

# Joshua Hihath

## List of Publications by Year in descending order

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62  
papers

4,322  
citations

236612

25  
h-index

138251

58  
g-index

66  
all docs

66  
docs citations

66  
times ranked

3327  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Anchoring Groups on Single-Molecule Conductance: A Comparative Study of Thiol-, Amine-, and Carboxylic-Acid-Terminated Molecules. <i>Journal of the American Chemical Society</i> , 2006, 128, 15874-15881.	6.6	701
2	Rectification and stability of a single molecular diode with controlled orientation. <i>Nature Chemistry</i> , 2009, 1, 635-641.	6.6	517
3	Conductance of Single Alkanedithiols: A Conduction Mechanism and Effect of Molecule-Electrode Contacts. <i>Journal of the American Chemical Society</i> , 2006, 128, 2135-2141.	6.6	484
4	Measurement of Single-Molecule Conductance. <i>Annual Review of Physical Chemistry</i> , 2007, 58, 535-564.	4.8	374
5	Transition from Tunneling to Hopping in Single Molecular Junctions by Measuring Length and Temperature Dependence. <i>Journal of the American Chemical Society</i> , 2010, 132, 11658-11664.	6.6	195
6	Mechanically controlled molecular orbital alignment in single molecule junctions. <i>Nature Nanotechnology</i> , 2012, 7, 35-40.	15.6	184
7	Measurement and Statistical Analysis of Single-Molecule Current-Voltage Characteristics, Transition Voltage Spectroscopy, and Tunneling Barrier Height. <i>Journal of the American Chemical Society</i> , 2011, 133, 19189-19197.	6.6	181
8	Study of single-nucleotide polymorphisms by means of electrical conductance measurements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 16979-16983.	3.3	148
9	Controlling single-molecule conductance through lateral coupling of $\pi$ orbitals. <i>Nature Nanotechnology</i> , 2011, 6, 226-231.	15.6	138
10	Thermally Activated Electron Transport in Single Redox Molecules. <i>Journal of the American Chemical Society</i> , 2007, 129, 11535-11542.	6.6	131
11	Gate-controlled electron transport in coronenes as a bottom-up approach towards graphene transistors. <i>Nature Communications</i> , 2010, 1, 31.	5.8	104
12	Study of Electron-Phonon Interactions in a Single Molecule Covalently Connected to Two Electrodes. <i>Nano Letters</i> , 2008, 8, 1673-1678.	4.5	94
13	Binding configurations and intramolecular strain in single-molecule devices. <i>Nature Materials</i> , 2015, 14, 517-522.	13.3	92
14	Inelastic Transport and Low-Bias Rectification in a Single-Molecule Diode. <i>ACS Nano</i> , 2011, 5, 8331-8339.	7.3	78
15	Conformational gating of DNA conductance. <i>Nature Communications</i> , 2015, 6, 8870.	5.8	75
16	A Chirality-Based Quantum Leap. <i>ACS Nano</i> , 2022, 16, 4989-5035.	7.3	74
17	Detection and identification of genetic material via single-molecule conductance. <i>Nature Nanotechnology</i> , 2018, 13, 1167-1173.	15.6	59
18	Electron-Phonon Interactions in Single Octanedithiol Molecular Junctions. <i>ACS Nano</i> , 2010, 4, 3823-3830.	7.3	53

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19	Switch of Conducting Orbital by Bias-Induced Electronic Contact Asymmetry in a Bipyrimidinyl-biphenyl Diblock Molecule: Mechanism to Achieve a $\langle i \rangle$ Directional Molecular Diode. <i>Journal of Physical Chemistry C</i> , 2011, 115, 19931-19938.	1.5	48
20	Effect of Ring Strain on the Charge Transport of a Robust Norbornadiene-Quadricyclane-Based Molecular Photoswitch. <i>Journal of Physical Chemistry C</i> , 2017, 121, 7094-7100.	1.5	42
21	The role of molecule-electrode contact in single-molecule electronics. <i>Semiconductor Science and Technology</i> , 2014, 29, 054007.	1.0	38
22	A Memristive Element Based on an Electrically Controlled Single-Molecule Reaction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 11641-11646.	7.2	37
23	Rapid measurement of single-molecule conductance. <i>Nanotechnology</i> , 2008, 19, 265204.	1.3	33
24	Comparing Charge Transport in Oligonucleotides: RNA:DNA Hybrids and DNA Duplexes. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1888-1894.	2.1	29
25	Bismuth Doping of Germanium Nanocrystals through Colloidal Chemistry. <i>Chemistry of Materials</i> , 2017, 29, 7353-7363.	3.2	26
26	An Electromechanical Approach to Understanding Binding Configurations in Single-Molecule Devices. <i>Nano Letters</i> , 2018, 18, 6638-6644.	4.5	26
27	Long-Range Charge Transport in Adenine-Stacked RNA:DNA Hybrids. <i>Small</i> , 2016, 12, 432-437.	5.2	24
28	An On-Chip Break Junction System for Combined Single-Molecule Conductance and Raman Spectroscopies. <i>Advanced Functional Materials</i> , 2020, 30, 2000615.	7.8	24
29	Thermal and electrochemical gate effects on DNA conductance. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 215202.	0.7	23
30	Effects of cytosine methylation on DNA charge transport. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 164204.	0.7	23
31	Understanding the Conductance Dispersion of Single-Molecule Junctions. <i>Journal of Physical Chemistry C</i> , 2021, 125, 3406-3414.	1.5	23
32	Electron-phonon interactions in atomic and molecular devices. <i>Progress in Surface Science</i> , 2012, 87, 189-208.	3.8	21
33	Single-Molecule Charge Transport and Electrochemical Gating in Redox-Active Perylene Diimide Junctions. <i>Journal of Physical Chemistry C</i> , 2016, 120, 22646-22654.	1.5	21
34	Conductance and Configuration of Molecular Gold-Water-Gold Junctions under Electric Fields. <i>Matter</i> , 2020, 3, 166-179.	5.0	21
35	Breakdown of Atomic-Sized Metallic Contacts Measured on Nanosecond Scale. <i>Nano Letters</i> , 2011, 11, 927-933.	4.5	18
36	Potential Dependence of Mechanical Stability and Electronic Coupling of Single Au Bonds. <i>Journal of the American Chemical Society</i> , 2018, 140, 18074-18081.	6.6	18

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37	Conductance based characterization of structure and hopping site density in 2D molecule-nanoparticle arrays. <i>Nanoscale</i> , 2015, 7, 14937-14945.	2.8	16
38	Immobilization-mediated reduction in melting temperatures of DNA-RNA hybrids: Immobilized DNA probe hybridization studied by SPR. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 481, 72-79.	2.3	14
39	Role of intercalation in the electrical properties of nucleic acids for use in molecular electronics. <i>Nanoscale Horizons</i> , 2021, 6, 651-660.	4.1	10
40	High-Throughput Dielectrophoretic Trapping and Detection of DNA Origami. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001476.	1.9	9
41	Design and Fabrication of a MEMS-Based Break Junction Device for Mechanical Strain-Correlated Optical Characterization of a Single-Molecule. <i>Journal of Microelectromechanical Systems</i> , 2021, 30, 126-136.	1.7	9
42	A machine learning approach for accurate and real-time DNA sequence identification. <i>BMC Genomics</i> , 2021, 22, 525.	1.2	9
43	Ligand exchange based molecular doping in 2D hybrid molecule-nanoparticle arrays: length determines exchange efficiency and conductance. <i>Molecular Systems Design and Engineering</i> , 2017, 2, 440-448.	1.7	8
44	Two-tiered electrical detection, purification, and identification of nucleic acids in complex media. <i>Electrochimica Acta</i> , 2019, 313, 116-121.	2.6	8
45	Electron correlation enhancement of the diode property of asymmetric molecules. <i>Physical Review B</i> , 2011, 84, .	1.1	7
46	Molecular Control of Charge Carrier and Seebeck Coefficient in Hybrid Two-Dimensional Nanoparticle Superlattices. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17-24.	1.5	7
47	Review of Dielectrophoretic Manipulation of Micro and Nanomaterials: Fundamentals, Recent Developments, and Challenges. <i>IEEE Transactions on Biomedical Engineering</i> , 2023, 70, 27-41.	2.5	7
48	Highly uniform monolayer graphene synthesis via a facile pretreatment of copper catalyst substrates using an ammonium persulfate solution. <i>RSC Advances</i> , 2019, 9, 20871-20878.	1.7	6
49	Multidimensional Characterization of Single-Molecule Dynamics in a Plasmonic Nanocavity. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 16436-16441.	7.2	6
50	A Memristive Element Based on an Electrically Controlled Single-Molecule Reaction. <i>Angewandte Chemie</i> , 2020, 132, 11738-11743.	1.6	5
51	Temperature-Dependent Tunneling in Furan Oligomer Single-Molecule Junctions. <i>ACS Sensors</i> , 2021, 6, 565-572.	4.0	5
52	Molecular quantum interference effects on thermopower in hybrid 2-dimensional monolayers. <i>Nanoscale</i> , 2022, 14, 6248-6257.	2.8	4
53	Measurement of Electron Transport Properties of Single Molecules. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 5344-5347.	0.8	3
54	Charge transport in the inverted Marcus region. <i>Nature Nanotechnology</i> , 2018, 13, 276-277.	15.6	3

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55	Thickness-Dependent Seebeck Coefficient in Hybrid 2-Dimensional layers. , 2021, , .		3
56	Moving Electrons Purposefully through Single Molecules and Nanostructures: A Tribute to the Science of Professor Nongjian Tao (1963â€”2020). ACS Nano, 2020, 14, 12291-12312.	7.3	2
57	Gold Nanoparticle Synthesis. Journal of Visualized Experiments, 2021, , .	0.2	2
58	Characterization of Ligand Exchange in 2D Hybrid Molecule-nanoparticle Superlattices. Microscopy and Microanalysis, 2018, 24, 1722-1723.	0.2	0
59	InnenÃ¼bersichtsbild: A Memristive Element Based on an Electrically Controlled Singleâ€”Molecule Reaction (Angew. Chem. 28/2020). Angewandte Chemie, 2020, 132, 11767-11767.	1.6	0
60	Singleâ€”Molecule Junctions: An Onâ€”Chip Break Junction System for Combined Singleâ€”Molecule Conductance and Raman Spectroscopies (Adv. Funct. Mater. 28/2020). Advanced Functional Materials, 2020, 30, 2070188.	7.8	0
61	Ã¼bersichtsbild: Multidimensional Characterization of Singleâ€”Molecule Dynamics in a Plasmonic Nanocavity (Angew. Chem. 30/2021). Angewandte Chemie, 2021, 133, 16852-16852.	1.6	0
62	Multidimensional Characterization of Singleâ€”Molecule Dynamics in a Plasmonic Nanocavity. Angewandte Chemie, 2021, 133, 16572-16577.	1.6	0