

Theodora Kyratsi

List of Publications by Year in descending order

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119
papers

2,097
citations

236833

25
h-index

276775

41
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122
all docs

122
docs citations

122
times ranked

2188
citing authors

#	ARTICLE	IF	CITATIONS
1	High thermoelectric figure of merit of Mg ₂ Si _{0.55} Sn _{0.4} Ge _{0.05} materials doped with Bi and Sb. Scripta Materialia, 2013, 69, 606-609.	2.6	136
2	Surface effects in layered semiconductors Bi ₂ Se ₃ and Bi ₂ Te ₃ . Physical Review B, 2004, 69, .	1.1	103
3	Scanning tunneling microscopy of defect states in the semiconductor Bi ₂ Se ₃ . Physical Review B, 2002, 66, .	1.1	90
4	Efficiency Study of a Commercial Thermoelectric Power Generator (TEG) Under Thermal Cycling. Journal of Electronic Materials, 2010, 39, 2112-2116.	1.0	89
5	Thermoelectric properties of highly efficient Bi-doped Mg ₂ Si _{1-x} Sn _x Ge _y materials. Acta Materialia, 2014, 77, 43-53.	3.8	74
6	KSb ₅ S ₈ : A Wide Bandgap Phase-Change Material for Ultra High Density Rewritable Information Storage. Advanced Materials, 2003, 15, 1428-1431.	11.1	62
7	Design, assembly and characterization of silicide-based thermoelectric modules. Energy Conversion and Management, 2016, 110, 13-21.	4.4	62
8	Thermal conductivity and degradation behavior of HDPE/graphene nanocomposites. Journal of Thermal Analysis and Calorimetry, 2017, 129, 1715-1726.	2.0	62
9	Solid-State Synthesis and Thermoelectric Properties of Sb-Doped Mg ₂ Si Materials. Journal of Electronic Materials, 2013, 42, 1827-1834.	1.0	56
10	Carbon sequestration via enhanced weathering of peridotites and basalts in seawater. Applied Geochemistry, 2018, 91, 197-207.	1.4	52
11	Key properties of inorganic thermoelectric materials – tables (version 1). JPhys Energy, 2022, 4, 022002.	2.3	51
12	Effect of Bi-doping and Mg-excess on the thermoelectric properties of Mg ₂ Si materials. Journal of Physics and Chemistry of Solids, 2014, 75, 984-991.	1.9	50
13	Fabrication of nanocrystalline Mg ₂ Si via ball milling process: Structural studies. Powder Technology, 2012, 217, 523-532.	2.1	47
14	Highly anisotropic crystal growth and thermoelectric properties of K ₂ Bi _{8-x} Sb _x Se ₁₃ solid solutions: Band gap anomaly at low x. Journal of Applied Physics, 2002, 92, 965-975.	1.1	46
15	CsM ₂ Bi ₃ Te ₆ and CsM ₂ Bi ₃ Te ₇ (M = Pb, Sn): New Thermoelectric Compounds with Low-Dimensional Structures. Journal of the American Chemical Society, 2002, 124, 2410-2411.	6.6	46
16	A ₂ Bi ₈ Se ₁₃ (A = Rb, Cs), CsBi _{3.67} Se ₆ , and BaBi ₂ Se ₄ : New Ternary Semiconducting Bismuth Selenides. Chemistry of Materials, 2001, 13, 622-633.	3.2	45
17	Energy Harvesting Technologies for Structural Health Monitoring of Airplane Components – A Review. Sensors, 2020, 20, 6685.	2.1	45
18	Nanostructure and doping stimulated phase separation in high-ZT Mg ₂ Si _{0.55} Sn _{0.4} Ge _{0.05} compounds. Acta Materialia, 2015, 83, 285-293.	3.8	43

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19	Carbon dioxide storage in olivine basalts: Effect of ball milling process. Powder Technology, 2015, 273, 220-229.	2.1	41
20	Synthesis of reactive Al/Ni structures by ball milling. Intermetallics, 2010, 18, 2219-2223.	1.8	34
21	Crystal/Glass Phase Change in KSb5S8 Studied through Thermal Analysis Techniques. Chemistry of Materials, 2004, 16, 1932-1937.	3.2	31
22	Students' use of the energy model to account for changes in physical systems. Journal of Research in Science Teaching, 2008, 45, 444-469.	2.0	30
23	Solid-state synthesis of Mg2Si via short-duration ball-milling and low-temperature annealing. Journal of Solid State Chemistry, 2013, 197, 172-180.	1.4	30
24	Enhancing the rate of ex situ mineral carbonation in dunites via ball milling. Advanced Powder Technology, 2016, 27, 360-371.	2.0	30
25	Bi/Sb distribution and its consequences in solid solution members of the thermoelectric materials $K_2Bi_{8-x}Sb_xSe_{13}$. Journal of Alloys and Compounds, 2002, 338, 36-42.	2.8	29
26	Design of Ball-Milling Experiments on Bi2Te3 Thermoelectric Material. Journal of Electronic Materials, 2013, 42, 1652-1660.	1.0	26
27	Exothermic reaction characteristics of continuously ball-milled Al/Ni powder compacts. Vacuum, 2013, 96, 73-78.	1.6	26
28	Thermoelectric Properties and Site-Selective Rb+/K+ Distribution in the $K_2-xRb_xBi_8Se_{13}$ Series. Chemistry of Materials, 2003, 15, 3035-3040.	3.2	25
29	Carbon nanotube-reinforced crosslinked polyethylene pipes for geothermal applications: From synthesis to decomposition using analytical pyrolysis-GC/MS and thermogravimetric analysis. Polymer Degradation and Stability, 2014, 100, 42-53.	2.7	24
30	Recycling Si-kerf from photovoltaics: A very promising route to thermoelectrics. Journal of Alloys and Compounds, 2019, 775, 1036-1043.	2.8	23
31	The influence of structure on thermal behavior of reactive Al-Ni powder mixtures formed by ball milling. Journal of Alloys and Compounds, 2010, 505, 467-471.	2.8	22
32	Local structure and influence of bonding on the phase-change behavior of the chalcogenide compounds $K_1-xRb_xSb_5S_8$. Journal of Solid State Chemistry, 2007, 180, 420-431.	1.4	19
33	Effect of ball milling on the carbon sequestration efficiency of serpentinized peridotites. Minerals Engineering, 2018, 120, 66-74.	1.8	19
34	Structure inhomogeneities, shallow defects, and charge transport in the series of thermoelectric materials $K_2Bi_{8-x}Sb_xSe_{13}$. Journal of Applied Physics, 2006, 100, 123704.	1.1	17
35	Spark ignitable Ni-Al ball-milled powders for bonding applications. Surface and Coatings Technology, 2014, 260, 396-400.	2.2	17
36	Crystal Growth of Ternary and Quaternary Alkali Metal Bismuth Chalcogenides Using Bridgman Technique. Materials Research Society Symposia Proceedings, 2000, 626, 881.	0.1	16

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37	Analysis of thermoelectric generator incorporating n-magnesium silicide and p-tetrahedrite materials. Energy Conversion and Management, 2021, 236, 114003.	4.4	16
38	Thermoelectric Properties of Nanocrystalline PbTe Synthesized by Mechanical Alloying. Journal of Electronic Materials, 2010, 39, 1665-1668.	1.0	15
39	Seebeck and thermal conductivity analysis in amorphous/crystalline $\text{K}_2\text{Bi}_8\text{Se}_{13}$ nanocomposite materials. Journal of Applied Physics, 2011, 110, .	1.1	15
40	Thermoelectric properties of $\text{Bi}_{0.5}\text{Sb}_{1.5}\text{Te}_3$ thin films grown by pulsed laser deposition. Applied Surface Science, 2015, 336, 138-142.	3.1	15
41	On the potential use of quarry waste material for CO2 sequestration. Journal of CO2 Utilization, 2016, 16, 361-370.	3.3	15
42	Effect of antimony-doping and germanium on the highly efficient thermoelectric Si-rich- $\text{Mg}_2(\text{Si},\text{Sn},\text{Ge})$ materials. Journal of Alloys and Compounds, 2017, 714, 502-513.	2.8	15
43	Synthesis, Crystallographic Studies, and Characterization of $\text{K}_2\text{Bi}_8\text{Se}_{13}\text{A}^x\text{S}_x$ Solid Solutions. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2003, 629, 2222-2228.	0.6	14
44	Lattice thermal conductivity of $\text{K}_2(\text{Bi}_{1-z}\text{Sb}_z)_8\text{Se}_{13}$ solid solutions. Journal of Applied Physics, 2004, 95, 4140-4146.	1.1	14
45	Low-Temperature Synthesis and Thermoelectric Properties of n-Type PbTe. Journal of Electronic Materials, 2013, 42, 1911-1917.	1.0	14
46	Understanding the mechanical and thermal property reinforcement of crosslinked polyethylene by nanodiamonds and carbon nanotubes. RSC Advances, 2014, 4, 45522-45534.	1.7	14
47	The Effect of Ge on $\text{Mg}_2\text{Si}_{0.6}\text{Sn}_{0.4}\text{Ge}_x$ Materials. Journal of Electronic Materials, 2014, 43, 3844-3851.	1.0	14
48	Ball Milling Effect on the CO2 Uptake of Mafic and Ultramafic Rocks: A Review. Geosciences (Switzerland), 2018, 8, 406.	1.0	14
49	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.	2.8	14
50	Design of an air-cooled thermoelectric generator system through modelling and simulations, for use in cement industries. Materials Today: Proceedings, 2021, 44, 3516-3524.	0.9	14
51	Improving the carbonation of air lime mortars at ambient conditions via the incorporation of ball-milled quarry waste. Construction and Building Materials, 2021, 301, 124073.	3.2	13
52	Changes in the electronic properties of Bi_2X_3 (X: Se, Te) single crystals due to intercalation. Ionics, 1997, 3, 305-309.	1.2	12
53	Role of K/Bi disorder in the electronic structure of $\text{K}_{1-x}\text{Bi}_x\text{Bi}_2\text{Te}_3$. Physical Review B, 2009, 80, .	1.1	12
54	Electronic Structure and Thermoelectric Properties of Pseudoquaternary $\text{Mg}_2\text{Si}_{1-x-y}\text{Sn}_x\text{Ge}_y$ -Based Materials. Journal of Electronic Materials, 2014, 43, 3831-3837.	1.0	12

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55	A method to enhance the CO ₂ storage capacity of pyroxenitic rocks. , 2015, 5, 577-591.		12
56	Thermoelectric Properties of Bi-doped Mg ₂ Si _{0.6} Sn _{0.4} Solid Solutions Synthesized by Two-Step Low Temperature Reaction Combined with Hot Pressing. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800136.	0.8	12
57	High thermoelectric performance of Bi _{2-x} Sb _x Te ₃ bulk alloys prepared from non-nanostructured starting powders. Journal of Solid State Chemistry, 2019, 270, 388-397.	1.4	12
58	The Initial Stage in Oxidation of ZrNiSn (Half Heusler) Alloy by Oxygen. Materials, 2019, 12, 1509.	1.3	11
59	Thermoelectric transport properties of (Ti ^{1-x} Al ^x)NiSn half-Heusler alloy. Physical Chemistry Chemical Physics, 2020, 22, 1566-1574.	1.3	11
60	Sustainable exploitation of mafic rock quarry waste for carbon sequestration following ball milling. Resources Policy, 2018, 59, 24-32.	4.2	10
61	Enhanced thermoelectric properties in vacuum-annealed Bi _{0.5} Sb _{1.5} Te ₃ thin films fabricated using pulsed laser deposition. Journal of Applied Physics, 2019, 125, 215308.	1.1	9
62	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.	1.9	9
63	Thermoelectric properties of Mg ₂ Si coatings deposited by pack cementation assisted process on heavily doped Si substrates. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1308-1314.	0.8	8
64	Syntheses, crystal Structures and electronic Structures of new metal chalcogenides Bi ₂ CuSe ₃ I and Bi ₆ Cu ₃ S ₁₀ I. Journal of Solid State Chemistry, 2016, 234, 1-8.	1.4	8
65	Synthesis, characterization and thermoelectric performance of Mg ₂ (Si,Sn,Ge) materials using Si-kerf waste from photovoltaic technology. Journal of Alloys and Compounds, 2020, 826, 153933.	2.8	8
66	Structure and thermoelectric properties of higher manganese silicides synthesized by pack cementation. Ceramics International, 2021, 47, 243-251.	2.3	8
67	Analysis and Design of a Silicide-Tetrahedrite Thermoelectric Generator Concept Suitable for Large-Scale Industrial Waste Heat Recovery. Energies, 2021, 14, 5655.	1.6	8
68	Synthetic conditions and their doping effect on \hat{I}^2 -K ₂ Bi ₈ Se ₁₃ . Journal of Alloys and Compounds, 2009, 474, 351-357.	2.8	7
69	Tetrahedrite Sintering Conditions: The Cu ₁₁ Mn ₁ Sb ₄ S ₁₃ Case. Journal of Electronic Materials, 2020, 49, 5077-5083.	1.0	7
70	Influence of processing conditions on the thermoelectric properties of La _{1-x} Sr _x CoO ₃ (x=0, 0.05). , 2012, , .		6
71	Thermoelectric Properties of Hot-Pressed \hat{I}^2 -K ₂ Bi ₈ Se ₁₃ \hat{I}^x S x Materials. Journal of Electronic Materials, 2013, 42, 1604-1611.	1.0	6
72	Inhomogeneities and Effective Mass in Doped Mg ₂ Si. Journal of Electronic Materials, 2016, 45, 1900-1906.	1.0	6

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73	Graphite reinforced silane crosslinked high density polyethylene: The effect of filler loading on the thermal and mechanical properties. <i>Polymer Composites</i> , 2021, 42, 1181-1197.	2.3	6
74	Thermoelectric Performance of Mechanically Mixed Bi _x Sb _{2-x} Te ₃ ABS Composites. <i>Materials</i> , 2021, 14, 1706.	1.3	5
75	Long-time Stability of Mg ₂ (Si-Sn-Ge) - Based Thermoelectrics Under Large Temperature Gradient Conditions. <i>Materials Today: Proceedings</i> , 2015, 2, 596-601.	0.9	4
76	Experimental and modeling evidence for the reduction of thermal conductivity in Mg ₂ Si by fine tuning the nano & micro-structural features. <i>Materials Today: Proceedings</i> , 2017, 4, 12374-12382.	0.9	4
77	Reduction of Hf via Hf/Zr Substitution in Mechanically Alloyed (Hf,Ti)CoSb Half-Heusler Solid Solutions. <i>Inorganics</i> , 2022, 10, 51.	1.2	4
78	IR Reflectivity Studies of Mechanically Alloyed PbTe Nanocrystals. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1166, 12.	0.1	3
79	Thermoelectric Materials and Applications on the Recovery of Waste Heat Energy. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	3
80	Carrier Mapping in Thermoelectric Materials. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1543, 171-176.	0.1	3
81	Simulation Based Design of a Thermoelectric Energy Harvesting Device for Aircraft Applications. , 2017, , .		3
82	Preparation of highly efficient thermoelectric Bi-doped Mg ₂ Si _{0.55-x} Sn _{0.4} Gex (x = 0 and 0.05) materials with a scalable mechanical alloying method. <i>Journal of Physics and Chemistry of Solids</i> , 2022, 161, 110472.	1.9	3
83	Design of a Thermoelectric Device for Power Generation through Waste Heat Recovery from Marine Internal Combustion Engines. <i>Energies</i> , 2022, 15, 4075.	1.6	3
84	Modification of Thermoelectric Properties Using Insertion Techniques. <i>Materials Research Society Symposia Proceedings</i> , 1998, 545, 149.	0.1	2
85	Thermoelectric Module For Low Temperature Applications. <i>Materials Research Society Symposia Proceedings</i> , 2001, 691, 1.	0.1	2
86	Synthesis, Crystal Structure and Thermoelectric Properties of $\hat{1}^2$ -K ₂ Bi ₈ Se ₁₃ Solid Solutions. <i>Materials Research Society Symposia Proceedings</i> , 2003, 793, 395.	0.1	2
87	On the optical properties of thermoelectric alkali metal chalcogenide compounds. <i>Materials Research Society Symposia Proceedings</i> , 2005, 886, 1.	0.1	2
88	On the Use of Thermoelectric (TE) Applications Based on Commercial Modules: The Case of TE Generator and TE Cooler. , 2010, , .		2
89	Structural features of ball-milled nanostructured K ₂ Bi ₈ Se ₁₃ thermoelectric material. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2011, 176, 1568-1573.	1.7	2
90	Thermal, electron transport and far infrared properties of PbTe single crystals doped with Br. , 2012, , .		2

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91	Macro and Micro-Scale Features of Thermoelectric PbTe (Br, Na) Systems: Micro-FTIR Spectroscopy, Micro-Seebeck Measurements, and SEM/EDX Observations. Journal of Electronic Materials, 2014, 43, 3785-3791.	1.0	2
92	Structural Characterization and Thermoelectric Properties of Hot-Pressed CoSi Nanocomposites. Journal of Electronic Materials, 2014, 43, 3824-3830.	1.0	2
93	Synthesis, crystal structure and thermoelectric properties of a new metal telluride Ba ₃ Ag ₃ InTe ₆ . Inorganic Chemistry Frontiers, 2017, 4, 1458-1464.	3.0	2
94	Low Temperature Synthesis as a Route for Highly Thermoelectric Efficient Na-doped PbTe. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800098.	0.8	2
95	Thermoelectric Properties of K ₂ Bi ₈ -xSbxSe ₁₃ Solid Solutions and Se Doping. Materials Research Society Symposia Proceedings, 2001, 691, 1.	0.1	1
96	Thermoelectric Properties of K ₂ Bi ₈ Se ₁₃ -xSx Solid Solutions. Materials Research Society Symposia Proceedings, 2005, 886, 1.	0.1	1
97	Synthesis and Thermoelectric Properties of low-x Bi ₂ Se ₃ -xS ₃ Series. , 2010, , .		1
98	Low temperature synthesis and characterization of PbTe-based materials. , 2012, , .		1
99	Materials Science: Trends, Material Properties and Educational Perspectives. , 2016, , 75-100.		1
100	Modeling of thermal conductivity in high performing thermoelectric materials. Journal of Physics: Conference Series, 2017, 785, 012004.	0.3	1
101	Optimization of thermoelectric properties of Bi ₂ Se ₃ using insertion techniques. Ionics, 1998, 4, 88-92.	1.2	0
102	Initial Assessment of the Thermoelectric Properties for the Mixed System K ₂ -xRbxBi ₈ Se ₁₃ . Materials Research Society Symposia Proceedings, 2001, 691, 1.	0.1	0
103	Doping and Alloying Trends in New Thermoelectric Materials. Materials Research Society Symposia Proceedings, 2001, 691, 1.	0.1	0
104	Thermoelectric Properties and Site-Selective Rb ⁺ /K ⁺ Distribution in the K ₂ -xRbxBi ₈ Se ₁₃ Series.. ChemInform, 2003, 34, no.	0.1	0
105	Crystal/Glass Phase Change in KSb ₅ S ₈ Studied Through Thermal Analysis Techniques.. ChemInform, 2004, 35, no.	0.1	0
106	Thermoelectric Properties of Pressed Pellets and Pressureless Sintering in the K ₂ Bi ₈ Se ₁₃ -xSx System. , 2006, , .		0
107	FTIR Reflectivity spectra of Thermoelectric K ₂ Sb ₈ Se ₁₃ crystals. , 2006, , .		0
108	n-to-p Transition on K ₂ Bi ₈ -xSbxSe ₁₃ Series. , 2006, , .		0

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109	Mechanical Alloying Synthesis of K ₂ Bi ₈ Se ₁₃ "type Solid Solutions. Materials Research Society Symposia Proceedings, 2007, 1044, 1.	0.1	0
110	Long-Term performance of a commercial Thermoelectric Power Generator. Materials Research Society Symposia Proceedings, 2009, 1166, 14.	0.1	0
111	Structural Characterization of Nano-Crystalline Mg ₂ Si Prepared by Ball Milling. Advances in Science and Technology, 2010, 74, 48-53.	0.2	0
112	Sintering process in ball-milled K ₂ Bi ₈ Se ₁₃ nano-composites. , 2012, , .		0
113	Effect of sintering in ball-milled K ₂ Bi ₈ Se ₁₃ thermoelectric nano-composites. Journal of Solid State Chemistry, 2012, 193, 137-141.	1.4	0
114	Effect of Silicon Nitride/Oxide on the Structure and the Thermal Conductivity of CoSi Nanocomposites. Journal of Nanoscience and Nanotechnology, 2017, 17, 1555-1563.	0.9	0
115	Materials for Energy Harvesting. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800645.	0.8	0
116	Highly efficient Mg ₂ Si-based thermoelectric materials: A review on the micro- and nanostructure properties and the role of alloying. , 2021, , 429-466.		0
117	Doping Studies of n-Type CsBi ₄ Te ₆ Thermoelectric Materials. Materials Research Society Symposia Proceedings, 2000, 626, 751.	0.1	0
118	Structural Modifications Induced by Sodium Doping in PbTe Thermoelectric Materials Prepared by Low Temperature Synthesis. Journal of Surfaces and Interfaces of Materials, 2014, 2, 238-243.	0.5	0
119	Electron channeling studies of atom site preference and distribution in doped Mg ₂ Si _{1-x} Sn _x thermoelectrics. Materialia, 2022, 24, 101486.	1.3	0