Theodore M Besmann

List of Publications by Year
in descending order

36	500	933447 10	713466 21
papers	citations	h-index	g-index

38	38	38	452
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hierarchical Materials as Tailored Nuclear Waste Forms: A Perspective. Chemistry of Materials, 2018, 30, 4475-4488.	6.7	98
2	Thermochemical Modeling of Oxide Glasses. Journal of the American Ceramic Society, 2002, 85, 2887-2894.	3.8	90
3	Versatile Uranyl Germanate Framework Hosting 12 Different Alkali Halide 1D Salt Inclusions. Inorganic Chemistry, 2018, 57, 11606-11615.	4.0	29
4	Uranium nitride-silicide advanced nuclear fuel: higher efficiency and greater safety. Advances in Applied Ceramics, 2018, 117, s76-s81.	1.1	26
5	Observation of an Unusual Uranyl Cationâ€"Cation Interaction in the Strongly Fluorescent Layered Uranyl Phosphates Rb₆[(UO₂)₇O₄(PO₄)₄] and Cs₆[(UO₂)₇O₄(PO₄)₄].	4.0	24
6	A Family of Layered Phosphates Crystallizing in a Rare Geometrical Isomer of the Phosphuranylite Topology: Synthesis, Characterization, and Computational Modeling of A₄[(UO₂)₃O₂(PO₄)₂] (A =) Tj ETQq0 0 0 rgBT /Overlock	4.0	20
7	Na₂(UO₂)(BO₃): An All-Uranium(V) Borate Synthesized under Mild Hydrothermal Conditions. Inorganic Chemistry, 2018, 57, 4244-4247.	4.0	14
8	NaGaS 2 : An Elusive Layered Compound with Dynamic Water Absorption and Wideâ€Ranging Ionâ€Exchange Properties. Angewandte Chemie - International Edition, 2020, 59, 10836-10841.	13.8	14
9	Observation of the Same New Sheet Topology in Both the Layered Uranyl Oxide-Phosphate Cs11[(UO2)12(PO4)3O13] and the Layered Uranyl Oxyfluoride-Phosphate Rb11[(UO2)12(PO4)3O12F2] Prepared by Flux Crystal Growth. Frontiers in Chemistry, 2019, 7, 583.	3.6	12
10	Exploring the links between crystal chemistry, cesium retention, thermochemistry and chemical durability in single-phase (Ba,Cs)1.33(Fe,Ti)8O16 hollandite. Journal of Materials Science, 2020, 55, 6401-6416.	3.7	12
11	Flux crystal growth of uranium(<scp>v</scp>) containing oxyfluoride perovskites. Inorganic Chemistry Frontiers, 2019, 6, 3203-3214.	6.0	11
12	Understanding the interface interaction between U3Si2 fuel and SiC cladding. Nature Communications, 2020, 11, 2621.	12.8	11
13	Correlational Approach to Predict the Enthalpy of Mixing for Chloride Melt Systems. ACS Omega, 2022, 7, 362-371.	3.5	11
14	Polymorphism and Molten Nitrate Salt-Assisted Single Crystal to Single Crystal Ion Exchange in the Cesium Ferrogermanate Zeotype: CsFeGeO₄. Inorganic Chemistry, 2020, 59, 9699-9709.	4.0	10
15	Developing Practical Models of Complex Salts for Molten Salt Reactors. Thermo, 2021, 1, 168-178.	1.3	10
16	Communication: First-principles evaluation of alkali ion adsorption and ion exchange in pure silica LTA zeolite. Journal of Chemical Physics, 2018, 149, 131102.	3.0	9
17	New germanate and mixed cobalt germanate salt inclusion materials: [(Rb6F)(Rb4F)][Ge14O32] and [(Rb6F)(Rb3.1Co0.9F0.96)][Co3.8Ge10.2O30F2]. CrystEngComm, 2020, 22, 8072-8080.	2.6	9
18	Understanding the Stability of Salt-Inclusion Phases for Nuclear Waste-forms through Volume-based Thermodynamics. Scientific Reports, 2018, 8, 15294.	3.3	8

#	Article	IF	Citations
19	Complex cobalt silicates and germanates crystallizing in a porous three-dimensional framework structure. CrystEngComm, 2020, 22, 1112-1119.	2.6	8
20	Discovery of Cs₂(UO₂)Al₂O₅ by Molten Flux Methods: A Uranium Aluminate Containing Solely Aluminate Tetrahedra as the Secondary Building Unit. Inorganic Chemistry, 2019, 58, 4099-4102.	4.0	7
21	Crystallization of A₃Ln(BO₃)₂ (A = Na, K; Ln = Lanthanide) from a Boric Acid Containing Hydroxide Melt: Synthesis and Investigation of Lanthanide Borates as Potential Nuclear Waste Forms. Inorganic Chemistry, 2022, 61, 11232-11242.	4.0	7
22	Thermodynamic assessment of the hollandite highâ€level radioactive waste form. Journal of the American Ceramic Society, 2019, 102, 6284-6297.	3.8	6
23	Understanding the Polymorphism of A₄[(UO₂)₃(PO₄)₂O₂] (A =) Tj ETQq1 1 0.784314 rgBT /O	3.8	6
24	New Rubidium-Containing Mixed-Metal Titanium Hollandites. Crystal Growth and Design, 2020, 20, 2398-2405.	3.0	6
25	Alkaline earth ion exchange study of pure silica LTA zeolites using periodic first-principles calculations. New Journal of Chemistry, 2019, 43, 16835-16840.	2.8	5
26	Targeting complex plutonium oxides by combining crystal chemical reasoning with density-functional theory calculations: the quaternary plutonium oxide Cs2PuSi6O15. Chemical Communications, 2020, 56, 9501-9504.	4.1	5
27	The effect of cesium content on the thermodynamic stability and chemical durability of (Ba , Cs) 1.33 (Al,Ti) 8 O 16 hollandite. Journal of the American Ceramic Society, 2020, 103, 7310-7321.	3.8	5
28	Dimensional reduction upon calcium incorporation in Cs_{0.3}(Ca_{0.3}Ln_{0.7})PS₄ and Cs_{0.5}(Ca_{0.5}Ln_{0.5})PS₄. CrystEngComm, 2021, 23, 831-840.	2.6	5
29	In Situ Determination of Speciation and Local Structure of NaClâ€“SrCl₂ and LiFâ€“ZrF₄ Molten Salts. Journal of Physical Chemistry B, 2022, 126, 1539-1550.	2.6	5
30	NaGaS₂: An Elusive Layered Compound with Dynamic Water Absorption and Wideâ€Ranging Ionâ€Exchange Properties. Angewandte Chemie, 2020, 132, 10928-10933.	2.0	4
31	Interplay between London Dispersion, Hubbard U, and Metastable States for Uranium Compounds. Journal of Physical Chemistry A, 2021, 125, 2791-2799.	2.5	4
32	Luminescence and Scintillation in the Niobium Doped Oxyfluoride Rb4Ge5O9F6:Nb. Inorganics, 2022, 10, 83.	2.7	4
33	Durable Crâ€substituted (Ba,Cs)_{1.33}(Cr,Ti)₈O₁₆ hollandite waste forms with high Cs loading. Journal of the American Ceramic Society, 2022, 105, 4564-4576.	3.8	3
34	Structure and stability of alkali gallates structurally reminiscent of hollandite. Journal of the American Ceramic Society, 2020, 103, 6531-6542.	3.8	1
35	Salt-flux synthesis, crystal structure and theoretical characterization of Rb0.74Ga6.62Ti0Â·38O11. Solid State Sciences, 2020, 109, 106394.	3.2	0
36	Modeling Metallic Halide Local Structures in Salt Melts Using a Genetic Algorithm. Journal of Physical Chemistry C, 0, , .	3.1	0