

Bryan R Goldsmith

List of Publications by Year in descending order

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Version: 2024-02-01

44
papers

3,198
citations

304743

22
h-index

289244

40
g-index

45
all docs

45
docs citations

45
times ranked

4301
citing authors

#	ARTICLE	IF	CITATIONS
1	New tolerance factor to predict the stability of perovskite oxides and halides. <i>Science Advances</i> , 2019, 5, eaav0693.	10.3	778
2	Activity and Selectivity Trends in Electrocatalytic Nitrate Reduction on Transition Metals. <i>ACS Catalysis</i> , 2019, 9, 7052-7064.	11.2	369
3	Machine learning for heterogeneous catalyst design and discovery. <i>AIChE Journal</i> , 2018, 64, 2311-2323.	3.6	258
4	A Cu ₂₅ Nanocluster with Partial Cu(0) Character. <i>Journal of the American Chemical Society</i> , 2015, 137, 13319-13324.	13.7	234
5	Surpassing the single-atom catalytic activity limit through paired Pt-O-Pt ensemble built from isolated Pt1 atoms. <i>Nature Communications</i> , 2019, 10, 3808.	12.8	225
6	Beyond Ordered Materials: Understanding Catalytic Sites on Amorphous Solids. <i>ACS Catalysis</i> , 2017, 7, 7543-7557.	11.2	134
7	Interpretable machine learning for knowledge generation in heterogeneous catalysis. <i>Nature Catalysis</i> , 2022, 5, 175-184.	34.4	127
8	Solvent-Free Conversion of Linalool to Methylcyclopentadiene Dimers: A Route To Renewable High-Density Fuels. <i>ChemSusChem</i> , 2011, 4, 465-469.	6.8	110
9	Increasing electrocatalytic nitrate reduction activity by controlling adsorption through PtRu alloying. <i>Journal of Catalysis</i> , 2021, 395, 143-154.	6.2	94
10	Role of Electrocatalysis in the Remediation of Water Pollutants. <i>ACS Catalysis</i> , 2020, 10, 3365-3371.	11.2	88
11	Uncovering structure-property relationships of materials by subgroup discovery. <i>New Journal of Physics</i> , 2017, 19, 013031.	2.9	77
12	Theory-Guided Machine Learning Finds Geometric Structure-Property Relationships for Chemisorption on Subsurface Alloys. <i>CheM</i> , 2020, 6, 3100-3117.	11.7	65
13	Inorganic Halide Double Perovskites with Optoelectronic Properties Modulated by Sublattice Mixing. <i>Journal of the American Chemical Society</i> , 2020, 142, 5135-5145.	13.7	62
14	Synthesis and Characterization of a Cu ₁₄ Hydride Cluster Supported by Neutral Donor Ligands. <i>Chemistry - A European Journal</i> , 2015, 21, 5341-5344.	3.3	60
15	CO- and NO-Induced Disintegration and Redispersion of Three-Way Catalysts Rhodium, Palladium, and Platinum: An ab Initio Thermodynamics Study. <i>Journal of Physical Chemistry C</i> , 2014, 118, 9588-9597.	3.1	56
16	Rate-Enhancing Roles of Water Molecules in Methyltrioxorhenium-Catalyzed Olefin Epoxidation by Hydrogen Peroxide. <i>Journal of the American Chemical Society</i> , 2015, 137, 9604-9616.	13.7	42
17	Isolated catalyst sites on amorphous supports: A systematic algorithm for understanding heterogeneities in structure and reactivity. <i>Journal of Chemical Physics</i> , 2013, 138, 204105.	3.0	41
18	Two-to-three dimensional transition in neutral gold clusters: The crucial role of van der Waals interactions and temperature. <i>Physical Review Materials</i> , 2019, 3, .	2.4	40

#	ARTICLE	IF	CITATIONS
19	Adsorption Energies of Oxygenated Aromatics and Organics on Rhodium and Platinum in Aqueous Phase. <i>ACS Catalysis</i> , 2020, 10, 4929-4941.	11.2	37
20	V^{2+}/V^{3+} Redox Kinetics on Glassy Carbon in Acidic Electrolytes for Vanadium Redox Flow Batteries. <i>ACS Energy Letters</i> , 2019, 4, 2368-2377.	17.4	36
21	Nanocluster and single-atom catalysts for thermocatalytic conversion of CO and CO_2 . <i>Catalysis Science and Technology</i> , 2020, 10, 5772-5791.	4.1	32
22	Synthesis and characterization of electrodeposited permalloy (Ni ₈₀ Fe ₂₀)/Cu multilayered nanowires. <i>Journal of Magnetism and Magnetic Materials</i> , 2010, 322, 3876-3881.	2.3	25
23	Identifying consistent statements about numerical data with dispersion-corrected subgroup discovery. <i>Data Mining and Knowledge Discovery</i> , 2017, 31, 1391-1418.	3.7	23
24	Uncovering electronic and geometric descriptors of chemical activity for metal alloys and oxides using unsupervised machine learning. <i>Chem Catalysis</i> , 2021, 1, 923-940.	6.1	22
25	Water-Catalyzed Activation of H_2O_2 by Methyltrioxorhenium: A Combined Computational-Experimental Study. <i>Inorganic Chemistry</i> , 2013, 52, 13904-13917.	4.0	20
26	Accelerating the structure search of catalysts with machine learning. <i>Current Opinion in Chemical Engineering</i> , 2022, 35, 100771.	7.8	20
27	Nitrogen-doped graphene layers for electrochemical oxygen reduction reaction boosted by lattice strain. <i>Journal of Catalysis</i> , 2019, 378, 113-120.	6.2	19
28	Comparing electrocatalytic and thermocatalytic conversion of nitrate on platinum-ruthenium alloys. <i>Catalysis Science and Technology</i> , 2021, 11, 7098-7109.	4.1	18
29	Structures and Free Energies of Cerium Ions in Acidic Electrolytes. <i>Inorganic Chemistry</i> , 2020, 59, 12552-12563.	4.0	14
30	Electrocatalytic nitrate reduction on rhodium sulfide compared to Pt and Rh in the presence of chloride. <i>Catalysis Science and Technology</i> , 2021, 11, 7331-7346.	4.1	13
31	Rhodium Single-Atom Catalysts on Titania for Reverse Water Gas Shift Reaction Explored by First Principles Mechanistic Analysis and Compared to Nanoclusters. <i>ChemCatChem</i> , 2021, 13, 3155-3164.	3.7	10
32	The Effect of Anion Bridging on Heterogeneous Charge Transfer for V^{2+}/V^{3+} . <i>Cell Reports Physical Science</i> , 2021, 2, 100307.	5.6	9
33	Synthesis and Micropatterning of Photocatalytically Reactive Self-Assembled Monolayers Covalently Linked to Si(100) Surfaces via a Si-C Bond. <i>Langmuir</i> , 2012, 28, 16156-16166.	3.5	7
34	Explaining the structure sensitivity of Pt and Rh for aqueous-phase hydrogenation of phenol. <i>Journal of Chemical Physics</i> , 2022, 156, 104703.	3.0	7
35	Why halides enhance heterogeneous metal ion charge transfer reactions. <i>Chemical Science</i> , 2021, 12, 12704-12710.	7.4	6
36	Perovskite oxynitrides as tunable materials for electrocatalytic nitrogen reduction to ammonia. <i>Trends in Chemistry</i> , 2021, 3, 694-696.	8.5	6

#	ARTICLE	IF	CITATIONS
37	Recent advances in computational materials design: methods, applications, algorithms, and informatics. <i>Journal of Materials Science</i> , 2022, 57, 10471-10474.	3.7	6
38	CHAPTER 9. Understanding Reactivity with Reduced Potential Energy Landscapes: Recent Advances and New Directions. <i>RSC Theoretical and Computational Chemistry Series</i> , 0, , 213-232.	0.7	4
39	Template Assisted Growth and Characterization of Electrodeposited Permalloy(Ni ₈₀ Fe ₂₀)/Cu Multilayered Nanowires. <i>ECS Transactions</i> , 2010, 25, 97-103.	0.5	2
40	Increasing Electrocatalytic Nitrate Reduction Performance By Tuning Adsorption through PtRu Alloying. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 3267-3267.	0.0	1
41	Probing the Influence of Anions on Charge Transfer in Redox Couples for Flow Battery Applications. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 212-212.	0.0	0
42	A Proposed Mechanism for the Cerium Electron Transfer for Use in RFB Applications. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 211-211.	0.0	0
43	(Invited) Probing the Reaction Mechanism of the Electrocatalytic Reduction of Nitrate. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 1553-1553.	0.0	0
44	Structures and Free Energies of Cerium Ions in Acidic Electrolytes and Structures of Electrolyte-Electrode Interfaces to Inform Kinetic Performance in Redox Flow Battery Applications. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 714-714.	0.0	0