

Masayuki Takashiri

List of Publications by Year in descending order

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106
papers

2,433
citations

136740

32
h-index

233125

45
g-index

108
all docs

108
docs citations

108
times ranked

1492
citing authors

#	ARTICLE	IF	CITATIONS
1	Fabrication and characterization of bismuth-telluride-based alloy thin film thermoelectric generators by flash evaporation method. <i>Sensors and Actuators A: Physical</i> , 2007, 138, 329-334.	2.0	170
2	Effect of grain size on thermoelectric properties of n-type nanocrystalline bismuth-telluride based thin films. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	133
3	Thermoelectric properties of n-type nanocrystalline bismuth-telluride-based thin films deposited by flash evaporation. <i>Journal of Applied Physics</i> , 2007, 101, 074301.	1.1	95
4	Combined effect of nanoscale grain size and porosity on lattice thermal conductivity of bismuth-telluride-based bulk alloys. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	76
5	Structure and thermoelectric properties of boron doped nanocrystalline Si _{0.8} Ge _{0.2} thin film. <i>Journal of Applied Physics</i> , 2006, 100, 054315.	1.1	69
6	Investigation of the effects of compressive and tensile strain on n-type bismuth telluride and p-type antimony telluride nanocrystalline thin films for use in flexible thermoelectric generators. <i>Journal of Alloys and Compounds</i> , 2015, 653, 480-485.	2.8	65
7	Improved thermoelectric performance of highly-oriented nanocrystalline bismuth antimony telluride thin films. <i>Thin Solid Films</i> , 2010, 519, 619-624.	0.8	58
8	Multi-layered-stack thermoelectric generators using p-type Sb ₂ Te ₃ and n-type Bi ₂ Te ₃ thin films by radio-frequency magnetron sputtering. <i>Vacuum</i> , 2017, 144, 164-171.	1.6	58
9	Strain and grain size effects on thermal transport in highly-oriented nanocrystalline bismuth antimony telluride thin films. <i>International Journal of Heat and Mass Transfer</i> , 2014, 76, 376-384.	2.5	53
10	Effect of thermal annealing on the structural and thermoelectric properties of electrodeposited antimony telluride thin films. <i>Journal of Alloys and Compounds</i> , 2016, 685, 147-152.	2.8	52
11	Growth of single-crystalline Bi ₂ Te ₃ hexagonal nanoplates with and without single nanopores during temperature-controlled solvothermal synthesis. <i>Scientific Reports</i> , 2019, 9, 10790.	1.6	52
12	Structural and thermoelectric properties of fine-grained Bi _{0.4} Te _{3.0} Sb _{1.6} thin films with preferred orientation deposited by flash evaporation method. <i>Thin Solid Films</i> , 2008, 516, 6336-6343.	0.8	51
13	Highly oriented crystal growth of nanocrystalline bismuth telluride thin films with anisotropic thermoelectric properties using two-step treatment. <i>Journal of Alloys and Compounds</i> , 2017, 698, 977-983.	2.8	46
14	Combination of Electrodeposition and Transfer Processes for Flexible Thin-Film Thermoelectric Generators. <i>Coatings</i> , 2018, 8, 22.	1.2	46
15	Structural and Thermoelectric Properties of Nanocrystalline Bismuth Telluride Thin Films Under Compressive and Tensile Strain. <i>Journal of Electronic Materials</i> , 2015, 44, 1632-1636.	1.0	44
16	Preparation and characterization of Bi _{0.4} Te _{3.0} Sb _{1.6} nanoparticles and their thin films. <i>Journal of Alloys and Compounds</i> , 2008, 462, 351-355.	2.8	41
17	Cross-plane thermal conductivity of highly oriented nanocrystalline bismuth antimony telluride thin films. <i>Journal of Alloys and Compounds</i> , 2010, 490, L44-L47.	2.8	41
18	Dual-bath electrodeposition of n-type Bi _{0.4} Te _{3.0} Se multilayer thin films. <i>Journal of Alloys and Compounds</i> , 2015, 649, 721-725.	2.8	41

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19	Structural, optical, and transport properties of nanocrystalline bismuth telluride thin films treated with homogeneous electron beam irradiation and thermal annealing. <i>Nanotechnology</i> , 2016, 27, 335703.	1.3	41
20	Anisotropic Analysis of Nanocrystalline Bismuth Telluride Thin Films Treated by Homogeneous Electron Beam Irradiation. <i>Materials Transactions</i> , 2017, 58, 513-519.	0.4	41
21	Role of stirring assist during solvothermal synthesis for preparing single-crystal bismuth telluride hexagonal nanoplates. <i>Materials Chemistry and Physics</i> , 2016, 173, 213-218.	2.0	40
22	Fabrication and characterization of Bi _{0.4} Te _{3.0} Sb _{1.6} thin films by flash evaporation method. <i>Journal of Alloys and Compounds</i> , 2007, 441, 246-250.	2.8	38
23	Comparison of crystal growth and thermoelectric properties of n-type Bi-Se-Te and p-type Bi-Sb-Te nanocrystalline thin films: Effects of homogeneous irradiation with an electron beam. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	38
24	Enhanced thermoelectric properties of phase-separating bismuth selenium telluride thin films via a two-step method. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	38
25	Fabrication of bismuth telluride nanoplates via solvothermal synthesis using different alkalis and nanoplate thin films by printing method. <i>Journal of Crystal Growth</i> , 2017, 468, 194-198.	0.7	38
26	Influences of substrate types and heat treatment conditions on structural and thermoelectric properties of nanocrystalline Bi ₂ Te ₃ thin films formed by DC magnetron sputtering. <i>Vacuum</i> , 2020, 179, 109535.	1.6	38
27	Determination of the Origin of Crystal Orientation for Nanocrystalline Bismuth Telluride-Based Thin Films Prepared by Use of the Flash Evaporation Method. <i>Journal of Electronic Materials</i> , 2014, 43, 1881-1889.	1.0	37
28	Effects of homogeneous irradiation of electron beam on crystal growth and thermoelectric properties of nanocrystalline bismuth selenium telluride thin films. <i>Journal of Alloys and Compounds</i> , 2014, 612, 98-102.	2.8	37
29	Determining the Thermal Conductivity of Nanocrystalline Bismuth Telluride Thin Films Using the Differential 3I% Method While Accounting for Thermal Contact Resistance. <i>Journal of Electronic Materials</i> , 2015, 44, 2021-2025.	1.0	36
30	Experimental and first-principles study of the electronic transport properties of strained Bi ₂ Te ₃ thin films on a flexible substrate. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	36
31	Thermoelectric properties of nanocrystalline Sb ₂ Te ₃ thin films: experimental evaluation and first-principles calculation, addressing effect of crystal grain size. <i>Nanotechnology</i> , 2018, 29, 075701.	1.3	36
32	Bismuth antimony telluride thin films with unique crystal orientation by two-step method. <i>Journal of Alloys and Compounds</i> , 2016, 683, 276-281.	2.8	33
33	Thermal annealing effect on structural and thermoelectric properties of hexagonal Bi ₂ Te ₃ nanoplate thin films by drop-casting technique. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 02CC02.	0.8	33
34	Optimized structure of tubular thermoelectric generators using n-type Bi ₂ Te ₃ and p-type Sb ₂ Te ₃ thin films on flexible substrate for energy harvesting. <i>Sensors and Actuators A: Physical</i> , 2020, 313, 112199.	2.0	32
35	Effects of different electrolytes and film thicknesses on structural and thermoelectric properties of electropolymerized poly(3,4-ethylenedioxythiophene) films. <i>RSC Advances</i> , 2019, 9, 15957-15965.	1.7	28
36	Facile preparation of air-stable n-type thermoelectric single-wall carbon nanotube films with anionic surfactants. <i>Scientific Reports</i> , 2020, 10, 8104.	1.6	26

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37	Freestanding bilayers of drop-cast single-walled carbon nanotubes and electropolymerized poly(3,4-ethylenedioxythiophene) for thermoelectric energy harvesting. <i>Organic Electronics</i> , 2020, 76, 105478.	1.4	25
38	Effects of Cr interlayer thickness on adhesive, structural, and thermoelectric properties of antimony telluride thin films deposited by radio-frequency magnetron sputtering. <i>Thin Solid Films</i> , 2016, 619, 195-201.	0.8	23
39	Characteristics of nanostructured bismuth telluride thin films fabricated by oblique deposition. <i>Vacuum</i> , 2018, 148, 296-302.	1.6	23
40	Hollow electrode enhanced radio frequency glow plasma and its application to the chemical vapor deposition of microcrystalline silicon. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004, 22, 2139-2144.	0.9	22
41	Growth of single-crystalline bismuth antimony telluride nanoplates on the surface of nanoparticle thin films. <i>Journal of Crystal Growth</i> , 2013, 372, 199-204.	0.7	22
42	Origin of n type properties in single wall carbon nanotube films with anionic surfactants investigated by experimental and theoretical analyses. <i>Scientific Reports</i> , 2021, 11, 5758.	1.6	21
43	Improvement of thermoelectric properties of flexible Bi ₂ Te ₃ thin films in bent states during sputtering deposition and post-thermal annealing. <i>Journal of Alloys and Compounds</i> , 2022, 898, 162889.	2.8	21
44	Power Generation in Slope-Type Thin-Film Thermoelectric Generators by the Simple Contact of a Heat Source. <i>Coatings</i> , 2019, 9, 63.	1.2	20
45	Flexible thermoelectric films formed using integrated nanocomposites with single-wall carbon nanotubes and Bi ₂ Te ₃ nanoplates via solvothermal synthesis. <i>Scientific Reports</i> , 2020, 10, 17031.	1.6	20
46	Hollow electrode enhanced RF glow plasma for the fast deposition of microcrystalline silicon. <i>Surface and Coatings Technology</i> , 2003, 173, 243-248.	2.2	18
47	Improved thermoelectric properties of solvothermally synthesized Bi ₂ Te ₃ nanoplate films with homogeneous interconnections using Bi ₂ Te ₃ electrodeposited layers. <i>Journal of Alloys and Compounds</i> , 2020, 818, 152901.	2.8	18
48	Atomic composition changes in bismuth telluride thin films by thermal annealing and estimation of their thermoelectric properties using experimental analyses and first-principles calculations. <i>Journal of Alloys and Compounds</i> , 2020, 841, 155697.	2.8	18
49	Effect of composition on the properties of bismuth telluride thin films produced by galvanostatic electrodeposition. <i>Transactions of the Materials Research Society of Japan</i> , 2015, 40, 383-387.	0.2	17
50	Enhanced thermoelectric properties of electropolymerized poly (3,4-ethylenedioxythiophene) thin films by optimizing electrolyte temperature and thermal annealing temperature. <i>Organic Electronics</i> , 2018, 55, 112-116.	1.4	16
51	Thermoelectric properties including thermal conductivity of electrodeposited bismuth selenide thin films fabricated using different acid solutions. <i>Journal of Alloys and Compounds</i> , 2019, 792, 222-229.	2.8	16
52	Heat source free water floating carbon nanotube thermoelectric generators. <i>Scientific Reports</i> , 2021, 11, 14707.	1.6	15
53	Promotion of crystal growth in as-grown Bi ₂ Te ₃ electrodeposited films without micro-pores using sputtered Bi ₂ Te ₃ seed layers deposited on a glass substrate. <i>Journal of Alloys and Compounds</i> , 2018, 764, 802-808.	2.8	13
54	Measurement of thermal boundary resistance and thermal conductivity of single-crystalline Bi ₂ Te ₃ nanoplate films by differential 3 ω method. <i>Applied Physics Express</i> , 2020, 13, 035501.	1.1	13

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55	Characteristics of electrodeposited bismuth telluride thin films with different crystal growth by adjusting electrolyte temperature and concentration. <i>Current Applied Physics</i> , 2018, 18, 1513-1522.	1.1	12
56	Impact of the amount of single-wall carbon nanotubes (SWCNTs) in single-crystalline Bi ₂ Te ₃ nanoplates/SWCNTs nanocomposite films by drop-casting method. <i>Japanese Journal of Applied Physics</i> , 2019, 58, SDDG04.	0.8	12
57	Thermoelectric Properties of Electrodeposited Bismuth Telluride Thin Films by Thermal Annealing and Homogeneous Electron Beam Irradiation. <i>ECS Transactions</i> , 2017, 75, 123-131.	0.3	11
58	Solvothermal synthesis of n-type Bi ₂ (SexTe _{1-\hat{x})₃ nanoplates for high-performance thermoelectric thin films on flexible substrates. <i>Scientific Reports</i>, 2020, 10, 6315.}	1.6	11
59	Fabrication of n-type Bismuth-Telluride Thin Films by Flash Evaporation Method. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 2006, 72, 1793-1798.	0.2	10
60	Highly oriented nanocrystalline bismuth telluride thin films obtained by radio-frequency magnetron sputtering with a magnetic field applied to the substrate via an affixed permanent magnet. <i>Vacuum</i> , 2018, 157, 216-222.	1.6	10
61	Air stability of n-type single-walled carbon nanotube films with anionic surfactants investigated using molecular dynamics. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 625, 126925.	2.3	10
62	Development of microcrystalline silicon thin films with high deposition rate (over 10nm/s) using VHF hollow electrode enhanced glow plasma. <i>Surface and Coatings Technology</i> , 2010, 204, 3525-3529.	2.2	9
63	Evaluation of Specific Heat, Sound Velocity and Lattice Thermal Conductivity of Strained Nanocrystalline Bismuth Antimony Telluride Thin Films. <i>Journal of Electronic Materials</i> , 2015, 44, 1679-1687.	1.0	9
64	Preparation and characterization of electropolymerized poly(3,4-ethylenedioxythiophene) thin films with different dopant anions. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 06GK03.	0.8	9
65	Effect of Pulse Frequency on Structural and Thermoelectric Properties of Bismuth Telluride Thin Films by Electrodeposition. <i>ECS Transactions</i> , 2017, 75, 133-141.	0.3	9
66	Combined infrared spectroscopy and first-principles calculation analysis of electronic transport properties in nanocrystalline Bi ₂ Te ₃ thin films with controlled strain. <i>Journal of Alloys and Compounds</i> , 2017, 702, 229-235.	2.8	9
67	Improved thermoelectric performances of nanocrystalline Sb ₂ Te ₃ /Cr bilayers by reducing thermal conductivity in the grain boundaries and heterostructure interface. <i>Vacuum</i> , 2019, 161, 92-97.	1.6	9
68	Evaluation of Thermoelectric Performance of Bi ₂ Te ₃ Films as a Function of Temperature Increase Rate during Heat Treatment. <i>Coatings</i> , 2021, 11, 38.	1.2	9
69	Effect of reducing impurity concentration of microcrystalline silicon thin films for solar cells using radio frequency hollow electrode enhanced glow plasma. <i>Vacuum</i> , 2014, 101, 125-129.	1.6	8
70	In- and cross-plane thermoelectric properties of oriented Bi ₂ Te ₃ thin films electrodeposited on an insulating substrate for thermoelectric applications. <i>Journal of Alloys and Compounds</i> , 2022, 899, 163317.	2.8	8
71	Structural changes in nanocrystalline Bi ₂ Te ₃ /Bi ₂ Se ₃ multilayer thin films caused by thermal annealing. <i>Journal of Crystal Growth</i> , 2017, 468, 188-193.	0.7	7
72	Thermoelectric properties of bismuth telluride nanoplate thin films determined using combined infrared spectroscopy and first-principles calculation. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 06HC02.	0.8	7

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73	Enhanced thermoelectric properties of electrodeposited Bi ₂ Te ₃ thin films using TiN diffusion barrier layer on a stainless-steel substrate and thermal annealing. <i>Thin Solid Films</i> , 2020, 714, 138356.	0.8	7
74	Self-powered broadband photo-detection and persistent energy generation with junction-free strained Bi ₂ Te ₃ thin films. <i>Optics Express</i> , 2020, 28, 27644.	1.7	7
75	Phonon transport properties depending on crystal orientation analyzed by nanoindentation using single-crystal silicon wafers. <i>Applied Physics Express</i> , 2021, 14, 126502.	1.1	7
76	Thin-film crystal growth of microcrystalline silicon using very-high-frequency hollow-electrode-enhanced glow plasma. <i>Thin Solid Films</i> , 2015, 579, 68-74.	0.8	6
77	Use of H ₂ -Ar gas mixtures in radio-frequency magnetron sputtering to produce high-performance nanocrystalline bismuth telluride thin films. <i>Thin Solid Films</i> , 2018, 664, 100-105.	0.8	6
78	Determination of group velocity based on nanoindentation using Si and SiO ₂ /Si wafers. <i>AIP Advances</i> , 2021, 11, .	0.6	6
79	Highly productive solvothermal synthesis of hexagonal Sb ₂ Te ₃ fine-platelets using solution with high precursor concentration and added glucose. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 055502.	0.8	5
80	Correlation between the air stability of n-type thermoelectric properties and defects in single-walled carbon nanotubes with anionic surfactants. <i>AIP Advances</i> , 2021, 11, 015332.	0.6	5
81	Fast chemical vapor deposition of microcrystalline silicon by applying magnetic field to hollow electrode enhanced radio frequency glow plasma. <i>Surface and Coatings Technology</i> , 2007, 202, 114-120.	2.2	4
82	Optical and electronic transport properties of single-crystalline Bi ₂ Te ₃ hexagonal nanoplates determined by infrared spectroscopy and first-principles calculations. <i>Transactions of the Materials Research Society of Japan</i> , 2018, 43, 311-317.	0.2	4
83	Investigation of Phase Transition from Critical Nucleus to Bi ₂ Te ₃ Nanoplate Based on Screw Dislocation-Driven Spiral Growth by Solvothermal Synthesis. <i>Crystal Research and Technology</i> , 2021, 56, 2100153.	0.6	4
84	Hollow Electrode Enhanced RF Glow Plasma Generation and its Application to the Fast Deposition of Microcrystalline Silicon Films. <i>Materials Research Society Symposia Proceedings</i> , 2003, 762, 5161.	0.1	3
85	Effect of ultraviolet irradiation on poly(3,4-ethylenedioxythiophene) doped with ClO ₄ thin films using electropolymerization. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 06GJ03.	0.8	3
86	Experimental and Computational Analyses of Temperature Distributions in Slope-Type Thin-Film Thermoelectric Generators at Different Slope Angles and Evaluation of Their Thermoelectric Performance. <i>Coatings</i> , 2020, 10, 214.	1.2	3
87	Film deposition and annealing treatment of sputtered bismuth telluride based thin films. <i>Journal of Advanced Science</i> , 2014, 26, 23-27.	0.1	2
88	Application of low hydrogen-diluted and low gaseous-pressure monosilane plasma to fast deposition of solar-cell-grade microcrystalline silicon. <i>Transactions of the Materials Research Society of Japan</i> , 2016, 41, 385-392.	0.2	2
89	Optimized hydrogen concentration within a remotely induced hollow-anode plasma for fast chemical-vapor-deposition of photosensitive and <110>-preferential microcrystalline silicon thin-films. <i>Thin Solid Films</i> , 2020, 694, 137714.	0.8	2
90	Development of a micro-generator based on Bi ₂ Te ₃ thin films. , 2007, , .		1

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91	Fabrication and characterization of bismuth-telluride based thin films by electrodeposition. Journal of Advanced Science, 2013, 25, 21-24.	0.1	1
92	Theoretical and experimental analyses to determine the effects of crystal orientation and grain size on the thermoelectric properties of oblique deposited bismuth telluride thin films. Japanese Journal of Applied Physics, 2018, 57, 06HE02.	0.8	1
93	Performance improvement of electrodeposited Bi ₂ Te ₃ thin films using homogeneous electron beam irradiation and thermal annealing. Journal of Advanced Science, 2018, 30, n/a.	0.1	1
94	Structure and thermoelectric properties of electrodeposited bismuth telluride thin films by controlling electrolyte temperature. Journal of Advanced Science, 2018, 30, n/a.	0.1	1
95	Remotely induced high-density hollow-anode plasma and its application to fast deposition of photosensitive microcrystalline silicon thin film with preferential <110> orientation. AIP Advances, 2019, 9, 055125.	0.6	1
96	Effect of Se incorporation on thermoelectric properties of Bi ₂ (Se _x) ₃ thin films. Journal of Applied Physics, 2019, 125, 054101.	0.8	1
97	Hetero-interfaced films composed of solvothermally synthesized Bi ₂ Te ₃ nanoplates covered with electrodeposited Bi ₂ Se ₃ layers. Thin Solid Films, 2022, 741, 139032.	0.8	1
98	Investigation on Momentum Loss of Transferred Arcjet.. 880-02 Nihon Kikai Gakkai Ronbunshu Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 1994, 60, 1632-1638.	0.2	0
99	Thermoelectric Micro-Cooler of Bismuth Telluride Thin Films. , 2007, , 335.		0
100	Thermal Conductivity of Nano-Porous Bismuth Antimony Telluride. , 2010, , .		0
101	Experimental and theoretical investigations of structural and thermoelectric properties of gallium doped ZnO thin films. Journal of Advanced Science, 2016, 28, n/a.	0.1	0
102	Improvement in thermoelectric properties of electrodeposited p-type Sb-Te thin films by performing thermal annealing and incorporating diffusion barrier layers. Journal of Advanced Science, 2017, 29, n/a.	0.1	0
103	Thin Films of Bismuth-Telluride-Based Alloys. , 2019, , 1-29.		0
104	30am2-PN-52 Impact on thermal annealing of electrodeposited bismuth telluride based thin films and thermoelectric modules. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2015, 2015.7, _30am2-PN-_30am2-PN-.	0.0	0
105	Crystal orientation control of antimony telluride thermoelectric thin films by oblique deposition. Journal of Advanced Science, 2016, 28, n/a.	0.1	0
106	Structural Evaluation of Bi ₂ Te ₃ Thin Films Prepared by Hydrogen-Argon Mixing Sputtering. Journal of Advanced Science, 2018, 30, n/a.	0.1	0