Evan J Reed

List of Publications by Year
in descending order

56 papers	5,528 citations	185998 28 h-index	168136 53 g-index
57 all docs	57 docs citations	57 times ranked	8617 citing authors

#	Article	IF	Citations
1	Intrinsic Piezoelectricity in Two-Dimensional Materials. Journal of Physical Chemistry Letters, 2012, 3, 2871-2876.	2.1	871
2	Structural phase transitions in two-dimensional Mo- and W-dichalcogenide monolayers. Nature Communications, 2014, 5, 4214.	5.8	832
3	Structural phase transition in monolayer MoTe2 driven by electrostatic doping. Nature, 2017, 550, 487-491.	13.7	548
4	Structural semiconductor-to-semimetal phase transition in two-dimensional materials induced by electrostatic gating. Nature Communications, 2016, 7, 10671.	5.8	318
5	New frontiers for the materials genome initiative. Npj Computational Materials, 2019, 5, .	3.5	312
6	Atomic Layer Deposition of Stable LiAlF₄ Lithium Ion Conductive Interfacial Layer for Stable Cathode Cycling. ACS Nano, 2017, 11, 7019-7027.	7.3	276
7	Holistic computational structure screening of more than 12â€‰000 candidates for solid lithium-ion conductor materials. Energy and Environmental Science, 2017, 10, 306-320.	15.6	259
8	Machine Learning-Assisted Discovery of Solid Li-Ion Conducting Materials. Chemistry of Materials, 2019, 31, 342-352.	3.2	196
9	The joint automated repository for various integrated simulations (JARVIS) for data-driven materials design. Npj Computational Materials, 2020, 6, .	3.5	181
10	Chemical Vapor Deposition Growth of Few-Layer MoTe₂ in the 2H, 1Tâ€², and 1T Phases: Tunable Properties of MoTe₂ Films. ACS Nano, 2017, 11, 900-905.	7.3	173
11	Data Mining for New Two- and One-Dimensional Weakly Bonded Solids and Lattice-Commensurate Heterostructures. Nano Letters, 2017, 17, 1915-1923.	4.5	166
12	Structural Phase Transitions by Design in Monolayer Alloys. ACS Nano, 2016, 10, 289-297.	7.3	109
13	The Effect of Hydrogen and Fluorine Coadsorption on the Piezoelectric Properties of Graphene. Journal of Physical Chemistry C, 2013, 117, 3615-3620.	1.5	96
14	Dynamic Structural Response and Deformations of Monolayer MoS₂ Visualized by Femtosecond Electron Diffraction. Nano Letters, 2015, 15, 6889-6895.	4.5	93
15	Elastic properties of bulk and low-dimensional materials using van der Waals density functional. Physical Review B, 2018, 98, .	1.1	88
16	Screening billions of candidates for solid lithium-ion conductors: A transfer learning approach for small data. Journal of Chemical Physics, 2019, 150, 214701.	1.2	88
17	Metallic Metalâ€“Organic Frameworks Predicted by the Combination of Machine Learning Methods and Ab Initio Calculations. Journal of Physical Chemistry Letters, 2018, 9, 4562-4569.	2.1	84
18	Effects of Uniaxial and Biaxial Strain on Few-Layered Terrace Structures of MoS₂ Grown by Vapor Transport. ACS Nano, 2016, 10, 3186-3197.	7.3	83

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19	Structural Phase Stability Control of Monolayer MoTe₂ with Adsorbed Atoms and Molecules. Journal of Physical Chemistry C, 2015, 119, 21674-21680.	1.5	74
20	Low Resistivity and High Breakdown Current Density of 10 nm Diameter van der Waals TaSe₃ Nanowires by Chemical Vapor Deposition. Nano Letters, 2019, 19, 4355-4361.	4.5	55
21	Dynamic Optical Tuning of Interlayer Interactions in the Transition Metal Dichalcogenides. Nano Letters, 2017, 17, 7761-7766.	4.5	46
22	Nanosecond homogeneous nucleation and crystal growth in shock-compressed SiO2. Nature Materials, 2016, 15, 60-65.	13.3	43
23	Ultrafast Detonation of Hydrazoic Acid (<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 592 Td (xmlns:mml="http://www.w3 Physical Review Letters, 2012, 109, 038301.	2.9	40
24	Theoretical potential for low energy consumption phase change memory utilizing electrostatically-induced structural phase transitions in 2D materials. Npj Computational Materials, 2018, 4, .	3.5	40
25	Valence-Dependent Electrical Conductivity in a 3D Tetrahydroxyquinone-Based Metalâ€“Organic Framework. Journal of the American Chemical Society, 2020, 142, 21243-21248.	6.6	39
26	Reversible Electrochemical Phase Change in Monolayer to Bulk-like MoTe₂ by Ionic Liquid Gating. ACS Nano, 2020, 14, 2894-2903.	7.3	37
27	Uncovering the effects of interface-induced ordering of liquid on crystal growth using machine learning. Nature Communications, 2020, 11, 3260.	5.8	32
28	Testbeds for Transition Metal Dichalcogenide Photonics: Efficacy of Light Emission Enhancement in Monomer vs Dimer Nanoscale Antennae. ACS Photonics, 2017, 4, 1713-1721.	3.2	31
29	Machine Learning Modeling for Accelerated Battery Materials Design in the Small Data Regime. Advanced Energy Materials, 2022, 12, .	10.2	29
30	Quantifying the Search for Solid Li-Ion Electrolyte Materials by Anion: A Data-Driven Perspective. Journal of Physical Chemistry C, 2020, 124, 8067-8079.	1.5	28
31	Revealing the Spectrum of Unknown Layered Materials with Superhuman Predictive Abilities. Journal of Physical Chemistry Letters, 2018, 9, 6967-6972.	2.1	25
32	Combining Superionic Conduction and Favorable Decomposition Products in the Crystalline Lithiumâ€“Boronâ€“Sulfur System: A New Mechanism for Stabilizing Solid Li-Ion Electrolytes. ACS Applied Materials & Interfaces, 2020, 12, 37957-37966.	4.0	24
33	Strain relaxation via formation of cracks in compositionally modulated two-dimensional semiconductor alloys. Npj 2D Materials and Applications, 2018, 2, .	3.9	23
34	Now in two dimensions. Nature Nanotechnology, 2015, 10, 106-107.	15.6	20
35	Learning reduced kinetic Monte Carlo models of complex chemistry from molecular dynamics. Chemical Science, 2017, 8, 5781-5796.	3.7	17
36	Spectrum of Exfoliable 1D van der Waals Molecular Wires and Their Electronic Properties. ACS Nano, 2021, 15, 9851-9859.	7.3	16

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37	Highly Efficient Uniaxial Inâ€Plane Stretching of a 2D Material via Ion Insertion. Advanced Materials, 2021, 33, e2101875.	11.1	16
38	Coherent Optical Photons from Shock Waves in Crystals. Physical Review Letters, 2006, 96, 013904.	2.9	15
39	Automated prediction of lattice parameters from X-ray powder diffraction patterns. Journal of Applied Crystallography, 2021, 54, 1799-1810.	1.9	14
40	Generalizable density functional theory based photoemission model for the accelerated development of photocathodes and other photoemissive devices. Physical Review B, 2020, 101, .	1.1	11
41	Transferable Kinetic Monte Carlo Models with Thousands of Reactions Learned from Molecular Dynamics Simulations. Journal of Physical Chemistry A, 2019, 123, 1874-1881.	1.1	10
42	Maxwell equation simulations of coherent optical photon emission from shock waves in crystals. Physical Review E, 2007, 75, 056611.	0.8	8
43	Electrically Conductive Copper Coreâ€“Shell Nanowires through Benzenethiol-Directed Assembly. Nano Letters, 2018, 18, 4900-4907.	4.5	8
44	L1 Regularization-Based Model Reduction of Complex Chemistry Molecular Dynamics for Statistical Learning of Kinetic Monte Carlo Models. MRS Advances, 2016, 1, 1767-1772.	0.5	7
45	Microscopic Origins of the Variability of Water Contact Angle with Adsorbed Contaminants on Layered Materials. Journal of Physical Chemistry C, 2018, 122, 18520-18527.	1.5	7
46	Novel Ultrabright and Airâ€Stable Photocathodes Discovered from Machine Learning and Density Functional Theory Driven Screening. Advanced Materials, 2021, 33, e2104081.	11.1	7
47	ODE integration schemes for plane-wave real-time time-dependent density functional theory. Journal of Chemical Physics, 2019, 150, 014101.	1.2	6
48	Rapid data-driven model reduction of nonlinear dynamical systems including chemical reaction networks using â„“1-regularization. Chaos, 2020, 30, 053122.	1.0	5
49	Data-centric framework for crystal structure identification in atomistic simulations using machine learning. Physical Review Materials, 2022, 6, .	0.9	5
50	Atomic-Level Features for Kinetic Monte Carlo Models of Complex Chemistry from Molecular Dynamics Simulations. Journal of Physical Chemistry A, 2021, 125, 4233-4244.	1.1	4
51	Backwards Doppler shifts. Nature Photonics, 2011, 5, 199-200.	15.6	3
52	Piezoelectricity in Monolayers and Bilayers of Inorganic Two-Dimensional Crystals. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	3
53	Two low-expansion Li-ion cathode materials with promising multi-property performance. MRS Bulletin, 0, , 1.	1.7	2
54	Simulations of Shocked Methane Including Self-consistent Semiclassical Quantum Nuclear Effects. Materials Research Society Symposia Proceedings, 2013, 1582, 1.	0.1	1

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55	Optical Characterization of Shock-Induced Chemistry in the Explosive Nitromethane using DFT and Time-Dependent DFT. Materials Research Society Symposia Proceedings, 2013, 1582, 1.	0.1	0
56	Novel Ultrabright and Airâ€Stable Photocathodes Discovered from Machine Learning and Density Functional Theory Driven Screening (Adv. Mater. 44/2021). Advanced Materials, 2021, 33, 2170348.	11.1	0