Zachary M Gibbs

List of Publications by Year
in descending order

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32 papers	5,832 citations	186265 28 h-index	395702 33 g-index
36 all docs	36 docs citations	36 times ranked	4764 citing authors

#	Article	IF	Citations
1	Characterization of Lorenz number with Seebeck coefficient measurement. APL Materials, 2015, 3, .	5.1	1,236
2	Thinking Like a Chemist: Intuition in Thermoelectric Materials. Angewandte Chemie - International Edition, 2016, 55, 6826-6841.	13.8	639
3	Convergence of multi-valley bands as the electronic origin of high thermoelectric performance in CoSb3 skutterudites. Nature Materials, 2015, 14, 1223-1228.	27.5	587
4	Optimum Carrier Concentration in nâ€Type PbTe Thermoelectrics. Advanced Energy Materials, 2014, 4, 1400486.	19.5	348
5	Engineering half-Heusler thermoelectric materials using Zintl chemistry. Nature Reviews Materials, 2016, 1, .	48.7	340
6	Optimization of thermoelectric efficiency in SnTe: the case for the light band. Physical Chemistry Chemical Physics, 2014, 16, 20741-20748.	2.8	230
7	Thermopower enhancement in Pb1âˆ’xMnxTe alloys and its effect on thermoelectric efficiency. NPG Asia Materials, 2012, 4, e28-e28.	7.9	214
8	Tuning bands of PbSe for better thermoelectric efficiency. Energy and Environmental Science, 2014, 7, 804-811.	30.8	214
9	Understanding thermoelectric properties from high-throughput calculations: trends, insights, and comparisons with experiment. Journal of Materials Chemistry C, 2016, 4, 4414-4426.	5.5	193
10	Optical band gap and the Burstein–Moss effect in iodine doped PbTe using diffuse reflectance infrared Fourier transform spectroscopy. New Journal of Physics, 2013, 15, 075020.	2.9	188
11	Band gap estimation from temperature dependent Seebeck measurementâ€”Deviations from the 2e|S|maxTmax relation. Applied Physics Letters, 2015, 106, .	3.3	181
12	High thermoelectric performance in (Bi0.25Sb0.75)2Te3 due to band convergence and improved by carrier concentration control. Materials Today, 2017, 20, 452-459.	14.2	151
13	Effective mass and Fermi surface complexity factor from ab initio band structure calculations. Npj Computational Materials, 2017, 3, .	8.7	145
14	Temperature dependent band gap in PbX (X‰=‰S, Se, Te). Applied Physics Letters, 2013, 103, .	3.3	140
15	Influence of a Nano Phase Segregation on the Thermoelectric Properties of the p-Type Doped Stannite Compound Cu_{2+x}Zn_{1–x}GeSe₄. Journal of the American Chemical Society, 2012, 134, 7147-7154.	13.7	129
16	Thermoelectric properties of Sn-doped p-type Cu₃SbSe₄: a compound with large effective mass and small band gap. Journal of Materials Chemistry A, 2014, 2, 13527-13533.	10.3	112
17	Computational and experimental investigation of TmAgTe₂and XYZ₂compounds, a new group of thermoelectric materials identified by first-principles high-throughput screening. Journal of Materials Chemistry C, 2015, 3, 10554-10565.	5.5	99
18	Resolving the true band gap of ZrNiSn half-Heusler thermoelectric materials. Materials Horizons, 2015, 2, 68-75.	12.2	99

#	Article	IF	Citations
19	Influence of the Triel Elements (M = Al, Ga, In) on the Transport Properties of Ca₅M₂Sb₆ Zintl Compounds. Chemistry of Materials, 2012, 24, 2091-2098.	6.7	90
20	Heterogeneous Distribution of Sodium for High Thermoelectric Performance of pâ€type Multiphase Leadâ€Chalcogenides. Advanced Energy Materials, 2015, 5, 1501047.	19.5	63
21	Band convergence in the non-cubic chalcopyrite compounds Cu₂MGeSe₄. Journal of Materials Chemistry C, 2014, 2, 10189-10194.	5.5	57
22	Thermoelectric Enhancement in BaGa₂Sb₂ by Zn Doping. Chemistry of Materials, 2015, 27, 1622-1630.	6.7	53
23	YCuTe₂: a member of a new class of thermoelectric materials with CuTe₄-based layered structure. Journal of Materials Chemistry A, 2016, 4, 2461-2472.	10.3	52
24	Chemical composition tuning in quaternary p-type Pb-chalcogenides â€“ a promising strategy for enhanced thermoelectric performance. Physical Chemistry Chemical Physics, 2014, 16, 1835-1840.	2.8	48
25	Synthesis, Structural Characterization, and Physical Properties of the Type-I Clathrates A8Zn18As28 (A) Tj ETQq1 1 0.784314 rgBT /O	6.7	38
26	Thermoelectric performance of co-doped SnTe with resonant levels. Applied Physics Letters, 2016, 109, .	3.3	36
27	Denken wie ein Chemiker: Thermoelektrika intuitiv. Angewandte Chemie, 2016, 128, 6938-6954.	2.0	33
28	A new crystal: layer-structured rhombohedral In3Se4. CrystEngComm, 2014, 16, 393-398.	2.6	31
29	Thermoelectric performance of tellurium-reduced quaternary p-type leadâ€“chalcogenide composites. Acta Materialia, 2014, 80, 365-372.	7.9	28
30	High temperature thermoelectric properties of Zn-doped Eu₅In₂Sb₆. Journal of Materials Chemistry C, 2015, 3, 10518-10524.	5.5	27
31	Enhanced thermoelectric properties of Sr5In2Sb6via Zn-doping. Journal of Materials Chemistry A, 2015, 3, 10289-10295.	10.3	21
32	Origin of resistivity anomaly in p-type leads chalcogenide multiphase compounds. AIP Advances, 2015, 5, 053601.	1.3	9