

Jin-Sang Kim

List of Publications by Year in descending order

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docs citations

122
times ranked

4239
citing authors

#	ARTICLE	IF	CITATIONS
1	Operation of Wearable Thermoelectric Generators Using Dual Sources of Heat and Light. <i>Advanced Science</i> , 2022, 9, e2104915.	11.2	17
2	Oxidation of thermoelectric Bi ₂ Te ₃ -based alloys by atomic layer deposition of Ru metal. <i>Materials Letters</i> , 2022, 320, 132321.	2.6	2
3	Nanostructured Inorganic Chalcogenide-Carbon Nanotube Yarn having a High Thermoelectric Power Factor at Low Temperature. <i>ACS Nano</i> , 2021, 15, 13118-13128.	14.6	24
4	Hot rolling process for texture development and grain refinement of n-type Bi ₂ Te ₃ alloys. <i>Materials Letters</i> , 2021, 301, 130278.	2.6	2
5	Wafer-Scale, Conformal, and Low-Temperature Synthesis of Layered Tin Disulfides for Emerging Nonplanar and Flexible Electronics. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 2679-2686.	8.0	20
6	Substrate Surface Modification for Enlarging Two-Dimensional SnS Grains at Low Temperatures. <i>Chemistry of Materials</i> , 2020, 32, 9026-9033.	6.7	9
7	High-performance compliant thermoelectric generators with magnetically self-assembled soft heat conductors for self-powered wearable electronics. <i>Nature Communications</i> , 2020, 11, 5948.	12.8	169
8	Domain engineering of epitaxial (001) Bi ₂ Te ₃ thin films by miscut GaAs substrate. <i>Acta Materialia</i> , 2020, 197, 309-315.	7.9	6
9	Combined hot extrusion and spark plasma sintering method for producing highly textured thermoelectric Bi ₂ Te ₃ alloys. <i>Journal of the European Ceramic Society</i> , 2020, 40, 3042-3048.	5.7	11
10	Carrier Modulation in Bi ₂ Te ₃ -Based Alloys via Interfacial Doping with Atomic Layer Deposition. <i>Coatings</i> , 2020, 10, 572.	2.6	10
11	Mapping thermoelectric properties of polycrystalline n-type Bi ₂ Te ₃ -xSex alloys by composition and doping level. <i>Journal of Alloys and Compounds</i> , 2020, 844, 155828.	5.5	7
12	3D architectures of single-crystalline complex oxides. <i>Materials Horizons</i> , 2020, 7, 1552-1557.	12.2	9
13	Enhanced thermal stability of Bi ₂ Te ₃ -based alloys via interface engineering with atomic layer deposition. <i>Journal of the European Ceramic Society</i> , 2020, 40, 3592-3599.	5.7	11
14	Atomic layer deposition of SnO ₂ thin films using tetraethyltin and H ₂ O ₂ . <i>Ceramics International</i> , 2019, 45, 20600-20605.	4.8	17
15	Atomic layer deposition of Ta-doped SnO ₂ films with enhanced dopant distribution for thermally stable capacitor electrode applications. <i>Applied Surface Science</i> , 2019, 497, 143804.	6.1	11
16	Precision Interface Engineering of an Atomic Layer in Bulk Bi ₂ Te ₃ Alloys for High Thermoelectric Performance. <i>ACS Nano</i> , 2019, 13, 7146-7154.	14.6	66
17	Impurity-free, mechanical doping for the reproducible fabrication of the reliable n-type Bi ₂ Te ₃ -based thermoelectric alloys. <i>Acta Materialia</i> , 2018, 150, 153-160.	7.9	23
18	All villi-like metal oxide nanostructures-based chemiresistive electronic nose for an exhaled breath analyzer. <i>Sensors and Actuators B: Chemical</i> , 2018, 257, 295-302.	7.8	51

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19	A novel class of oxynitrides stabilized by nitrogen dimer formation. <i>Scientific Reports</i> , 2018, 8, 14471.	3.3	6
20	A Ru-Pt alloy electrode to suppress leakage currents of dynamic random-access memory capacitors. <i>Nanotechnology</i> , 2018, 29, 455202.	2.6	4
21	Laser-irradiated inclined metal nanocolumns for selective, scalable, and room-temperature synthesis of plasmonic isotropic nanospheres. <i>Journal of Materials Chemistry C</i> , 2018, 6, 6038-6045.	5.5	37
22	Low-temperature wafer-scale synthesis of two-dimensional SnS ₂ . <i>Nanoscale</i> , 2018, 10, 17712-17721.	5.6	30
23	Texture-induced reduction in electrical resistivity of p-type (Bi,Sb) ₂ Te ₃ by a hot extrusion. <i>Journal of Alloys and Compounds</i> , 2018, 764, 261-266.	5.5	12
24	Versatile approaches to tune a nanocolumnar structure for optimized electrical properties of In ₂ O ₃ based gas sensor. <i>Sensors and Actuators B: Chemical</i> , 2017, 248, 894-901.	7.8	23
25	Interface Engineering for Extremely Large Grains in Explosively Crystallized TiO ₂ Films Grown by Low-Temperature Atomic Layer Deposition. <i>Chemistry of Materials</i> , 2017, 29, 2046-2054.	6.7	19
26	Fabrication of high-performance p-type thin film transistors using atomic-layer-deposited SnO films. <i>Journal of Materials Chemistry C</i> , 2017, 5, 3139-3145.	5.5	81
27	Downsizing gas sensors based on semiconducting metal oxide: Effects of electrodes on gas sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2017, 248, 949-956.	7.8	31
28	Design and Experimental Investigation of Thermoelectric Generators for Wearable Applications. <i>Advanced Materials Technologies</i> , 2017, 2, 1600292.	5.8	28
29	Improvement of thermoelectric properties of Bi ₂ Te ₃ and Sb ₂ Te ₃ films grown on graphene substrate. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1700029.	2.4	14
30	A two-step synthesis process of thermoelectric alloys for the separate control of carrier density and mobility. <i>Journal of Alloys and Compounds</i> , 2017, 727, 191-195.	5.5	6
31	Synthesis of SnS Thin Films by Atomic Layer Deposition at Low Temperatures. <i>Chemistry of Materials</i> , 2017, 29, 8100-8110.	6.7	68
32	Wearable solar thermoelectric generator driven by unprecedentedly high temperature difference. <i>Nano Energy</i> , 2017, 40, 663-672.	16.0	119
33	Suppression of bulk conductivity and large phase relaxation length in topological insulator Bi ₂ Te ₃ epitaxial thin films grown by Metal-Organic Chemical Vapor Deposition (MOCVD). <i>Journal of Alloys and Compounds</i> , 2017, 723, 942-947.	5.5	5
34	Self-doped nanocolumnar vanadium oxides thin films for highly selective NO ₂ gas sensing at low temperature. <i>Sensors and Actuators B: Chemical</i> , 2017, 241, 40-47.	7.8	17
35	Harman Measurements for Thermoelectric Materials and Modules under Non-Adiabatic Conditions. <i>Scientific Reports</i> , 2016, 6, 39131.	3.3	19
36	Effect of spark plasma sintering conditions on the thermoelectric properties of (Bi _{0.25} Sb _{0.75}) ₂ Te ₃ alloys. <i>Journal of Alloys and Compounds</i> , 2016, 678, 396-402.	5.5	25

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37	Wafer-scale growth of MoS ₂ thin films by atomic layer deposition. <i>Nanoscale</i> , 2016, 8, 10792-10798.	5.6	139
38	Toward High-Performance Hematite Nanotube Photoanodes: Charge-Transfer Engineering at Heterointerfaces. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 23793-23800.	8.0	22
39	Correction of the Electrical and Thermal Extrinsic Effects in Thermoelectric Measurements by the Harman Method. <i>Scientific Reports</i> , 2016, 6, 26507.	3.3	11
40	Enhancement of Mechanical Hardness in SnO ₂ N _y with a Dense High-Pressure Cubic Phase of SnO ₂ . <i>Chemistry of Materials</i> , 2016, 28, 7051-7057.	6.7	23
41	Chemiresistive Electronic Nose toward Detection of Biomarkers in Exhaled Breath. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 20969-20976.	8.0	113
42	High-performance shape-engineerable thermoelectric painting. <i>Nature Communications</i> , 2016, 7, 13403.	12.8	122
43	Free-electron creation at the 60° twin boundary in Bi ₂ Te ₃ . <i>Nature Communications</i> , 2016, 7, 12449.	12.8	59
44	Large linear magnetoresistance in heavily-doped Nb:SrTiO ₃ epitaxial thin films. <i>Scientific Reports</i> , 2016, 6, 34295.	3.3	12
45	Thermal stability of 2DEG at amorphous LaAlO ₃ /crystalline SrTiO ₃ heterointerfaces. <i>Nano Convergence</i> , 2016, 3, 7.	12.1	5
46	Impedance-based interpretations in 2-dimensional electron gas conduction formed in the LaAlO ₃ /Sr _x Ca _{1-x} TiO ₃ /SrTiO ₃ system. <i>Journal of Physics and Chemistry of Solids</i> , 2016, 93, 131-136.	4.0	0
47	Glancing angle deposited WO ₃ nanostructures for enhanced sensitivity and selectivity to NO ₂ in gas mixture. <i>Sensors and Actuators B: Chemical</i> , 2016, 229, 92-99.	7.8	28
48	Comprehensive study on critical role of surface oxygen vacancies for 2DEG formation and annihilation in LaAlO ₃ /SrTiO ₃ heterointerfaces. <i>Electronic Materials Letters</i> , 2016, 12, 243-250.	2.2	12
49	Thickness-Dependent Electrocaloric Effect in Pb _{0.9} La _{0.1} Zr _{0.65} Ti _{0.35} O ₃ Films Grown by Sol-Gel Process. <i>Journal of Electronic Materials</i> , 2016, 45, 1057-1064.	2.2	12
50	Giant Electroresistive Ferroelectric Diode on 2DEG. <i>Scientific Reports</i> , 2015, 5, 10548.	3.3	10
51	Hardening of BiTe based alloys by dispersing B ₄ C nanoparticles. <i>Acta Materialia</i> , 2015, 97, 68-74.	7.9	19
52	Electric-field-induced Shift in the Threshold Voltage in LaAlO ₃ /SrTiO ₃ Heterostructures. <i>Scientific Reports</i> , 2015, 5, 8023.	3.3	13
53	Effect of Sn Doping on the Thermoelectric Properties of n-type Bi ₂ (Te,Se) ₃ Alloys. <i>Journal of Electronic Materials</i> , 2015, 44, 1926-1930.	2.2	8
54	Vertically ordered SnO ₂ nanobamboos for substantially improved detection of volatile reducing gases. <i>Journal of Materials Chemistry A</i> , 2015, 3, 17939-17945.	10.3	40

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55	Sn doping in thermoelectric Bi ₂ Te ₃ films by metal-organic chemical vapor deposition. Applied Surface Science, 2015, 353, 232-237.	6.1	18
56	Thermoelectric Properties of Sn-Doped Bi _{0.4} Sb _{1.6} Te ₃ Thin Films. Journal of Electronic Materials, 2015, 44, 1573-1578.	2.2	3
57	Utilization of both-side metal decoration in close-packed SnO ₂ nanodome arrays for ultrasensitive gas sensing. Sensors and Actuators B: Chemical, 2015, 213, 314-321.	7.8	30
58	High mobility, large linear magnetoresistance, and quantum transport phenomena in Bi ₂ Te ₃ films grown by metallo-organic chemical vapor deposition (MOCVD). Nanoscale, 2015, 7, 17359-17365.	5.6	7
59	Symmetry-dependent interfacial reconstruction to compensate polar discontinuity at perovskite oxide interfaces (LaAlO ₃ /SrTiO ₃ and LaAlO ₃ /CaTiO ₃). Applied Physics Letters, 2015, 106, .	3.3	7
60	Growth Enhancement and Nitrogen Loss in ZnO _x N _y Low-Temperature Atomic Layer Deposition with NH ₃ . Journal of Physical Chemistry C, 2015, 119, 23470-23477.	3.1	7
61	Control of the initial growth in atomic layer deposition of Pt films by surface pretreatment. Nanotechnology, 2015, 26, 304003.	2.6	21
62	Effect of Trivalent Bi Doping on the Seebeck Coefficient and Electrical Resistivity of Ca ₃ Co ₄ O ₉ . Journal of Electronic Materials, 2015, 44, 3621-3626.	2.2	12
63	Orientation-Controlled Growth of Pt Films on SrTiO ₃ (001) by Atomic Layer Deposition. Chemistry of Materials, 2015, 27, 6779-6783.	6.7	9
64	Nanomaterials for Thermoelectrics. Journal of Nanomaterials, 2014, 2014, 1-1.	2.7	0
65	Dynamic temperature response of electrocaloric multilayer capacitors. Applied Physics Letters, 2014, 104, .	3.3	11
66	Enhancement of Initial Growth of ZnO Films on Layer-Structured Bi ₂ Te ₃ by Atomic Layer Deposition. Chemistry of Materials, 2014, 26, 6448-6453.	6.7	14
67	Thermopower Enhancement of Bi ₂ Te ₃ Films by Doping I Ions. Journal of Electronic Materials, 2014, 43, 2000-2005.	2.2	9
68	Thermoelectric Properties of n-Type Bi ₂ Te ₃ /PbSe _{0.5} Te _{0.5} Segmented Thermoelectric Material. Journal of Electronic Materials, 2014, 43, 414-418.	2.2	13
69	Thermoelectric Properties of Highly Deformed and Subsequently Annealed p-Type (Bi _{0.25} Sb _{0.75}) ₂ Te ₃ Alloys. Journal of Electronic Materials, 2014, 43, 1726-1732.	2.2	4
70	Strain-assisted, low-temperature synthesis of high-performance thermoelectric materials. Physical Chemistry Chemical Physics, 2014, 16, 3529.	2.8	13
71	Nonvolatile Resistance Switching on Two-Dimensional Electron Gas. ACS Applied Materials & Interfaces, 2014, 6, 17785-17791.	8.0	5
72	Vertically Ordered Hematite Nanotube Array as an Ultrasensitive and Rapid Response Acetone Sensor. ACS Applied Materials & Interfaces, 2014, 6, 14779-14784.	8.0	84

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73	Impact of parasitic thermal effects on thermoelectric property measurements by Harman method. Review of Scientific Instruments, 2014, 85, 045108.	1.3	21
74	Effect of Heat Treatment on the Thermoelectric Properties of Bismuth–Antimony–Telluride Prepared by Mechanical Deformation and Mechanical Alloying. Journal of Electronic Materials, 2014, 43, 2255-2261.	2.2	14
75	SnO ₂ thin films grown by atomic layer deposition using a novel Sn precursor. Applied Surface Science, 2014, 320, 188-194.	6.1	35
76	Non-Volatile Control of 2DEG Conductivity at Oxide Interfaces. Advanced Materials, 2013, 25, 4612-4617.	21.0	47
77	Highly Ordered TiO ₂ Nanotubes on Patterned Substrates: Synthesis-in-Place for Ultrasensitive Chemiresistors. Journal of Physical Chemistry C, 2013, 117, 17824-17831.	3.1	24
78	Composition-Dependent Thermoelectric Properties of n-Type Bi ₂ Te _{2.7} Se _{0.3} Doped with In ₄ Se ₃ . Journal of Electronic Materials, 2013, 42, 2178-2183.	2.2	6
79	Extremely Sensitive and Selective NO Probe Based on Villi-like WO ₃ Nanostructures for Application to Exhaled Breath Analyzers. ACS Applied Materials & Interfaces, 2013, 5, 10591-10596.	8.0	96
80	The Effect of Grain Size and Density on the Thermoelectric Properties of Bi ₂ Te ₃ -PbTe Compounds. Journal of Electronic Materials, 2013, 42, 3390-3396.	2.2	34
81	Tunable conductivity at LaAlO ₃ /SrxCa1-xTiO ₃ (0 ≤ x ≤ 1) heterointerfaces. Applied Physics Letters, 2013, 102, 012903.	3.3	14
82	Synthesis of self-ordered Sb ₂ Te ₂ films with atomically aligned Te layers and the effect of phonon scattering modulation. Journal of Materials Chemistry C, 2013, 1, 7043.	5.5	7
83	Large-scale Synthesis of Vertically Aligned ZnO Hexagonal Nanotube-Rod Hybrids Using a Two-Step Growth Method. Journal of the American Ceramic Society, 2013, 96, 3500-3503.	3.8	8
84	Capacitance-voltage analysis of LaAlO ₃ /SrTiO ₃ heterostructures. Applied Physics Letters, 2013, 102, 112906.	3.3	8
85	IONIC LIQUID CATALYZED ELECTROLYTE FOR ELECTROCHEMICAL POLYANILINE SUPERCAPACITORS. , 2013, , .		0
86	The effect of substrate on the thermoelectric properties of rf sputtered Bi ₂ Te ₃ film. AIP Conference Proceedings, 2012, , .	0.4	1
87	Self-activated ultrahigh chemosensitivity of oxide thin film nanostructures for transparent sensors. Scientific Reports, 2012, 2, 588.	3.3	110
88	Epitaxial growth of CdTe films on GaAs-buffered (001) Si substrates by metal organic chemical vapor deposition. Materials Letters, 2012, 87, 139-141.	2.6	3
89	Growth and thermoelectric properties of Bi ₂ Te ₃ films deposited by modified MOCVD. Journal of Crystal Growth, 2012, 346, 17-21.	1.5	31
90	A Structural Investigation of CdTe(001) Thin Films on GaAs/Si(001) Substrates by High-Resolution Electron Microscopy. Journal of Electronic Materials, 2012, 41, 2795-2798.	2.2	2

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91	The Effect of Annealing in Controlled Vapor Pressure on the Thermoelectric Properties of RF-Sputtered Bi ₂ Te ₃ Film. Journal of Electronic Materials, 2012, 41, 1519-1523.	2.2	7
92	Thermoelectric Properties of Indium-Selenium Nanocomposites Prepared by Mechanical Alloying and Spark Plasma Sintering. Journal of Electronic Materials, 2012, 41, 1354-1359.	2.2	17
93	Three-Dimensional Bi ₂ Te ₃ Nanocrystallites Embedded in 2D Bi ₂ Te ₃ Films Grown by MOCVD. Journal of Electronic Materials, 2012, 41, 1237-1241.	2.2	3
94	Effect of Composition on Thermoelectric Properties in PbTe-Bi ₂ Te ₃ Composites. Journal of Electronic Materials, 2011, 40, 1010-1014.	2.2	16
95	Deposition of Nanocrystalline Bi ₂ Te ₃ Films Using a Modified MOCVD System. Journal of Electronic Materials, 2011, 40, 635-640.	2.2	17
96	High-temperature thermoelectric properties of nanostructured Ca ₃ Co ₄ O ₉ thin films. Applied Physics Letters, 2011, 98, .	3.3	38
97	Size Effects in the CO Sensing Properties of Nanostructured TiO ₂ Thin Films Fabricated by Colloidal Templating. Electronic Materials Letters, 2010, 6, 31-34.	2.2	14
98	Mechanism of the Sensitivity Enhancement in TiO ₂ Hollow-Hemisphere Gas Sensors. Electronic Materials Letters, 2010, 6, 135-139.	2.2	14
99	Highly sensitive CO sensors based on cross-linked TiO ₂ hollow hemispheres. Sensors and Actuators B: Chemical, 2010, 149, 116-121.	7.8	64
100	Metalorganic Chemical Vapor Deposition of CdTe(133) Epilayers on Si(211) Substrates. Journal of Electronic Materials, 2010, 39, 863-867.	2.2	13
101	Growth of Large Scale CdTe(400) Thin Films by MOCVD. Journal of the Korean Institute of Electrical and Electronic Material Engineers, 2010, 23, 343-346.	0.0	0
102	Growth of Nano Structure Bi ₂ Te ₃ Films using Modified MOCVD Technique. Journal of the Korean Institute of Electrical and Electronic Material Engineers, 2010, 23, 497-501.	0.0	0
103	Fabrication of Bismuth Telluride-Based Alloy Thin Film Thermoelectric Devices Grown by Metal Organic Chemical Vapor Deposition. Journal of Electronic Materials, 2009, 38, 920-924.	2.2	56
104	MOCVD Growth of Thermoelectric BiSbTe ₃ Films on Surface-Treated Sapphire Substrates. Journal of the Korean Physical Society, 2009, 54, 1589-1593.	0.7	3
105	Structural Characteristics of Bi ₂ Te ₃ and Sb ₂ Te ₃ films on (001) GaAs Substrates grown by MOCVD. , 2006, , .		3
106	Material characteristics of metalorganic chemical vapor deposition of Bi ₂ Te ₃ films on GaAs substrates. Journal of Crystal Growth, 2006, 290, 441-445.	1.5	14
107	Surface acoustic wave sensors to detect volatile gases by measuring output phase shift. Journal of Electroceramics, 2006, 17, 1013-1017.	2.0	4
108	The effect of ammonium sulfide treatment on interfacial properties in ZnS/HgCdTe heterostructure. Journal of Electroceramics, 2006, 17, 1041-1045.	2.0	1

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109	Constructions and characteristics of a tiny piezoelectric linear motor using radial mode vibrations. Journal of Electroceramics, 2006, 17, 603-608.	2.0	4
110	MOCVD of Bi ₂ Te ₃ and Sb ₂ Te ₃ on GaAs Substrates for Thin-Film Thermoelectric Applications. Journal of Nanoscience and Nanotechnology, 2006, 6, 3325-3328.	0.9	26
111	Metal organic vapor phase epitaxy of BiSbTe ₃ films on (001) GaAs vicinal substrates. Journal of Applied Physics, 2006, 100, 123501.	2.5	17
112	Two-dimensional growth of ZnO epitaxial films on c-Al ₂ O ₃ (0001) substrates with optimized growth temperature and low-temperature buffer layer by plasma-assisted molecular beam epitaxy. Journal of Crystal Growth, 2005, 274, 418-424.	1.5	35
113	Wear and dynamic properties of piezoelectric ultrasonic motor with frictional materials coated stator. Materials Chemistry and Physics, 2005, 90, 391-395.	4.0	49
114	Ammonium sulfide treatment of HgCdTe substrate and its effects on electrical properties of ZnS/HgCdTe heterostructure. Thin Solid Films, 2005, 483, 407-410.	1.8	7
115	Low-energy ion beam treatment of $\hat{\pm}$ -Al ₂ O ₃ (0001) and improvement of photoluminescence of ZnO thin films. Metals and Materials International, 2004, 10, 351-355.	3.4	6
116	The role of surface adsorbates on electrical properties of MOVPE grown HgCdTe onto (001) GaAs substrates. Solid-State Electronics, 2004, 48, 1623-1627.	1.4	5
117	The effect of ZnO homo-buffer layer on ZnO thin films grown on c-Al ₂ O ₃ (0001) by plasma assisted molecular beam epitaxy. Journal of Crystal Growth, 2004, 267, 85-91.	1.5	22
118	Characteristics of SWIR Diodes of HgCdTe/CdTe/GaAs Grown by Metal Organic Vapor Phase Epitaxy. Physica Status Solidi (B): Basic Research, 2002, 229, 1089-1092.	1.5	3
119	Control of hillock formation during MOVPE growth of HgCdTe by suppressing the pre-reaction of the Cd precursor with Hg. Journal of Crystal Growth, 2002, 236, 119-124.	1.5	9
120	Growth of high quality of ZnSe epilayers on (001) vicinally oriented GaAs substrate by molecular beam epitaxy. Materials Science in Semiconductor Processing, 2000, 3, 201-205.	4.0	1
121	Structural properties of ZnSe layers grown on (001) GaAs substrates tilted toward [110] and [010]. Journal of Applied Physics, 1997, 81, 6107-6111.	2.5	10