Yaniv Gelbstein

List of Publications by Citations

113 papers	3,926 citations	44 h-index	61 g-index
120 ext. papers	4,366 ext. citations	4.1 avg, IF	5.93 L-index

#	Paper	IF	Citations
113	Origin of the high performance in GeTe-based thermoelectric materials upon Bi2Te3 doping. *Journal of the American Chemical Society*, **2014**, 136, 11412-9	16.4	259
112	High performance n-type PbTe-based materials for thermoelectric applications. *Physica B: Condensed Matter*, **2005**, 363, 196-205	2.8	205
111	Controlling Metallurgical Phase Separation Reactions of the Ge0.87Pb0.13Te Alloy for High Thermoelectric Performance. *Advanced Energy Materials*, **2013**, 3, 815-820	21.8	172
110	Mechanical properties of PbTe-based thermoelectric semiconductors. *Scripta Materialia*, **2008**, 58, 251-254	3.6	111
109	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	1.9	104
108	Phase separation and antisite defects in the thermoelectric TiNiSn half-Heusler alloys. *Journal of Solid State Chemistry*, **2013**, 203, 247-254	3.3	104
107	Highly efficient functional GexPb1-xTe based thermoelectric alloys. *Physical Chemistry Chemical Physics*, **2014**, 16, 20120-6	3.6	99
106	Hybrid photovoltaic-thermoelectric system for concentrated solar energy conversion: Experimental realization and modeling. *Journal of Applied Physics*, **2015**, 118, 115104	2.5	93
105	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	1.9	87
104	Functional Graded Germanium–Lead Chalcogenide-Based Thermoelectric Module for Renewable Energy Applications. *Advanced Energy Materials*, **2015**, 5, 1500272	21.8	85
103	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	1.9	79
102	Thermoelectric power and structural properties in two-phase Sn/SnTe alloys. *Journal of Applied Physics*, **2009**, 105, 023713	2.5	79
101	An ab initio study of the thermoelectric enhancement potential in nano-grained TiNiSn. *Physical Chemistry Chemical Physics*, **2014**, 16, 20023-9	3.6	75
100	Enhancement of the thermoelectric properties of n-type PbTe by Na and Cl co-doping. *Journal of Materials Chemistry C*, **2015**, 3, 9559-9564	7.1	73
99	Highly textured Bi2Te3-based materials for thermoelectric energy conversion. *Journal of Applied Physics*, **2007**, 101, 113707	2.5	73
98	Texture anisotropy of higher manganese silicide following arc-melting and hot-pressing. *Intermetallics*, **2016**, 68, 71-77	3.5	72
97	Effective Electronic Mechanisms for Optimizing the Thermoelectric Properties of GeTe-Rich Alloys. *Advanced Electronic Materials*, **2015**, 1, 1500228	6.4	71

96	Phase morphology effects on the thermoelectric properties of Pb0.25Sn0.25Ge0.5Te. *Acta Materialia*, **2013**, 61, 1499-1507	8.4	70
95	Significant lattice thermal conductivity reduction following phase separation of the highly efficient GexPb1−xTe thermoelectric alloys. *Physica Status Solidi (B): Basic Research*, **2014**, 251, 1431-1437	1.3	70
94	High Thermoelectric Figure of Merit and Nanostructuring in Bulk p-type Gex(SnyPb1−y)1−xTe Alloys Following a Spinodal Decomposition Reaction. *Chemistry of Materials*, **2010**, 22, 1054-1058	9.6	70
93	Electronic tuning of the transport properties of off-stoichiometric PbxSn1−xTe thermoelectric alloys by Bi2Te3 doping. *Journal of Applied Physics*, **2015**, 118, 065102	2.5	69
92	High thermoelectric potential of Bi2Te3 alloyed GeTe-rich phases. *Journal of Applied Physics*, **2016**, 120, 035102	2.5	69
91	Pb1− Sn x Te Alloys: Application Considerations. *Journal of Electronic Materials*, **2011**, 40, 533-536	1.9	68
90	Thermoelectric properties of spark plasma sintered composites based on TiNiSn half-Heusler alloys. *Journal of Materials Research*, **2011**, 26, 1919-1924	2.5	66
89	High temperature thermoelectric properties evolution of Pb1-Sn Te based alloys. *Journal of Alloys and Compounds*, **2017**, 722, 33-38	5.7	65
88	Morphological effects on the thermoelectric properties of Ti0.3Zr0.35Hf0.35Ni1+δSn alloys following phase separation. *Journal of Materials Chemistry C*, **2015**, 3, 11653-11659	7.1	65
87	Powder metallurgical processing of functionally graded p-Pb1−SnxTe materials for thermoelectric applications. *Physica B: Condensed Matter*, **2007**, 391, 256-265	2.8	64
86	High thermoelectric potential of n-type Pb1−TixTe alloys. *Journal of Applied Physics*, **2016**, 120, 055104	2.5	64
85	Thermoelectric Properties of the Quasi-Binary MnSi1.73−xCrxSi2 System. *Journal of Electronic Materials*, **2015**, 44, 1637-1643	1.9	63
84	Development of Bi2Te2.4Se0.6 alloy for thermoelectric power generation applications. *Journal of Alloys and Compounds*, **2016**, 679, 196-201	5.7	62
83	Structural Evolution Following Spinodal Decomposition of the Pseudoternary Compound (Pb0.3Sn0.1Ge0.6)Te. *Journal of Electronic Materials*, **2010**, 39, 2165-2171	1.9	61
82	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	1.9	60
81	Highly Efficient Ge-Rich Ge x Pb1− Te Thermoelectric Alloys. *Journal of Electronic Materials*, **2010**, 39, 2049-2052	1.9	58
80	Mechanical Alloying and Spark Plasma Sintering of Higher Manganese Silicides for Thermoelectric Applications. *Journal of Electronic Materials*, **2013**, 42, 1926-1931	1.9	56
79	Bonding of Bi2Te3-Based Thermoelectric Legs to Metallic Contacts Using Bi0.82Sb0.18 Alloy. *Journal of Electronic Materials*, **2016**, 45, 1296-1300	1.9	55

78	Highly efficient bismuth telluride doped p-type Pb0.13Ge0.87Te for thermoelectric applications. *Physica Status Solidi - Rapid Research Letters*, **2007**, 1, 232-234	2.5	55
77	Thermoelectric Properties of (Pb,Sn,Ge)Te-Based Alloys. *Journal of Electronic Materials*, **2009**, 38, 1478-1482	1.9	53
76	The search for mechanically stable PbTe based thermoelectric materials. *Journal of Applied Physics*, **2008**, 104, 033702	2.5	52
75	Silicon-Rich Higher Manganese Silicides for Thermoelectric Applications. *Journal of Electronic Materials*, **2012**, 41, 1504-1508	1.9	51
74	Criteria for extending the operation periods of thermoelectric converters based on IV-VI compounds. *Journal of Solid State Chemistry*, **2016**, 241, 79-85	3.3	50
73	In-doped Pb0.5Sn0.5Te p-type samples prepared by powder metallurgical processing for thermoelectric applications. *Physica B: Condensed Matter*, **2007**, 396, 16-21	2.8	50
72	Phase separation and thermoelectric properties of the Pb0.25Sn0.25Ge0.5Te compound. *Journal of Alloys and Compounds*, **2012**, 526, 31-38	5.7	49
71	Thermoelectric properties of p-type didymium (DD) based skutterudites DDy(Fe1−xNix)4Sb12 (0.13?x?0.25, 0.46?y?0.68). *Journal of Alloys and Compounds*, **2012**, 537, 242-249	5.7	47
70	Thermoelectric Properties Evolution of Spark Plasma Sintered (Ge0.6Pb0.3Sn0.1)Te Following a Spinodal Decomposition. *Journal of Physical Chemistry C*, **2010**, 114, 13126-13131	3.8	46
69	Investigation of the thermoelectric potential for heating, cooling and ventilation in buildings: Characterization options and applications. *Renewable Energy*, **2019**, 131, 229-239	8.1	39
68	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	8.1	31
67	Thermoelectric BiTeSe alloys for efficient thermal to electrical energy conversion. *Physical Chemistry Chemical Physics*, **2018**, 20, 4092-4099	3.6	29
66	TiNiSn half-Heusler crystals grown from metallic flux for thermoelectric applications. *Journal of Alloys and Compounds*, **2019**, 781, 1132-1138	5.7	28
65	Characterization of AISI 4340 corrosion products using Raman spectroscopy. *Corrosion Science*, **2013**, 74, 414-418	6.8	25
64	Nucleation of nanosize particles following the spinodal decomposition in the pseudo-ternary Ge0.6Sn0.1Pb0.3Te compound. *Scripta Materialia*, **2010**, 62, 89-92	5.6	21
63	Submicron Features in Higher Manganese Silicide. *Journal of Nanomaterials*, **2013**, 2013, 1-5	3.2	20
62	Sc solubility in p-type half-Heusler (Ti1-Sc)NiSn thermoelectric alloys. *Journal of Alloys and Compounds*, **2017**, 729, 446-452	5.7	15
61	Solubility of Ti in thermoelectric PbTe compound. *Intermetallics*, **2017**, 89, 16-21	3.5	13

60	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	5.5	13
59	Phase transitions of p-type (Pb,Sn,Ge)Te-based alloys for thermoelectric applications. *Journal of Crystal Growth*, **2009**, 311, 4289-4292	1.6	12
58	Investigation of the Effect of MoSe2 on the Thermoelectric Properties of n-Type Bi2Te2.4Se0.6. *Journal of Electronic Materials*, **2015**, 44, 1402-1407	1.9	11
57	Enhanced Thermoelectric Properties of n-Type Bi2Te3−xSex Alloys following Melt-Spinning. *ACS Applied Energy Materials*, **2020**, 3, 2090-2095	6.1	10
56	Microstructure Evolution of Ag-Alloyed PbTe-Based Compounds and Implications for Thermoelectric Performance. *Crystals*, **2017**, 7, 281	2.3	9
55	Thermoelectric transport properties of (TiAl)NiSn half-Heusler alloy. *Physical Chemistry Chemical Physics*, **2020**, 22, 1566-1574	3.6	9
54	Surface Oxidation of TiNiSn (Half-Heusler) Alloy by Oxygen and Water Vapor. *Materials*, **2018**, 11,	3.5	9
53	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	5.7	8
52	Internal Nano Voids in Yttria-Stabilised Zirconia (YSZ) Powder. *Materials*, **2017**, 10,	3.5	8
51	Morphological effects on the electronic transport properties of three-phase thermoelectric materials. *Journal of Applied Physics*, **2012**, 112, 113721	2.5	8
50	Mechanical Properties of Thermoelectric Materials for Practical Applications **2018**,		8
49	Combined electronic and thermodynamic approaches for enhancing the thermoelectric properties of Ti-doped PbTe. *Physical Chemistry Chemical Physics*, **2016**, 18, 32429-32437	3.6	7
48	Doping in controlling the type of conductivity in bulk and nanostructured thermoelectric materials. *Journal of Solid State Chemistry*, **2016**, 240, 91-100	3.3	7
47	Compatibility between Co-Metallized PbTe Thermoelectric Legs and an Ag-Cu-In Brazing Alloy. *Materials*, **2018**, 11,	3.5	7
46	Lattice variations in nanocrystalline Y2O3 confined in magnesia (MgO) matrix. *Journal of Alloys and Compounds*, **2019**, 801, 375-380	5.7	6
45	Al solubility in (TiAl)NiSn half-Heusler alloy. *Physical Chemistry Chemical Physics*, **2019**, 21, 7524-7533	3.6	6
44	The Mechanical Behavior of HAVAR Foils Using the Small Punch Technique. *Materials*, **2017**, 10,	3.5	6
43	Thermoelectric properties of Ti0.3Zr0.35Hf0.35Ni1.005Sn half-Heusler alloy. *Journal of Applied Physics*, **2019**, 126, 085110	2.5	5

42	PbO-SiO2-based glass doped with B2O3 and Na2O for coating of thermoelectric materials. *Journal of Materials Research*, **2019**, 34, 3563-3572	2.5	5
41	The Initial Stage in Oxidation of ZrNiSn (Half Heusler) Alloy by Oxygen. *Materials*, **2019**, 12,	3.5	5
40	Bismuth doping of induction furnace synthesized Mg2Si, Mg2Sn and Mg2Ge thermoelectric compounds. *Intermetallics*, **2020**, 120, 106767	3.5	5
39	Thermoelectric and mechanical properties of Ag and Cu doped (GeTe)0.96(Bi2Te3)0.04. *MRS Communications*, **2018**, 8, 1292-1299	2.7	5
38	Investigation of the Microstructural and Thermoelectric Properties of the(GeTe)0.95(Bi2Te3)0.05Composition for Thermoelectric Power Generation Applications. *Journal of Nanomaterials*, **2014**, 2014, 1-7	3.2	5
37	Rhombohedral-cubic phase transition characterization of (Pb,Ge)Te using high-temperature XRD. *Powder Diffraction*, **2008**, 23, 137-140	1.8	5
36	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	5.7	5
35	Phase Stability of Nanocrystalline Grains of Rare-Earth Oxides (SmO and EuO) Confined in Magnesia (MgO) Matrix. *Materials*, **2020**, 13,	3.5	4
34	Composition conserving defects and their influence on the electronic properties of thermoelectric TiNiSn. *Physical Chemistry Chemical Physics*, **2020**, 22, 8035-8047	3.6	4
33	Influence of galia (Ga2O3) addition on the phase transformations and crystal growth behavior of zirconia (ZrO2). *Journal of Materials Science*, **2018**, 53, 12741-12749	4.3	4
32	Design, synthesis and characterization of graded n-type PbTe		4
31	Synthesis of n-type PbTe by powder metallurgy		4
30	Thermal shock resistant solid oxide fuel cell ceramic composite electrolytes. *Journal of Alloys and Compounds*, **2020**, 821, 153490	5.7	4
29	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	5.7	4
28	Metallurgical and Hydrogen Effects on the Small Punch Tested Mechanical Properties of PH-13-8Mo Stainless Steel. *Materials*, **2018**, 11,	3.5	4
27	Peculiarities of doping of nanograined thermoelectric TiNiSn by 3d noble and transition metals. *Intermetallics*, **2018**, 98, 154-160	3.5	4
26	High entropy alloy on single sub-lattice in MNiSn compound: Stability and thermoelectric properties. *Journal of Alloys and Compounds*, **2021**, 874, 159940	5.7	4
25	Physical Metallurgy Inspired Nano-Features for Enhancement of Thermoelectric Conversion Efficiency. *Advanced Theory and Simulations*, **2018**, 1, 1800072	3.5	3

24	Applying the general effective media (GEM) approach for analyzing the thermal conductivity of ZrO-8YSZ composites. *Physical Chemistry Chemical Physics*, **2018**, 20, 16666-16672	3.6	3
23	Evaporation-condensation effects on the thermoelectric performance of PbTe-based couples. *Physical Chemistry Chemical Physics*, **2017**, 19, 19326-19333	3.6	3
22	Preparation and Thermoelectric Properties of N-type PbTe Doped with In and PbI2 **2006**,		3
21	Hybrid structural electronics printing by novel dry film stereolithography and laser induced forward transfer. *Nano Select*, **2021**, 2, 979-991	3.1	3
20	Orienting MoS2 flakes into ordered films. *Journal of Materials Science*, **2014**, 49, 7353-7359	4.3	2
19	Ion-induced n-p inversion of conductivity in TiNiSn compound for thermoelectric applications. *Journal of Applied Physics*, **2019**, 126, 155106	2.5	2
18	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**, 110735	3.9	2
17	The origin of the effect of aging on the thermoelectric power of maraging C250 steel. *Journal of Materials Science*, **2015**, 50, 7698-7704	4.3	1
16	Simulation of Morphological Effects on Thermoelectric Power, Thermal and Electrical Conductivity in Multi-Phase Thermoelectric Materials **2016**,		1
15	PbO-SiO2 Based Glass Coating of PbI2 Doped PbTe. *Metals*, **2020**, 10, 284	2.3	1
14	APPLYING TEP MEASUREMENTS TO ASSESS THE AGING STAGE OF MARAGING 250 STEEL. *AIP Conference Proceedings*, **2008**,	0	1
13	Development of p-Pb1-xSnxTe Functionally Graded Materials **2006**,		1
12	Improved power factor of Bi0.4Sb1.6Te3 - based samples prepared by cold pressing and sintering **2006**,		1
11	Optimization of thermoelectric efficiency in graded materials		1
10	Electronic properties of co-doped nonstoichiometric germanium telluride. *Intermetallics*, **2021**, 131, 107118	3.5	1
9	Vertical power MOS transistor as a thermoelectric quasi-nanowire device. *Journal of Applied Physics* , **2016**, 120, 244903	2.5	1
8	Co-doping effect on the electronic properties of nonstoichiometric tin telluride. *MRS Advances*, **2019**, 4, 1699-1707	0.7	1
7	Lattice variation of cubic Y2O3 in three dimensions: Temperature, pressure and crystal size. *Journal of Alloys and Compounds*, **2021**, 885, 161199	5.7	1

6	Enhanced thermoelectric properties of n-type Ti-doped PbTe. *MRS Advances*, **2019**, 4, 1683-1689	0.7	0
5	Reduction of Hf via Hf/Zr Substitution in Mechanically Alloyed (Hf,Ti)CoSb Half-Heusler Solid Solutions. *Inorganics*, **2022**, 10, 51	2.9	0
4	Utilizing Phase Separation Reactions for Enhancement of the Thermoelectric Efficiency in IV–VI Alloys. *Advanced Micro & Nanosystems*, **2017**, 1-13		
3	Mechanical properties of proton bombarded SS316L thin foils using the small punch technique. *Journal of Nuclear Materials*, **2020**, 540, 152340	3.3	
2	Highly Efficient Segmented p-type Thermoelectric Leg. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2013**, 59-65	0.2	
1	Microstructural effects on the thermoelectric performance of Ge0.962Bi0.038Te1.057. *Journal of Alloys and Compounds*, **2022**, 918, 165663	5.7	