Yaniv Gelbstein

List of Publications by Year
in descending order

118 papers	4,765 citations	41344 49 h-index	98798 67 g-index
120 all docs	120 docs citations	120 times ranked	2853 citing authors

#	Article	IF	Citations
1	Origin of the High Performance in GeTe-Based Thermoelectric Materials upon Bi₂Te₃ Doping. Journal of the American Chemical Society, 2014, 136, 11412-11419.	13.7	319
2	High performance n-type PbTe-based materials for thermoelectric applications. Physica B: Condensed Matter, 2005, 363, 196-205.	2.7	231
3	Controlling Metallurgical Phase Separation Reactions of the Ge_{0.87}Pb_{0.13}Te Alloy for High Thermoelectric Performance. Advanced Energy Materials, 2013, 3, 815-820.	19.5	202
4	Mechanical properties of PbTe-based thermoelectric semiconductors. Scripta Materialia, 2008, 58, 251-254.	5.2	137
5	Hybrid photovoltaic-thermoelectric system for concentrated solar energy conversion: Experimental realization and modeling. Journal of Applied Physics, 2015, 118, .	2.5	121
6	Physical, Mechanical, and Structural Properties of Highly Efficient Nanostructured n- and p-Silicides for Practical Thermoelectric Applications. Journal of Electronic Materials, 2014, 43, 1703-1711.	2.2	119
7	Phase separation and antisite defects in the thermoelectric TiNiSn half-Heusler alloys. Journal of Solid State Chemistry, 2013, 203, 247-254.	2.9	113
8	Highly efficient functional Ge_xPb_{1â^'x}Te based thermoelectric alloys. Physical Chemistry Chemical Physics, 2014, 16, 20120-20126.	2.8	111
9	A Comparison Between the Mechanical and Thermoelectric Properties of Three Highly Efficient p-Type GeTe-Rich Compositions: TAGS-80, TAGS-85, and 3% Bi2Te3-Doped Ge0.87Pb0.13Te. Journal of Electronic Materials, 2013, 42, 1542-1549.	2.2	104
10	Functional Graded Germaniumâ€“Lead Chalcogenideâ€Based Thermoelectric Module for Renewable Energy Applications. Advanced Energy Materials, 2015, 5, 1500272.	19.5	95
11	Thermoelectric power and structural properties in two-phase Sn/SnTe alloys. Journal of Applied Physics, 2009, 105, .	2.5	90
12	Highly textured Bi2Te3-based materials for thermoelectric energy conversion. Journal of Applied Physics, 2007, 101, 113707.	2.5	89
13	An ab initio study of the thermoelectric enhancement potential in nano-grained TiNiSn. Physical Chemistry Chemical Physics, 2014, 16, 20023-20029.	2.8	84
14	A Comparison Between the Effects of Sb and Bi Doping on the Thermoelectric Properties of the Ti0.3Zr0.35Hf0.35NiSn Half-Heusler Alloy. Journal of Electronic Materials, 2014, 43, 1976-1982.	2.2	80
15	Texture anisotropy of higher manganese silicide following arc-melting and hot-pressing. Intermetallics, 2016, 68, 71-77.	3.9	80
16	Effective Electronic Mechanisms for Optimizing the Thermoelectric Properties of GeTeâ€Rich Alloys. Advanced Electronic Materials, 2015, 1, 1500228.	5.1	79
17	Enhancement of the thermoelectric properties of n-type PbTe by Na and Cl co-doping. Journal of Materials Chemistry C, 2015, 3, 9559-9564.	5.5	79
18	Pb1â^'x Sn x Te Alloys: Application Considerations. Journal of Electronic Materials, 2011, 40, 533-536.	2.2	76

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19	Significant lattice thermal conductivity reduction following phase separation of the highly efficient Ge_x Pb_{1-x} Te thermoelectric alloys. Physica Status Solidi (B): Basic Research, 2014, 251, 1431-1437.	1.5	76
20	High Thermoelectric Figure of Merit and Nanostructuring in Bulk p-type Ge_x(Sn_yPb_{1â^'y})_{1â^'x}Te Alloys Following a Spinodal Decomposition Reaction. Chemistry of Materials, 2010, 22, 1054-1058.	6.7	75
21	Electronic tuning of the transport properties of off-stoichiometric PbxSn1â^'xTe thermoelectric alloys by Bi2Te3 doping. Journal of Applied Physics, 2015, 118, .	2.5	75
22	High thermoelectric potential of Bi2Te3 alloyed GeTe-rich phases. Journal of Applied Physics, 2016, 120, .	2.5	75
23	Phase morphology effects on the thermoelectric properties of Pb0.25Sn0.25Ge0.5Te. Acta Materialia, 2013, 61, 1499-1507.	7.9	74
24	High temperature thermoelectric properties evolution of Pb1-Sn Te based alloys. Journal of Alloys and Compounds, 2017, 722, 33-38.	5.5	72
25	Powder metallurgical processing of functionally graded p-Pb1â^'xSnxTe materials for thermoelectric applications. Physica B: Condensed Matter, 2007, 391, 256-265.	2.7	71
26	Thermoelectric properties of spark plasma sintered composites based on TiNiSn half-Heusler alloys. Journal of Materials Research, 2011, 26, 1919-1924.	2.6	71
27	Morphological effects on the thermoelectric properties of Ti_{0.3}Zr_{0.35}Hf_{0.35}Ni_{1+Î´}Sn alloys following phase separation. Journal of Materials Chemistry C, 2015, 3, 11653-11659.	5.5	71
28	Thermoelectric Properties of the Quasi-Binary MnSi1.73â€“FeSi2 System. Journal of Electronic Materials, 2015, 44, 1637-1643.	2.2	70
29	High thermoelectric potential of n-type Pb1â^'xTixTe alloys. Journal of Applied Physics, 2016, 120, .	2.5	70
30	Nucleation of nanosize particles following the spinodal decomposition in the pseudo-ternary Ge0.6Sn0.1Pb0.3Te compound. Scripta Materialia, 2010, 62, 89-92.	5.2	67
31	Development of Bi2Te2.4Se0.6 alloy for thermoelectric power generation applications. Journal of Alloys and Compounds, 2016, 679, 196-201.	5.5	67
32	The search for mechanically stable PbTe based thermoelectric materials. Journal of Applied Physics, 2008, 104, .	2.5	65
33	Criteria for extending the operation periods of thermoelectric converters based on IV-VI compounds. Journal of Solid State Chemistry, 2016, 241, 79-85.	2.9	65
34	Highly Efficient Ge-Rich Ge x Pb1â^'x Te Thermoelectric Alloys. Journal of Electronic Materials, 2010, 39, 2049-2052.	2.2	64
35	Thermoelectric Bi₂Te_{3â^'x}Se_x alloys for efficient thermal to electrical energy conversion. Physical Chemistry Chemical Physics, 2018, 20, 4092-4099.	2.8	63
36	Effects of Microstructural Evolution on the Thermoelectric Properties of Spark-Plasma-Sintered Ti0.3Zr0.35Hf0.35NiSn Half-Heusler Compound. Journal of Electronic Materials, 2013, 42, 1340-1345.	2.2	62

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37	Structural Evolution Following Spinodal Decomposition of the Pseudoternary Compound (Pb0.3Sn0.1Ge0.6)Te. Journal of Electronic Materials, 2010, 39, 2165-2171.	2.2	61
38	TiNiSn half-Heusler crystals grown from metallic flux for thermoelectric applications. Journal of Alloys and Compounds, 2019, 781, 1132-1138.	5.5	61
39	Mechanical Alloying and Spark Plasma Sintering of Higher Manganese Silicides for Thermoelectric Applications. Journal of Electronic Materials, 2013, 42, 1926-1931.	2.2	60
40	Thermoelectric Properties Evolution of Spark Plasma Sintered (Ge_{0.6}Pb_{0.3}Sn_{0.1})Te Following a Spinodal Decomposition. Journal of Physical Chemistry C, 2010, 114, 13126-13131.	3.1	59
41	Highly efficient bismuth telluride doped pâ€type Pb_{0.13}Ge_{0.87}Te for thermoelectric applications. Physica Status Solidi - Rapid Research Letters, 2007, 1, 232-234.	2.4	57
42	Silicon-Rich Higher Manganese Silicides for Thermoelectric Applications. Journal of Electronic Materials, 2012, 41, 1504-1508.	2.2	57
43	Investigation of the thermoelectric potential for heating, cooling and ventilation in buildings: Characterization options and applications. Renewable Energy, 2019, 131, 229-239.	8.9	57
44	Bonding of Bi2Te3-Based Thermoelectric Legs to Metallic Contacts Using Bi0.82Sb0.18 Alloy. Journal of Electronic Materials, 2016, 45, 1296-1300.	2.2	56
45	Thermoelectric Properties of (Pb,Sn,Ge)Te-Based Alloys. Journal of Electronic Materials, 2009, 38, 1478-1482.	2.2	54
46	Phase separation and thermoelectric properties of the Pb0.25Sn0.25Ge0.5Te compound. Journal of Alloys and Compounds, 2012, 526, 31-38.	5.5	53
47	Submicron Features in Higher Manganese Silicide. Journal of Nanomaterials, 2013, 2013, 1-5.	2.7	53
48	Thermoelectric properties of p-type didymium (DD) based skutterudites DDy(Fe1âˆ’xNix)4Sb12 (0.13â©½xâ©½0.25,) Tj ETQq0 0 0 rg	5.5	52
49	In-doped Pb0.5Sn0.5Te p-type samples prepared by powder metallurgical processing for thermoelectric applications. Physica B: Condensed Matter, 2007, 396, 16-21.	2.7	51
50	Solubility of Ti in thermoelectric PbTe compound. Intermetallics, 2017, 89, 16-21.	3.9	49
51	Evaluation of the mechanical properties of SS-316L thin foils by small punch testing and finite element analysis. Materials and Design, 2015, 83, 75-84.	7.0	43
52	Characterization of AISI 4340 corrosion products using Raman spectroscopy. Corrosion Science, 2013, 74, 414-418.	6.6	32
53	Sc solubility in p-type half-Heusler (Ti1-Sc)NiSn thermoelectric alloys. Journal of Alloys and Compounds, 2017, 729, 446-452.	5.5	31
54	Enhanced Thermoelectric Properties of n-Type Bi₂Te_{3â€“x}Se_x Alloys following Melt-Spinning. ACS Applied Energy Materials, 2020, 3, 2090-2095.	5.1	26

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55	Estimation of yield and ultimate stress using the small punch test method applied to non-standard specimens: A computational study validated by experiments. International Journal of Mechanical Sciences, 2018, 135, 484-498.	6.7	17
56	Surface Oxidation of TiNiSn (Half-Heusler) Alloy by Oxygen and Water Vapor. Materials, 2018, 11, 2296.	2.9	16
57	Aging condition and trapped hydrogen effects on the mechanical behavior of a precipitation hardened martensitic stainless steel. Journal of Alloys and Compounds, 2019, 805, 509-516.	5.5	16
58	Mechanical Properties of Thermoelectric Materials for Practical Applications. , 0, , .		15
59	Phase transitions of p-type (Pb,Sn,Ge)Te-based alloys for thermoelectric applications. Journal of Crystal Growth, 2009, 311, 4289-4292.	1.5	14
60	Compatibility between Co-Metallized PbTe Thermoelectric Legs and an Agâ€“Cuâ€“In Brazing Alloy. Materials, 2018, 11, 99.	2.9	14
61	Phase Stability of Nanocrystalline Grains of Rare-Earth Oxides (Sm2O3 and Eu2O3) Confined in Magnesia (MgO) Matrix. Materials, 2020, 13, 2201.	2.9	14
62	High thermoelectric performance of p-type half-Heusler (Hf,Ti)Co(Sb,Sn) solid solutions fabricated by mechanical alloying. Journal of Alloys and Compounds, 2021, 858, 158330.	5.5	14
63	Microstructure Evolution of Ag-Alloyed PbTe-Based Compounds and Implications for Thermoelectric Performance. Crystals, 2017, 7, 281.	2.2	13
64	Investigation of the Effect of MoSe2 on the Thermoelectric Properties of n-Type Bi2Te2.4Se0.6. Journal of Electronic Materials, 2015, 44, 1402-1407.	2.2	12
65	The Initial Stage in Oxidation of ZrNiSn (Half Heusler) Alloy by Oxygen. Materials, 2019, 12, 1509.	2.9	11
66	Thermoelectric transport properties of (Ti1â^’cAlc)NiSn half-Heusler alloy. Physical Chemistry Chemical Physics, 2020, 22, 1566-1574.	2.8	11
67	Investigation of the Microstructural and Thermoelectric Properties of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:mrow><mml:msub><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:mtext>GeTe</mml:mtext><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 257 Td (stretchy xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M2"><mml:mrow><mml:msub><mml:mrow><m	2.5	10
68	Thermal shock resistant solid oxide fuel cell ceramic composite electrolytes. Journal of Alloys and Compounds, 2020, 821, 153490.	5.5	10
69	Morphological effects on the electronic transport properties of three-phase thermoelectric materials. Journal of Applied Physics, 2012, 112, .	2.5	9
70	Internal Nano Voids in Yttria-Stabilised Zirconia (YSZ) Powder. Materials, 2017, 10, 1440.	2.9	9
71	Bismuth doping of induction furnace synthesized Mg2Si, Mg2Sn and Mg2Ge thermoelectric compounds. Intermetallics, 2020, 120, 106767.	3.9	9
72	n-type (Zr,Ti)NiSn half Heusler materials via mechanical alloying: Structure, Sb-doping and thermoelectric properties. Journal of Physics and Chemistry of Solids, 2022, 167, 110735.	4.0	9

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73	Doping in controlling the type of conductivity in bulk and nanostructured thermoelectric materials. Journal of Solid State Chemistry, 2016, 240, 91-100.	2.9	8
74	The Mechanical Behavior of HAVAR Foils Using the Small Punch Technique. Materials, 2017, 10, 491.	2.9	8
75	Metallurgical and Hydrogen Effects on the Small Punch Tested Mechanical Properties of PH-13-8Mo Stainless Steel. Materials, 2018, 11, 1966.	2.9	8
76	Thermoelectric properties of Ti0.3Zr0.35Hf0.35Ni1.005Sn half-Heusler alloy. Journal of Applied Physics, 2019, 126, .	2.5	8
77	Combined electronic and thermodynamic approaches for enhancing the thermoelectric properties of Ti-doped PbTe. Physical Chemistry Chemical Physics, 2016, 18, 32429-32437.	2.8	7
78	Thermoelectric and mechanical properties of Ag and Cu doped (GeTe)0.96(Bi2Te3)0.04. MRS Communications, 2018, 8, 1292-1299.	1.8	7
79	Influence of galia (Ga2O3) addition on the phase transformations and crystal growth behavior of zirconia (ZrO2). Journal of Materials Science, 2018, 53, 12741-12749.	3.7	7
80	PbOâ€“SiO₂-based glass doped with B₂O₃ and Na₂O for coating of thermoelectric materials. Journal of Materials Research, 2019, 34, 3563-3572.	2.6	7
81	Lattice variations in nanocrystalline Y2O3 confined in magnesia (MgO) matrix. Journal of Alloys and Compounds, 2019, 801, 375-380.	5.5	7
82	Composition conserving defects and their influence on the electronic properties of thermoelectric TiNiSn. Physical Chemistry Chemical Physics, 2020, 22, 8035-8047.	2.8	7
83	Synthesis of n-type PbTe by powder metallurgy. , 0, , .		6
84	Rhombohedral-cubic phase transition characterization of (Pb,Ge)Te using high-temperature XRD. Powder Diffraction, 2008, 23, 137-140.	0.2	6
85	Physical Metallurgy Inspired Nanoâ€Features for Enhancement of Thermoelectric Conversion Efficiency. Advanced Theory and Simulations, 2018, 1, 1800072.	2.8	6
86	Al solubility in (Ti_{1â^'c}Al_c)NiSn half-Heusler alloy. Physical Chemistry Chemical Physics, 2019, 21, 7524-7533.	2.8	6
87	Hybrid structural electronics printing by novel dry film stereolithography and laser induced forward transfer. Nano Select, 2021, 2, 979-991.	3.7	6
88	High entropy alloy on single sub-lattice in MNiSn compound: Stability and thermoelectric properties. Journal of Alloys and Compounds, 2021, 874, 159940.	5.5	5
89	Lattice variation of cubic Y2O3 in three dimensions: Temperature, pressure and crystal size. Journal of Alloys and Compounds, 2021, 885, 161199.	5.5	5
90	Design, synthesis and characterization of graded n-type PbTe. , 0, , .		4

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91	Evaporationâ€“condensation effects on the thermoelectric performance of PbTe-based couples. Physical Chemistry Chemical Physics, 2017, 19, 19326-19333.	2.8	4
92	Peculiarities of doping of nanograined thermoelectric TiNiSn by 3d noble and transition metals. Intermetallics, 2018, 98, 154-160.	3.9	4
93	Applying the general effective media (GEM) approach for analyzing the thermal conductivity of ZrO2â€“8YSZ composites. Physical Chemistry Chemical Physics, 2018, 20, 16666-16672.	2.8	4
94	Influence of galia (Ga2O3) addition on the phase evolution and grain growth behavior of voided yttria stabilized zirconia (YSZ) powder. Journal of Alloys and Compounds, 2019, 783, 286-291.	5.5	4
95	Reduction of Hf via Hf/Zr Substitution in Mechanically Alloyed (Hf,Ti)CoSb Half-Heusler Solid Solutions. Inorganics, 2022, 10, 51.	2.7	4
96	Preparation and Thermoelectric Properties of N-type PbTe Doped with In and PbI2. , 2006, , .		3
97	APPLYING TEP MEASUREMENTS TO ASSESS THE AGING STAGE OF MARAGING 250 STEEL. AIP Conference Proceedings, 2008, , .	0.4	3
98	Ion-induced n-p inversion of conductivity in TiNiSn compound for thermoelectric applications. Journal of Applied Physics, 2019, 126, 155106.	2.5	3
99	Optimization of thermoelectric efficiency in graded materials. , 0, , .		2
100	Improved power factor of Bi0.4Sb1.6Te3 - based samples prepared by cold pressing and sintering. , 2006, , .		2
101	Orienting MoS2 flakes into ordered films. Journal of Materials Science, 2014, 49, 7353-7359.	3.7	2
102	The origin of the effect of aging on the thermoelectric power of maraging C250 steel. Journal of Materials Science, 2015, 50, 7698-7704.	3.7	2
103	Simulation of Morphological Effects on Thermoelectric Power, Thermal and Electrical Conductivity in Multiâ€Phase Thermoelectric Materials. , 0, , .		2
104	Electronic properties of co-doped nonstoichiometric germanium telluride. Intermetallics, 2021, 131, 107118.	3.9	2
105	The Initial Oxidation of HfNiSn Half-Heusler Alloy by Oxygen and Water Vapor. Materials, 2021, 14, 3942.	2.9	2
106	Microstructural effects on the thermoelectric performance of Ge0.962Bi0.038Te1.057. Journal of Alloys and Compounds, 2022, 918, 165663.	5.5	2
107	Development of p-Pb1-xSnxTe Functionally Graded Materials. , 2006, , .		1
108	Vertical power MOS transistor as a thermoelectric quasi-nanowire device. Journal of Applied Physics, 2016, 120, 244903.	2.5	1

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109	Enhanced thermoelectric properties of n-type Ti-doped PbTe. MRS Advances, 2019, 4, 1683-1689.	0.9	1
110	Co-doping effect on the electronic properties of nonstoichiometric tin telluride. MRS Advances, 2019, 4, 1699-1707.	0.9	1
111	PbO-SiO2 Based Glass Coating of PbI2 Doped PbTe. Metals, 2020, 10, 284.	2.3	1
112	Transport properties of PbI/sub 2/-doped PbTe. , 0, , .		0
113	Thermoelectric Properties of p-type In-doped Pb1-xSnxTe. , 2006, , .		0
114	Functionally Graded Bi<inf>2</inf>Te<inf>3</inf> based material for above ambient temperature application. , 2007, , .		0
115	KINETIC STUDY OF AGING IN A URANIUM-TITANIUM EUTECTOID ALLOY USING THERMOELECTRIC POWER MEASUREMENT. AIP Conference Proceedings, 2008, , .	0.4	0
116	APPLYING TEP MEASUREMENTS TO ASSESS THE RESPONSE OF HASTELLOY TO LONG TIME AGING. , 2009, , .		0
117	Bismuth Telluride Solubility Limit and Dopant Effects on the Electronic Properties of Lead Telluride. , 0, , .		0
118	Mechanical properties of proton bombarded SS316L thin foils using the small punch technique. Journal of Nuclear Materials, 2020, 540, 152340.	2.7	0