

Oded Hod

List of Publications by Year in descending order

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77
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6,966
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94269

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times ranked

6939
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of Chirality Induced Spin Selectivity: Progress and Challenges. <i>Advanced Materials</i> , 2022, 34, e2106629.	11.1	119
2	Edge State Quantum Interference in Twisted Graphitic Interfaces. <i>Advanced Science</i> , 2022, , 2102261.	5.6	2
3	Interlayer Registry Index of Layered Transition Metal Dichalcogenides. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 3353-3359.	2.1	3
4	Sliding on the edge. <i>Nature Materials</i> , 2022, 21, 12-14.	13.3	2
5	Catalytic Growth of Ultralong Graphene Nanoribbons on Insulating Substrates. <i>Advanced Materials</i> , 2022, 34, e2200956.	11.1	12
6	Magnetic control over the fundamental structure of atomic wires. <i>Nature Communications</i> , 2022, 13, .	5.8	4
7	Mechanisms of frictional energy dissipation at graphene grain boundaries. <i>Physical Review B</i> , 2021, 103, .	1.1	16
8	The Chemistry of Short-Lived $\hat{\pm}$ -Fluorocarocations. <i>Journal of Organic Chemistry</i> , 2021, 86, 3882-3889.	1.7	1
9	Parity-Dependent Moiré Superlattices in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Graphene} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{h} \langle \text{mml:mi} \rangle \langle \text{mml:mtex} \rangle \hat{\alpha} \langle \text{mml:mtex} \rangle$ Heterostructures: A Route to Mechanomutable Metamaterials. <i>Physical Review Letters</i> , 2021, 126, 216101.		
10	Interfacial ferroelectricity by van der Waals sliding. <i>Science</i> , 2021, 372, 1462-1466.	6.0	262
11	Registry-Dependent Peeling of Layered Material Interfaces: The Case of Graphene Nanoribbons on Hexagonal Boron Nitride. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 43533-43539.	4.0	6
12	Superlubric polycrystalline graphene interfaces. <i>Nature Communications</i> , 2021, 12, 5694.	5.8	14
13	Registry-Dependent Potential for Interfaces of Gold with Graphitic Systems. <i>Journal of Chemical Theory and Computation</i> , 2021, 17, 7215-7223.	2.3	5
14	Anisotropic Interlayer Force Field for Transition Metal Dichalcogenides: The Case of Molybdenum Disulfide. <i>Journal of Chemical Theory and Computation</i> , 2021, 17, 7237-7245.	2.3	12
15	Mechanical and Tribological Properties of Layered Materials under High Pressure: Assessing the Importance of Many-Body Dispersion Effects. <i>Journal of Chemical Theory and Computation</i> , 2020, 16, 666-676.	2.3	39
16	The scaling laws of edge vs. bulk interlayer conduction in mesoscale twisted graphitic interfaces. <i>Nature Communications</i> , 2020, 11, 4746.	5.8	8
17	Long-Range Spin-Selective Transport in Chiral Metal-Organic Crystals with Temperature-Activated Magnetization. <i>ACS Nano</i> , 2020, 14, 16624-16633.	7.3	51
18	Controllable Thermal Conductivity in Twisted Homogeneous Interfaces of Graphene and Hexagonal Boron Nitride. <i>Nano Letters</i> , 2020, 20, 7513-7518.	4.5	50

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19	Simulating Electron Dynamics in Open Quantum Systems under Magnetic Fields. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8652-8662.	1.5	4
20	Numerical Approach to Nonequilibrium Quantum Thermodynamics: Nonperturbative Treatment of the Driven Resonant Level Model Based on the Driven Liouville von-Neumann Formalism. <i>Journal of Chemical Theory and Computation</i> , 2020, 16, 1232-1248.	2.3	16
21	The Princess and the Nanoscale Pea: Long-Range Penetration of Surface Distortions into Layered Materials Stacks. <i>ACS Nano</i> , 2019, 13, 7603-7609.	7.3	23
22	Evaluation of dynamical properties of open quantum systems using the driven Liouville-von Neumann approach: methodological considerations. <i>Molecular Physics</i> , 2019, 117, 2083-2096.	0.8	13
23	Negative Friction Coefficients in Superlubric Graphiteâ€“Hexagonal Boron Nitride Heterojunctions. <i>Physical Review Letters</i> , 2019, 122, 076102.	2.9	63
24	Bionanostructures: Bioinspired Flexible and Tough Layered Peptide Crystals (<i>Adv. Mater.</i> 5/2018). <i>Advanced Materials</i> , 2018, 30, 1870035.	11.1	0
25	Bioinspired Flexible and Tough Layered Peptide Crystals. <i>Advanced Materials</i> , 2018, 30, 1704551.	11.1	28
26	Structural superlubricity and ultralow friction across the length scales. <i>Nature</i> , 2018, 563, 485-492.	13.7	382
27	Flatlands in the Holy Land: The Evolution of Layered Materials Research in Israel. <i>Advanced Materials</i> , 2018, 30, e1706581.	11.1	7
28	Robust microscale superlubricity in graphite/hexagonal boron nitride layered heterojunctions. <i>Nature Materials</i> , 2018, 17, 894-899.	13.3	292
29	Nanoserpents: Graphene Nanoribbon Motion on Two-Dimensional Hexagonal Materials. <i>Nano Letters</i> , 2018, 18, 6009-6016.	4.5	104
30	Terahertz spectroscopy of 2,4,6-trinitrotoluene molecular solids from first principles. <i>Beilstein Journal of Organic Chemistry</i> , 2018, 14, 381-388.	1.3	10
31	Parameter-free driven Liouville-von Neumann approach for time-dependent electronic transport simulations in open quantum systems. <i>Journal of Chemical Physics</i> , 2017, 146, 092331.	1.2	40
32	Sliding friction of graphene/hexagonal â€“boron nitride heterojunctions: a route to robust superlubricity. <i>Scientific Reports</i> , 2017, 7, 10851.	1.6	108
33	Selectivity of a Graphene Nanoribbon-Based Trinitrotoluene Detector: A Computational Assessment. <i>Journal of Physical Chemistry C</i> , 2017, 121, 21546-21552.	1.5	6
34	Interlayer Potential for Homogeneous Graphene and Hexagonal Boron Nitride Systems: Reparametrization for Many-Body Dispersion Effects. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22826-22835.	1.5	61
35	Smallest Archimedean Screw: Facet Dynamics and Friction in Multiwalled Nanotubes. <i>Nano Letters</i> , 2017, 17, 5321-5328.	4.5	16
36	Interlayer Potential for Graphene/h<i>h</i>-BN Heterostructures. <i>Journal of Chemical Theory and Computation</i> , 2016, 12, 2896-2905.	2.3	107

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37	Multiwalled nanotube faceting unravelled. <i>Nature Nanotechnology</i> , 2016, 11, 1082-1086.	15.6	47
38	Coherent commensurate electronic states at the interface between misoriented graphene layers. <i>Nature Nanotechnology</i> , 2016, 11, 752-757.	15.6	107
39	Driven Liouville von Neumann Approach for Time-Dependent Electronic Transport Calculations in a Nonorthogonal Basis-Set Representation. <i>Journal of Physical Chemistry C</i> , 2016, 120, 15052-15062.	1.5	27
40	Nanotube Motion on Layered Materials: A Registry Perspective. <i>Journal of Physical Chemistry C</i> , 2016, 120, 4466-4470.	1.5	14
41	Graphene Nanoribbons-Based Ultrasensitive Chemical Detectors. <i>Journal of Physical Chemistry C</i> , 2016, 120, 3791-3797.	1.5	11
42	Driven Liouville von Neumann Equation in Lindblad Form. <i>Journal of Physical Chemistry A</i> , 2016, 120, 3278-3285.	1.1	33
43	Molecule-Lead Coupling at Molecular Junctions: Relation between the Real- and State-Space Perspectives. <i>Journal of Chemical Theory and Computation</i> , 2015, 11, 4861-4869.	2.3	33
44	Magnetization Dynamics from Time-Dependent Noncollinear Spin Density Functional Theory Calculations. <i>Journal of Chemical Theory and Computation</i> , 2015, 11, 3661-3668.	2.3	28
45	Real-space method for highly parallelizable electronic transport calculations. <i>Physical Review B</i> , 2014, 90, .	1.1	10
46	Inter-layer potential for hexagonal boron nitride. <i>Journal of Chemical Physics</i> , 2014, 140, 104106.	1.2	72
47	Effects of Edge Oxidation on the Structural, Electronic, and Magnetic Properties of Zigzag Boron Nitride Nanoribbons. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 373-380.	2.3	30
48	State Representation Approach for Atomistic Time-Dependent Transport Calculations in Molecular Junctions. <i>Journal of Chemical Theory and Computation</i> , 2014, 10, 2927-2941.	2.3	56
49	Robust Superlubricity in Graphene/h-BN Heterojunctions. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 115-120.	2.1	184
50	Towards graphene based ultrasensitive chemical detectors: Lithium anchoring of organic molecules on the surface of graphene. , 2013, , .		0
51	The Registry Index: A Quantitative Measure of Materials' Interfacial Commensurability. <i>ChemPhysChem</i> , 2013, 14, 2376-2391.	1.0	62
52	Graphite and Hexagonal Boron-Nitride have the Same Interlayer Distance. Why?. <i>Journal of Chemical Theory and Computation</i> , 2012, 8, 1360-1369.	2.3	256
53	Magnetic fields effects on the electronic conduction properties of molecular ring structures. <i>Physical Review B</i> , 2012, 85, .	1.1	52
54	Interlayer Registry to Determine the Sliding Potential of Layered Metal Dichalcogenides: The Case of $2H-MoS_2$. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 1936-1940.	2.1	46

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55	Interlayer commensurability and superlubricity in rigid layered materials. <i>Physical Review B</i> , 2012, 86, .	1.1	80
56	Role of Backbone Charge Rearrangement in the Bond-Dipole and Work Function of Molecular Monolayers. <i>Journal of Physical Chemistry C</i> , 2011, 115, 24888-24892.	1.5	31
57	Magnetic Field Control of the Current through Molecular Ring Junctions. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2118-2124.	2.1	46
58	Dispersion Interactions with Density-Functional Theory: Benchmarking Semiempirical and Interatomic Pairwise Corrected Density Functionals. <i>Journal of Chemical Theory and Computation</i> , 2011, 7, 3944-3951.	2.3	265
59	Circular Currents in Molecular Wires. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20583-20594.	1.5	77
60	Quantifying the Stacking Registry Matching in Layered Materials. <i>Israel Journal of Chemistry</i> , 2010, 50, 506-514.	1.0	28
61	Stacking and Registry Effects in Layered Materials: The Case of Hexagonal Boron Nitride. <i>Physical Review Letters</i> , 2010, 105, 046801.	2.9	283
62	Electromechanical Properties of Suspended Graphene Nanoribbons. <i>Nano Letters</i> , 2009, 9, 2619-2622.	4.5	114
63	Half-Metallic Zigzag Carbon Nanotube Dots. <i>ACS Nano</i> , 2008, 2, 2243-2249.	7.3	68
64	Half-metallic graphene nanodots: A comprehensive first-principles theoretical study. <i>Physical Review B</i> , 2008, 77, .	1.1	290
65	Electronic structure of copper phthalocyanine: A comparative density functional theory study. <i>Journal of Chemical Physics</i> , 2008, 128, 164107.	1.2	153
66	Magnetoresistance of nanoscale molecular devices based on Aharonov-Bohm interferometry. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 383201.	0.7	30
67	Constructing spin interference devices from nanometric rings. <i>Physical Review B</i> , 2007, 76, .	1.1	57
68	Edge effects in finite elongated graphene nanoribbons. <i>Physical Review B</i> , 2007, 76, .	1.1	148
69	Enhanced Half-Metallicity in Edge-Oxidized Zigzag Graphene Nanoribbons. <i>Nano Letters</i> , 2007, 7, 2295-2299.	4.5	547
70	Magnetoresistance of Nanoscale Molecular Devices. <i>Accounts of Chemical Research</i> , 2006, 39, 109-117.	7.6	45
71	Electronic Structure and Stability of Semiconducting Graphene Nanoribbons. <i>Nano Letters</i> , 2006, 6, 2748-2754.	4.5	1,568
72	First-principles electronic transport calculations in finite elongated systems: A divide and conquer approach. <i>Journal of Chemical Physics</i> , 2006, 125, 114704.	1.2	33

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73	Inelastic Effects in Aharonov-Bohm Molecular Interferometers. <i>Physical Review Letters</i> , 2006, 97, 266803.	2.9	25
74	Magnetoresistance devices based on single-walled carbon nanotubes. <i>Journal of Chemical Physics</i> , 2005, 123, 051103.	1.2	10
75	A Parallel Electromagnetic Molecular Logic Gate. <i>Journal of the American Chemical Society</i> , 2005, 127, 1648-1649.	6.6	50
76	Feasible Nanometric Magnetoresistance Devices. <i>Journal of Physical Chemistry B</i> , 2004, 108, 14807-14810.	1.2	30
77	A coarse-grained model for a nanometer-scale molecular pump. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 14661-14665.	3.3	16