Matt Beekman

List of Publications by Year
in descending order

64	2,023	304743	243625
papers	citations	22 h-index	44 g-index

70	70	70	2156
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermoelectrics: From history, a window to the future. Materials Science and Engineering Reports, 2019, 138, 100501.	31.8	341
2	Better thermoelectrics through glass-like crystals. Nature Materials, 2015, 14, 1182-1185.	27.5	212
3	Inorganic clathrate-II materials of group 14: synthetic routes and physical properties. Journal of Materials Chemistry, 2008, 18, 842-851.	6.7	176
4	Thermal conductivity of elemental crystalline silicon clathrate Si136. Applied Physics Letters, 2003, 82, 910-912.	3.3	98
5	Preparation and Crystal Growth of Na₂₄Si₁₃₆. Journal of the American Chemical Society, 2009, 131, 9642-9643.	13.7	91
6	Inorganic Crystals with Glassâ€Like and Ultralow Thermal Conductivitiesâ€. Crystal Research and Technology, 2017, 52, 1700114.	1.3	66
7	Characterization of delafossite-type CuCoO2 prepared by ion exchange. Journal of Alloys and Compounds, 2010, 489, 336-338.	5.5	55
8	Framework Contraction in Na-Stuffed Si(cF136). Inorganic Chemistry, 2010, 49, 5338-5340.	4.0	52
9	Simple Approach for Selective Crystal Growth of Intermetallic Clathrates. Chemistry of Materials, 2011, 23, 1491-1495.	6.7	52
10	Synthesis, Structure, and Properties of Turbostratically Disordered (PbSe)_{1.18}(TiSe₂)₂. Chemistry of Materials, 2013, 25, 2404-2409.	6.7	51
11	Synthesis and thermal conductivity of type II silicon clathrates. Physica B: Condensed Matter, 2006, 383, 111-114.	2.7	50
12	Ferecrystals: non-epitaxial layered intergrowths. Semiconductor Science and Technology, 2014, 29, 064012.	2.0	50
13	In-plane thermal and thermoelectric properties of misfit-layered [(PbSe)0.99]x(WSe2)x superlattice thin films. Applied Physics Letters, 2010, 96, .	3.3	38
14	Zintl Phases as Reactive Precursors for Synthesis of Novel Silicon and Germanium-Based Materials. Materials, 2019, 12, 1139.	2.9	38
15	Synthesis and single-crystal X-ray diffraction studies of new framework substituted type II clathrates, Cs8Na16AgxGe136â^'x (x<7). Journal of Solid State Chemistry, 2007, 180, 1076-1082.	2.9	33
16	Controlling Sizeâ€Induced Phase Transformations Using Chemically Designed Nanolaminates. Angewandte Chemie - International Edition, 2013, 52, 13211-13214.	13.8	33
17	Inâ€plane structure of ferecrystalline compounds. Crystal Research and Technology, 2015, 50, 464-472.	1.3	32
18	Telluride Misfit Layer Compounds: [(PbTe)_{1.17}]_m(TiTe₂)_n. Angewandte Chemie - International Edition, 2014, 53, 5672-5675.	13.8	30

#	Article	IF	Citations
19	Structure of Turbostratically Disordered Misfit Layer Compounds [(PbSe)_{0.99}]₁[WSe₂]₁, [(PbSe)_{1.00}]₁[MoSe₂]₁, and [(SnSe)_{1.03}]₁[MoSe₂]₁. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2012, 638, 2633-2639.	1.2	27
20	New Layered Intergrowths in the Sn-Mo-Se System. Journal of Electronic Materials, 2012, 41, 1476-1480.	2.2	27
21	Clathrates and beyond: Low-density allotropy in crystalline silicon. Applied Physics Reviews, 2016, 3, .	11.3	24
22	Synthesis and Thermal Properties of Solid-State Structural Isomers: Ordered Intergrowths of SnSe and MoSe₂. Journal of the American Chemical Society, 2015, 137, 8803-8809.	13.7	23
23	Synthesis and crystal structure of Na1â^'xGe3+z: a novel zeolite-like framework phase in the Naâ€“Ge system. Chemical Communications, 2007, , 837-839.	4.1	22
24	Synthesis, Crystal Structure, and Transport Properties of Na22Si136. Journal of Electronic Materials, 2009, 38, 1136.	2.2	22
25	Synthesis and characterization of framework-substituted Cs8Na16Cu5Ge131. Journal of Alloys and Compounds, 2009, 470, 365-368.	5.5	22
26	Structural and electrical properties of (PbSe)_{1Â·16}TiSe₂. Emerging Materials Research, 2012, 1, 292-298.	0.7	22
27	Precursor Routes to Complex Ternary Intermetallics: Single-Crystal and Microcrystalline Preparation of Clathrate-I Na₈Al₈Si₃₈ from NaSi + NaAlSi. Inorganic Chemistry, 2015, 54, 5316-5321.	4.0	21
28	Estimating Energy Conversion Efficiency of Thermoelectric Materials: Constant Property Versus Average Property Models. Journal of Electronic Materials, 2017, 46, 6-13.	2.2	21
29	Transport Properties of the Binary Type I Clathrate K₈Ge₄₄â–¡₂. International Journal of Applied Ceramic Technology, 2007, 4, 332-338.	2.1	20
30	Probing the Effects of Alloying, Grain Size, and Turbostratic Disorder on Thermal Conductivity. Science of Advanced Materials, 2011, 3, 639-645.	0.7	19
31	Tunable dielectric thin films by aqueous, inorganic solution-based processing. Solid State Sciences, 2011, 13, 2037-2040.	3.2	18
32	Influence of selenium vapor postannealing on the electrical transport properties of PbSeâ€“WSe₂ nanolaminates. Journal of Materials Research, 2011, 26, 1866-1871.	2.6	18
33	New hopes for allotropes. Materials Today, 2015, 18, 304-305.	14.2	18
34	A study of low-energy guest phonon modes in clathrate-II Na_xSi₁₃₆(x= 3, 23, and 24). Journal of Physics Condensed Matter, 2010, 22, 355401.	1.8	15
35	Inorganic Clathrates for Thermoelectric Applications. Springer Series in Materials Science, 2014, , 169-191.	0.6	15
36	Raman Spectroscopy Insights into the Size-Induced Structural Transformation in SnSe Nanolayers. Langmuir, 2014, 30, 8209-8214.	3.5	14

#	Article	IF	Citations
37	Influence of composition and processing parameters on the properties of solution-processed aluminum phosphate oxide (AlPO) thin films. Solid State Sciences, 2016, 55, 8-12.	3.2	14
38	Local structure of Cu in Cs8Na16Cu5Ge131 type II clathrate. Journal of Solid State Chemistry, 2009, 182, 107-114.	2.9	12
39	Structure and thermal conductivity of Na1â^'Ge3+. Journal of Solid State Chemistry, 2010, 183, 1272-1277.	2.9	11
40	Synthesis, structure, and thermal conductivity of [(SnSe)_{1 + y}]_n[MoSe₂]_n compounds. Semiconductor Science and Technology, 2014, 29, 124007.	2.0	11
41	High-temperature thermal conductivity of thermoelectric clathrates. Journal of Applied Physics, 2017, 121, .	2.5	10
42	Open-Structured Materials: Skutterudites and Clathrates. Journal of Electronic Materials, 2009, 38, 1052-1055.	2.2	8
43	X-ray absorption spectroscopy studies of local structure and electronic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Na</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:msub> xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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55	New Compounds Consisting of Turbostratic Intergrowths: Ultra-low Thermal Conductivities and Tunable Electric Properties. Materials Research Society Symposia Proceedings, 2011, 1329, 1.	0.1	3
56	Synthesis of four new members of the (PbSe)<inf>1.16</inf>(TiSe<inf>2</inf>)<inf>n</inf> (n = 1, 2, 3, and 4) Family of ferecrystals. , 2011, , .		2
57	Confined lattice dynamics of single and quadruple SnSe bilayers in [(SnSe)_{1.04}]_m[MoSe₂]_nferecrystals. Nanoscale, 2016, 8, 856-861.	5.6	2
58	Comparison of Predicted Thermoelectric Energy Conversion Efficiency by Cumulative Properties and Reduced Variables Approaches. Journal of Electronic Materials, 2018, 47, 3085-3090.	2.2	2
59	Potential error from using ZT to optimize thermoelectric performance. AIP Advances, 2021, 11, .	1.3	2
60	Synthetic Approaches to Intermetallic Clathrates. Springer Series in Materials Science, 2014, , 65-90.	0.6	2
61	Thermal and mechanical properties of the clathrate-II <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Na</mml:mi><mml:mn>24</mml:mn></mml:msub></mml:mrow></mml:math> Physical Review B, 2022, 105, .	3.24	2
62	Synthesis and Characterization of Bulk and Thin Film Clathrates for Solid State Power Conversion Applications. , 2006, , .		1
63	Methods of Electron Crystallography as Tools for Materials Analysis. Solid State Phenomena, 0, 186, 1-6.	0.3	1
64	Material considerations for thermoelectric enhancement via modulation doping. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	1