Gerda Rogl

List of Publications by Year
in descending order

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81 papers	3,569 citations	136950 32 h-index	133252 59 g-index
81 all docs	81 docs citations	81 times ranked	2392 citing authors

#	Article	IF	Citations
1	n-Type skutterudites (R,Ba,Yb)yCo4Sb12 (R=Sr, La, Mm, DD, SrMm, SrDD) approaching ZTâ‰ˆ2.0. Acta Materialia, 2014, 63, 30-43.	7.9	254
2	Mechanical properties of half-Heusler alloys. Acta Materialia, 2016, 107, 178-195.	7.9	235
3	Thermoelectric high ZT half-Heusler alloys Ti1âˆ’xâˆ’yZrxHfyNiSn (0Ââ‰¤Âxâ‰¤Â1; 0Ââ‰¤Âyâ‰¤Â1). Acta Materialia, 2016, 104, 210-222.	7.9	166
4	Skutterudites, a most promising group of thermoelectric materials. Current Opinion in Green and Sustainable Chemistry, 2017, 4, 50-57.	5.9	150
5	In-doped multifilled n-type skutterudites with ZT= 1.8. Acta Materialia, 2015, 95, 201-211.	7.9	146
6	Unconventional superconducting phase in the weakly correlated noncentrosymmetric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Mo</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msu Physical Review B, 2010, 82, .	3.2	121
7	Thermoelectric properties of novel skutterudites with didymium: DDy(Fe1âˆ’xCox)4Sb12 and DDy(Fe1âˆ’xNix)4Sb12. Intermetallics, 2010, 18, 57-64.	3.9	119
8	(V,Nb)-doped half Heusler alloys based on {Ti,Zr,Hf}NiSn with high ZT. Acta Materialia, 2017, 131, 336-348.	7.9	119
9	High-pressure torsion, a new processing route for thermoelectrics of high ZTs by means of severe plastic deformation. Acta Materialia, 2012, 60, 2146-2157.	7.9	117
10	Thermoelectric properties of a Mn substituted synthetic tetrahedrite. Physical Chemistry Chemical Physics, 2015, 17, 1716-1727.	2.8	117
11	A new generation of p-type didymium skutterudites with high ZT. Intermetallics, 2011, 19, 546-555.	3.9	115
12	Nanostructuring of p- and n-type skutterudites reaching figures of merit of approximately 1.3 and 1.6, respectively. Acta Materialia, 2014, 76, 434-448.	7.9	102
13	Mechanical Properties of Skutterudites. Science of Advanced Materials, 2011, 3, 517-538.	0.7	102
14	New bulk p-type skutterudites DD0.7Fe2.7Co1.3Sb12âˆ’X (X = Ge, Sn) reaching ZT > 1.3. Acta Materialia, 2015, 91, 227-238.	7.9	98
15	Thermoelectric properties of Co substituted synthetic tetrahedrite. Acta Materialia, 2015, 100, 266-274.	7.9	96
16	Multifilled nanocrystalline p-type didymium â€“ Skutterudites with ZT>1.2. Intermetallics, 2010, 18, 2435-2444.	3.9	93
17	Concepts for medium-high to high temperature thermoelectric heat-to-electricity conversion: a review of selected materials and basic considerations of module design. Translational Materials Research, 2015, 2, 025001.	1.2	93
18	Mechanical properties of filled antimonide skutterudites. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 170, 26-31.	3.5	92

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19	How nanoparticles can change the figure of merit, ZT, and mechanical properties of skutterudites. Materials Today Physics, 2017, 3, 48-69.	6.0	80
20	Thermal expansion of skutterudites. Journal of Applied Physics, 2010, 107, .	2.5	74
21	Effect of HPT processing on the structure, thermoelectric and mechanical properties of Sr0.07Ba0.07Yb0.07Co4Sb12. Journal of Alloys and Compounds, 2012, 537, 183-189.	5.5	71
22	On the Half-Heusler compounds Nb1-x{Ti,Zr,Hf}xFeSb: Phase relations, thermoelectric properties at low and high temperature, and mechanical properties. Acta Materialia, 2017, 135, 263-276.	7.9	61
23	Dependence of thermoelectric behaviour on severe plastic deformation parameters: A case study on p-type skutterudite DD0.60Fe3CoSb12. Acta Materialia, 2013, 61, 6778-6789.	7.9	59
24	Thermoelectric properties of p-type didymium (DD) based skutterudites DDy(Fe1â^'xNix)4Sb12 (0.13â©½xâ©½0.25,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td	5.5	52
25	Thermoelectric properties of Fe0.2Co3.8Sb12â^'xTex skutterudites. Acta Materialia, 2013, 61, 6698-6711.	7.9	47
26	Half-Heusler alloys: Enhancement of ZT after severe plastic deformation (ultra-low thermal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td	7.9	44
27	Thermal expansion of thermoelectric type-I-clathrates. Journal of Applied Physics, 2010, 108, .	2.5	43
28	Thermoelectric properties of In and I doped PbTe. Journal of Applied Physics, 2016, 120, .	2.5	37
29	Structural and physical properties of n-type skutterudite Ca0.07Ba0.23Co3.95Ni0.05Sb12. Intermetallics, 2010, 18, 394-398.	3.9	36
30	The half Heusler system Ti_{1+x}Fe_{1.33â^'x}Sbâ€“TiCoSb with Sb/Sn substitution: phase relations, crystal structures and thermoelectric properties. Dalton Transactions, 2018, 47, 879-897.	3.3	36
31	Nanostructuring as a tool to adjust thermal expansion in high ZT skutterudites. Acta Materialia, 2018, 145, 359-368.	7.9	35
32	Compositional dependence of the thermoelectric properties of (Sr_xBa_xYb_{1 â^') Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 Td (2x})<sub>y Condensed Matter, 2011, 23, 275601.	1.8	32
33	Attempts to further enhance ZT in skutterudites via nano-composites. Journal of Alloys and Compounds, 2017, 695, 682-696.	5.5	31
34	High-ZT half-Heusler thermoelectrics, Ti0.5Zr0.5NiSn and Ti0.5Zr0.5NiSn0.98Sb0.02: Physical properties at low temperatures. Acta Materialia, 2019, 166, 466-483.	7.9	31
35	Changes in microstructure and physical properties of skutterudites after severe plastic deformation. Physical Chemistry Chemical Physics, 2015, 17, 3715-3722.	2.8	29
36	New p- and n-type skutterudites with ZT>1 and nearly identical thermal expansion and mechanical properties. Acta Materialia, 2013, 61, 4066-4079.	7.9	28

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37	Direct SPD-processing to achieve high-ZT skutterudites. Acta Materialia, 2018, 159, 352-363.	7.9	27
38	Effect of Fe alloying on the thermoelectric performance of Cu2Te. Journal of Alloys and Compounds, 2020, 817, 152729.	5.5	24
39	Sustainable and simple processing technique for n-type skutterudites with high ZT and their analysis. Acta Materialia, 2019, 173, 9-19.	7.9	22
40	Enhanced Thermoelectric Figure of Merit in P-Type DD_y(Fe_{1-X}Co_x)₄Sb₁₂ Solid State Phenomena, 0, 170, 240-243.	0.5	21
41	The Effect of Severe Plastic Deformation on Thermoelectric Performance of Skutterudites, Half-Heuslers and Bi-Tellurides. Materials Transactions, 2019, 60, 2071-2085.	1.2	21
42	Study of thermal stability of CoSb3 skutterudite by Knudsen effusion mass spectrometry. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2019, 65, 1-7.	1.6	18
43	Influence of shear strain on HPT-processed n-type skutterudites yielding ZT=2.1. Journal of Alloys and Compounds, 2021, 855, 157409.	5.5	17
44	High-Pressure Torsion to Improve Thermoelectric Efficiency of Clathrates?. Journal of Electronic Materials, 2013, 42, 1330-1334.	2.2	15
45	Thermoelectric properties of Co4Sb12with Bi2Te3nanoinclusions. Journal of Physics Condensed Matter, 2018, 30, 095701.	1.8	15
46	Severe Plastic Deformation, A Tool to Enhance Thermoelectric Performance. Springer Series in Materials Science, 2013, , 193-254.	0.6	14
47	Thermoelectric properties of Bi-added Co₄Sb₁₂skutterudites. Journal of Physics Condensed Matter, 2013, 25, 105701.	1.8	13
48	Effect of High-Pressure Torsion on Texture, Microstructure, and Raman Spectroscopy: Case Study of Fe- and Te-Substituted CoSb3. Journal of Electronic Materials, 2014, 43, 3817-3823.	2.2	13
49	Ba-filled Niâ€“Sbâ€“Sn based skutterudites with anomalously high lattice thermal conductivity. Dalton Transactions, 2016, 45, 11071-11100.	3.3	13
50	Enhanced Thermoelectric Performance in the Ba_{0.3}Co₄Sb₁₂/InSb Nanocomposite Originating from the Minimum Possible Lattice Thermal Conductivity. ACS Applied Materials & Interfaces, 2020, 12, 48729-48740.	8.0	13
51	Determination of structural disorder in Heusler-type phases. Computational Materials Science, 2020, 172, 109307.	3.0	12
52	HPT production of large bulk skutterudites. Journal of Alloys and Compounds, 2021, 854, 156678.	5.5	12
53	La₂Pd₃Ge₅ and Nd₂Pd₃Ge₅ Compounds: Chemical Bonding and Physical Properties. Inorganic Chemistry, 2021, 60, 3345-3354.	4.0	11
54	Thermoelectric properties of Al substituted tetrahedrite. Journal of Applied Physics, 2020, 127, .	2.5	9

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55	Boron-phil and boron-phob structure units in novel borides Ni3Zn2B and Ni2ZnB: experiment and first principles calculations. Dalton Transactions, 2018, 47, 3303-3320.	3.3	8
56	How Severe Plastic Deformation Changes the Mechanical Properties of Thermoelectric Skutterudites and Half Heusler Alloys. Frontiers in Materials, 2020, 7, .	2.4	8
57	Preferential phonon scattering and low energy carrier filtering by interfaces of in situ formed InSb nanoprecipitates and GaSb nanoinclusions for enhanced thermoelectric performance of In_{0.2}Co₄Sb₁₂. Dalton Transactions, 2020, 49, 15883-15894.	3.3	8
58	Properties of HPT-Processed Large Bulks of p-Type Skutterudite DD_{0.7}Fe₃CoSb₁₂ with ZT > 1.3. ACS Applied Energy Materials, 2021, 4, 4831-4844.	5.1	8
59	Spinodal decomposition in (CaxBa1â^'x)yFe4Sb12. Acta Materialia, 2012, 60, 4487-4495.	7.9	7
60	InSb nanoparticles dispersion in Yb-filled Co4Sb12 improves the thermoelectric performance. Journal of Alloys and Compounds, 2021, 880, 160532.	5.5	7
61	Simultaneous optimization of power factor and thermal conductivity via Te and Se double substitution in Cu12Sb4S13 tetrahedrite. Scripta Materialia, 2020, 188, 151-156.	5.2	6
62	Skutterudites: Progress and Challenges. , 2019, , 177-201.		6
63	Impact of Ball Milling and High-Pressure Torsion on the Microstructure and Thermoelectric Properties of p- and n-Type Sb-Based Skutterudites. Materials Science Forum, 0, 667-669, 1089-1094.	0.3	5
64	Dependence of the Elastic Moduli of Skutterudites on Density and Temperature. Materials Research Society Symposia Proceedings, 2011, 1325, 29.	0.1	5
65	Mechanical properties of non-centrosymmetric CePt3Si and CePt3B. Journal of Physics Condensed Matter, 2017, 29, 185402.	1.8	5
66	Study of thermal stability of p-type skutterudites DD_{0.7}Fe₃CoSb₁₂ by Knudsen effusion mass spectrometry. RSC Advances, 2019, 9, 21451-21459.	3.6	5
67	Resistivity and Thermal Expansion (4.2â€"820 K) of Skutterudites after Severe Plastic Deformation via HPT. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2020, 646, 1267-1272.	1.2	5
68	High pressure torsion, a largeâ€scale manufacturing tool for high ZT skutterudite thermoelectrics. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2022, 648, .	1.2	5
69	Understanding thermal and electronic transport in high-performance thermoelectric skutterudites. Intermetallics, 2022, 146, 107567.	3.9	5
70	From Occupied Voids to Nanoprecipitates: Synthesis of Skutterudite Nanocomposites in situ. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2015, 641, 1495-1502.	1.2	4
71	On the constitution and thermodynamic modeling of the phase diagrams Nb-Mn and Ta-Mn. Journal of Alloys and Compounds, 2021, 865, 158715.	5.5	4
72	Study of thermal stability of half-Heusler alloys TiFe1.33Sb and TixNb1-xFeSb (x = 0, 0.15) by differential thermal analysis and Knudsen effusion method. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2021, 74, 102292.	1.6	4

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73	Origin of Band Modulation in GeTe-Rich Geâ€“Sbâ€“Te Thin Film. ACS Applied Electronic Materials, 2019, 1, 2619-2625.	4.3	3
74	Interaction of Skutterudites with Contact Materials: A Metallurgical Analysis. Journal of Phase Equilibria and Diffusion, 2020, 41, 365-377.	1.4	2
75	Thermoelectric properties enhancement of Ba0Â·2Co4Sb12 through dispersion of GaSb inclusions. Physica B: Condensed Matter, 2021, 606, 412440.	2.7	2
76	Study of thermal stability of n-type skutterudites Sr0.07Ba0.07Yb0.07Co4Sb12 by differential thermal analysis and Knudsen effusion method. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2021, 73, 102258.	1.6	2
77	Anisotropy of Microstructure and Its Influence on Thermoelectricity: The Case of Cu₂Teâ€“Sb₂Te₃ Eutectic. ACS Applied Energy Materials, 2021, 4, 11867-11877.	5.1	2
78	Structure and properties of a novel boride: ThNi₁₂B₆. Dalton Transactions, 2018, 47, 12933-12943.	3.3	1
79	Local mechanical properties of advanced skutterudites processed by various routes. IOP Conference Series: Materials Science and Engineering, 2019, 613, 012036.	0.6	1
80	Microstructure and Local Mechanical Properties of Skutterudites with Addition of Metallic Borides. Key Engineering Materials, 2018, 784, 9-14.	0.4	0
81	Physical properties of {Ti,Zr,Hf}2Ni2Sn compounds. Dalton Transactions, 2021, 51, 361-374.	3.3	0