2011, , .		2
104	A review on carbon-based materials as on-chip interconnects. Proceedings of SPIE, 2011, , .	0.8	2
105	Graphene-Based DNA Sensors. , 2016, , 13-26.		2
106	Quantum Interference Enhanced Thermoelectricity in Ferrocene Based Molecular Junctions. Journal of Nanoscience and Nanotechnology, 2019, 19, 7452-7455.	0.9	2
107	Switching Quantum Interference in Phenoxyquinone Single Molecule Junction with Light. Nanomaterials, 2020, 10, 1544.	1.9	2
108	Genomics of carbon atomic chains. Carbon, 2021, 183, 977-983.	5.4	2

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109	Thermoelectric Effect on Linear Array of Graphene-Based Materials Including Fullerene, Twisted Graphene, and Graphene Nanoribbon. ECS Journal of Solid State Science and Technology, 2022, 11, 051002.	0.9	2
110	CARRIER STATISTICS MODEL FOR A BILAYER GRAPHENE NANORIBBON IN THE NONDEGENERATE REGIME. , 2011, , .		1
111	Bilayer Graphene Nanoribbon Mobility Model in Ballistic Transport Limit. Journal of Computational and Theoretical Nanoscience, 2013, 10, 1262-1265.	0.4	1
112	Breakdown of Curly Arrow Rules in Anthraquinone. Angewandte Chemie, 2018, 130, 15285-15289.	1.6	1
113	Magic Number Theory of Superconducting Proximity Effects and Wigner Delay Times in Graphene-Like Molecules. Journal of Physical Chemistry C, 2019, 123, 6812-6822.	1.5	1
114	Bilayer Graphene nanoribbon conductance model in parabolic band structure. , 2010, , .		0
115	Biased voltage boundary condition to operate Bilayer Graphene in the insulating region. , 2011, , .		0
116	Bilayer Graphene Nanoribbon Conductance Model in Parabolic Band Structure. , 2011, , .		0
117	The Effect of Effective Channel Length on a Silicon Nanowire Fin Field Effect Transistor. Journal of Computational and Theoretical Nanoscience, 2013, 10, 964-967.	0.4	0
118	InnenrÃ¼cktitelbild: Hemilabile Ligands as Mechanosensitive Electrode Contacts for Molecular Electronics (Angew. Chem. 46/2019). Angewandte Chemie, 2019, 131, 16851-16851.	1.6	0
119	Silicene Nanoribbons and Nanopores for Nanoelectronic Devices and Applications. Advances in Computer and Electrical Engineering Book Series, 2017, , 39-69.	0.2	0
120	Redoxâ€Addressable Singleâ€Molecule Junctions Incorporating a Persistent Organic Radical**. Angewandte Chemie, 0, , .	1.6	0