Christopher J Bartel

List of Publications by Year
in descending order

32 papers	2,296 citations	361413 20 h-index	434195 31 g-index
41 all docs	41 docs citations	41 times ranked	3017 citing authors

#	Article	IF	Citations
1	New tolerance factor to predict the stability of perovskite oxides and halides. Science Advances, 2019, 5, eaav0693.	10.3	778
2	A map of the inorganic ternary metal nitrides. Nature Materials, 2019, 18, 732-739.	27.5	274
3	Machine learning for heterogeneous catalyst design and discovery. AIChE Journal, 2018, 64, 2311-2323.	3.6	258
4	Physical descriptor for the Gibbs energy of inorganic crystalline solids and temperature-dependent materials chemistry. Nature Communications, 2018, 9, 4168.	12.8	152
5	A critical examination of compound stability predictions from machine-learned formation energies. Npj Computational Materials, 2020, 6, .	8.7	119
6	The role of decomposition reactions in assessing first-principles predictions of solid stability. Npj Computational Materials, 2019, 5, .	8.7	63
7	Inorganic Halide Double Perovskites with Optoelectronic Properties Modulated by Sublattice Mixing. Journal of the American Chemical Society, 2020, 142, 5135-5145.	13.7	62
8	Toward autonomous design and synthesis of novel inorganic materials. Materials Horizons, 2021, 8, 2169-2198.	12.2	61
9	Redox-Mediated Stabilization in Zinc Molybdenum Nitrides. Journal of the American Chemical Society, 2018, 140, 4293-4301.	13.7	53
10	Observing and Modeling the Sequential Pairwise Reactions that Drive Solidâ€State Ceramic Synthesis. Advanced Materials, 2021, 33, e2100312.	21.0	51
11	Synthetic accessibility and stability rules of NASICONs. Nature Communications, 2021, 12, 5752.	12.8	47
12	Probabilistic Deep Learning Approach to Automate the Interpretation of Multi-phase Diffraction Spectra. Chemistry of Materials, 2021, 33, 4204-4215.	6.7	45
13	Review of computational approaches to predict the thermodynamic stability of inorganic solids. Journal of Materials Science, 2022, 57, 10475-10498.	3.7	39
14	Computational investigation of chalcogenide spinel conductors for all-solid-state Mg batteries. Chemical Communications, 2020, 56, 1952-1955.	4.1	31
15	Performance comparison of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi>r</mml:mi></mml:mrow><mml:mn>2</m and SCAN metaGGA density functionals for solid materials via an automated, high-throughput computational workflow. Physical Review Materials, 2022, 6, .	2.4	31
16	Selective metathesis synthesis of MgCr₂S₄ by control of thermodynamic driving forces. Materials Horizons, 2020, 7, 1310-1316.	12.2	27
17	Kinetically Controlled Low-Temperature Solid-State Metathesis of Manganese Nitride Mn₃N₂. Chemistry of Materials, 2019, 31, 7248-7254.	6.7	26
18	Operando X-ray Diffraction Studies of the Mg-Ion Migration Mechanisms in Spinel Cathodes for Rechargeable Mg-Ion Batteries. Journal of the American Chemical Society, 2021, 143, 10649-10658.	13.7	24

#	Article	IF	Citations
19	Aluminum Nitride Hydrolysis Enabled by Hydroxyl-Mediated Surface Proton Hopping. ACS Applied Materials & Interfaces, 2016, 8, 18550-18559.	8.0	21
20	High-Throughput Equilibrium Analysis of Active Materials for Solar Thermochemical Ammonia Synthesis. ACS Applied Materials & Interfaces, 2019, 11, 24850-24858.	8.0	21
21	Highâ€Throughput Analysis of Materials for Chemical Looping Processes. Advanced Energy Materials, 2020, 10, 2000685.	19.5	18
22	Characterization of products derived from the high temperature flash pyrolysis of microalgae and rice hulls. Chemical Engineering Science, 2019, 196, 527-537.	3.8	15
23	Toward the Development of a High-Voltage Mg Cathode Using a Chromium Sulfide Host. , 2021, 3, 1213-1220.		12
24	Intercalation of Ca into a Highly Defective Manganese Oxide at Room Temperature. Chemistry of Materials, 2022, 34, 836-846.	6.7	10
25	Helium interactions with alumina formed by atomic layer deposition show potential for mitigating problems with excess helium in spent nuclear fuel. Journal of Nuclear Materials, 2018, 499, 301-311.	2.7	8
26	Particle atomic layer deposition of alumina for sintering yttriaâ€stabilized cubic zirconia. Journal of the American Ceramic Society, 2019, 102, 2283-2293.	3.8	8
27	First-principles study of CaB₁₂H₁₂ as a potential solid-state conductor for Ca. Physical Chemistry Chemical Physics, 2020, 22, 27600-27604.	2.8	8
28	Layered Transition Metal Oxides as Ca Intercalation Cathodes: A Systematic Firstâ€Principles Evaluation. Advanced Energy Materials, 2021, 11, 2101698.	19.5	8
29	Data-centric approach to improve machine learning models for inorganic materials. Patterns, 2021, 2, 100382.	5.9	7
30	Solid-State Calcium-Ion Diffusion in Ca_{1.5}Ba_{0.5}Si₅O₃N₆. Chemistry of Materials, 2022, 34, 128-139.	6.7	7
31	Expanding the Ambient-Pressure Phase Space of CaFe₂O₄-Type Sodium Postspinel Hostâ€"Guest Compounds. ACS Organic & Inorganic Au, 2022, 2, 8-22.	4.0	5
32	Hydrolysis protection and sintering of aluminum nitride powders with yttria nanofilms. Journal of the American Ceramic Society, 0, , .	3.8	4