Jin-Sang Kim

List of Publications by Year
in descending order

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		201674	206112
121	2,870	27	48
papers	citations	h-index	g-index

122	122	122	4239
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-performance compliant thermoelectric generators with magnetically self-assembled soft heat conductors for self-powered wearable electronics. Nature Communications, 2020, 11, 5948.	12.8	169
2	Wafer-scale growth of MoS₂thin films by atomic layer deposition. Nanoscale, 2016, 8, 10792-10798.	5.6	139
3	High-performance shape-engineerable thermoelectric painting. Nature Communications, 2016, 7, 13403.	12.8	122
4	Wearable solar thermoelectric generator driven by unprecedentedly high temperature difference. Nano Energy, 2017, 40, 663-672.	16.0	119
5	Chemiresistive Electronic Nose toward Detection of Biomarkers in Exhaled Breath. ACS Applied Materials & Interfaces, 2016, 8, 20969-20976.	8.0	113
6	Self-activated ultrahigh chemosensitivity of oxide thin film nanostructures for transparent sensors. Scientific Reports, 2012, 2, 588.	3.3	110
7	Extremely Sensitive and Selective NO Probe Based on Villi-like WO₃ Nanostructures for Application to Exhaled Breath Analyzers. ACS Applied Materials & Interfaces, 2013, 5, 10591-10596.	8.0	96
8	Vertically Ordered Hematite Nanotube Array as an Ultrasensitive and Rapid Response Acetone Sensor. ACS Applied Materials & Interfaces, 2014, 6, 14779-14784.	8.0	84
9	Fabrication of high-performance p-type thin film transistors using atomic-layer-deposited SnO films. Journal of Materials Chemistry C, 2017, 5, 3139-3145.	5.5	81
10	Synthesis of SnS Thin Films by Atomic Layer Deposition at Low Temperatures. Chemistry of Materials, 2017, 29, 8100-8110.	6.7	68
11	Precision Interface Engineering of an Atomic Layer in Bulk Bi₂Te₃ Alloys for High Thermoelectric Performance. ACS Nano, 2019, 13, 7146-7154.	14.6	66
12	Highly sensitive CO sensors based on cross-linked TiO2 hollow hemispheres. Sensors and Actuators B: Chemical, 2010, 149, 116-121.	7.8	64
13	Free-electron creation at the 60Â° twin boundary in Bi2Te3. Nature Communications, 2016, 7, 12449.	12.8	59
14	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
15	All villi-like metal oxide nanostructures-based chemiresistive electronic nose for an exhaled breath analyzer. Sensors and Actuators B: Chemical, 2018, 257, 295-302.	7.8	51
16	Wear and dynamic properties of piezoelectric ultrasonic motor with frictional materials coated stator. Materials Chemistry and Physics, 2005, 90, 391-395.	4.0	49
17	Nonâ€Volatile Control of 2DEG Conductivity at Oxide Interfaces. Advanced Materials, 2013, 25, 4612-4617.	21.0	47
18	Vertically ordered SnO₂ nanobamboos for substantially improved detection of volatile reducing gases. Journal of Materials Chemistry A, 2015, 3, 17939-17945.	10.3	40

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19	High-temperature thermoelectric properties of nanostructured Ca3Co4O9 thin films. Applied Physics Letters, 2011, 98, .	3.3	38
20	Laser-irradiated inclined metal nanocolumns for selective, scalable, and room-temperature synthesis of plasmonic isotropic nanospheres. Journal of Materials Chemistry C, 2018, 6, 6038-6045.	5.5	37
21	Two-dimensional growth of ZnO epitaxial films on c-Al2O3 (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
22	SnO 2 thin films grown by atomic layer deposition using a novel Sn precursor. Applied Surface Science, 2014, 320, 188-194.	6.1	35
23	The Effect of Grain Size and Density on the Thermoelectric Properties of Bi2Te3-PbTe Compounds. Journal of Electronic Materials, 2013, 42, 3390-3396.	2.2	34
24	Growth and thermoelectric properties of Bi2Te3 films deposited by modified MOCVD. Journal of Crystal Growth, 2012, 346, 17-21.	1.5	31
25	Downsizing gas sensors based on semiconducting metal oxide: Effects of electrodes on gas sensing properties. Sensors and Actuators B: Chemical, 2017, 248, 949-956.	7.8	31
26	Utilization of both-side metal decoration in close-packed SnO2 nanodome arrays for ultrasensitive gas sensing. Sensors and Actuators B: Chemical, 2015, 213, 314-321.	7.8	30
27	Low-temperature wafer-scale synthesis of two-dimensional SnS₂. Nanoscale, 2018, 10, 17712-17721.	5.6	30
28	Glancing angle deposited WO 3 nanostructures for enhanced sensitivity and selectivity to NO 2 in gas mixture. Sensors and Actuators B: Chemical, 2016, 229, 92-99.	7.8	28
29	Design and Experimental Investigation of Thermoelectric Generators for Wearable Applications. Advanced Materials Technologies, 2017, 2, 1600292.	5.8	28
30	MOCVD of Bi2Te3 and Sb2Te3 on GaAs Substrates for Thin-Film Thermoelectric Applications. Journal of Nanoscience and Nanotechnology, 2006, 6, 3325-3328.	0.9	26
31	Effect of spark plasma sintering conditions on the thermoelectric properties of (Bi0.25Sb0.75)2Te3 alloys. Journal of Alloys and Compounds, 2016, 678, 396-402.	5.5	25
32	Highly Ordered TiO₂ Nanotubes on Patterned Substrates: Synthesis-in-Place for Ultrasensitive Chemiresistors. Journal of Physical Chemistry C, 2013, 117, 17824-17831.	3.1	24
33	Nanostructured Inorganic Chalcogenide-Carbon Nanotube Yarn having a High Thermoelectric Power Factor at Low Temperature. ACS Nano, 2021, 15, 13118-13128.	14.6	24
34	Enhancement of Mechanical Hardness in SnO_xN_y with a Dense High-Pressure Cubic Phase of SnO₂. Chemistry of Materials, 2016, 28, 7051-7057.	6.7	23
35	Versatile approaches to tune a nanocolumnar structure for optimized electrical properties of In2O3 based gas sensor. Sensors and Actuators B: Chemical, 2017, 248, 894-901.	7.8	23
36	Impurity-free, mechanical doping for the reproducible fabrication of the reliable n-type Bi2Te3-based thermoelectric alloys. Acta Materialia, 2018, 150, 153-160.	7.9	23

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37	The effect of ZnO homo-buffer layer on ZnO thin films grown on c-Al2O3(0001) by plasma assisted molecular beam epitaxy. Journal of Crystal Growth, 2004, 267, 85-91.	1.5	22
38	Toward High-Performance Hematite Nanotube Photoanodes: Charge-Transfer Engineering at Heterointerfaces. ACS Applied Materials & Interfaces, 2016, 8, 23793-23800.	8.0	22
39	Impact of parasitic thermal effects on thermoelectric property measurements by Harman method. Review of Scientific Instruments, 2014, 85, 045108.	1.3	21
40	Control of the initial growth in atomic layer deposition of Pt films by surface pretreatment. Nanotechnology, 2015, 26, 304003.	2.6	21
41	Wafer-Scale, Conformal, and Low-Temperature Synthesis of Layered Tin Disulfides for Emerging Nonplanar and Flexible Electronics. ACS Applied Materials & Interfaces, 2020, 12, 2679-2686.	8.0	20
42	Hardening of Biâ€“Te based alloys by dispersing B4C nanoparticles. Acta Materialia, 2015, 97, 68-74.	7.9	19
43	Harman Measurements for Thermoelectric Materials and Modules under Non-Adiabatic Conditions. Scientific Reports, 2016, 6, 39131.	3.3	19
44	Interface Engineering for Extremely Large Grains in Explosively Crystallized TiO₂ Films Grown by Low-Temperature Atomic Layer Deposition. Chemistry of Materials, 2017, 29, 2046-2054.	6.7	19
45	Sn doping in thermoelectric Bi2Te3 films by metal-organic chemical vapor deposition. Applied Surface Science, 2015, 353, 232-237.	6.1	18
46	Metal organic vapor phase epitaxy of BiSbTe3 films on (001) GaAs vicinal substrates. Journal of Applied Physics, 2006, 100, 123501.	2.5	17
47	Deposition of Nanocrystalline Bi2Te3 Films Using a Modified MOCVD System. Journal of Electronic Materials, 2011, 40, 635-640.	2.2	17
48	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
49	Self-doped nanocolumnar vanadium oxides thin films for highly selective NO2 gas sensing at low temperature. Sensors and Actuators B: Chemical, 2017, 241, 40-47.	7.8	17
50	Atomic layer deposition of SnO2 thin films using tetraethyltin and H2O2. Ceramics International, 2019, 45, 20600-20605.	4.8	17
51	Operation of Wearable Thermoelectric Generators Using Dual Sources of Heat and Light. Advanced Science, 2022, 9, e2104915.	11.2	17
52	Effect of Composition on Thermoelectric Properties in PbTe-Bi2Te3 Composites. Journal of Electronic Materials, 2011, 40, 1010-1014.	2.2	16
53	Material characteristics of metalorganic chemical vapor deposition of Bi2Te3 films on GaAs substrates. Journal of Crystal Growth, 2006, 290, 441-445.	1.5	14
54	Size Effects in the CO Sensing Properties of Nanostructured TiO2 Thin Films Fabricated by Colloidal Templating. Electronic Materials Letters, 2010, 6, 31-34.	2.2	14

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55	Mechanism of the Sensitivity Enhancement in TiO2 Hollow-Hemisphere Gas Sensors. Electronic Materials Letters, 2010, 6, 135-139.	2.2	14
56	Tunable conductivity at LaAlO3/SrxCa1â^'xTiO3 (0â€‰â‰€â€‰xâ€‰â‰€â€‰1) heterointerfaces. Applied Physics Letters, 2013, 102, 012903.	3.3	14
57	Enhancement of Initial Growth of ZnO Films on Layer-Structured Bi₂Te₃ by Atomic Layer Deposition. Chemistry of Materials, 2014, 26, 6448-6453.	6.7	14
58	Effect of Heat Treatment on the Thermoelectric Properties of Bismuthâ€“Antimonyâ€“Telluride Prepared by Mechanical Deformation and Mechanical Alloying. Journal of Electronic Materials, 2014, 43, 2255-2261.	2.2	14
59	Improvement of thermoelectric properties of Bi₂Te₃ and Sb₂Te₃ films grown on graphene substrate. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700029.	2.4	14
60	Metalorganic Chemical Vapor Deposition of CdTe(133) Epilayers on Si(211) Substrates. Journal of Electronic Materials, 2010, 39, 863-867.	2.2	13
61	Thermoelectric Properties of n-Type Bi2Te3/PbSe0.5Te0.5 Segmented Thermoelectric Material. Journal of Electronic Materials, 2014, 43, 414-418.	2.2	13
62	Strain-assisted, low-temperature synthesis of high-performance thermoelectric materials. Physical Chemistry Chemical Physics, 2014, 16, 3529.	2.8	13
63	Electric-field-induced Shift in the Threshold Voltage in LaAlO3/SrTiO3 Heterostructures. Scientific Reports, 2015, 5, 8023.	3.3	13
64	Effect of Trivalent Bi Doping on the Seebeck Coefficient and Electrical Resistivity of Ca3Co4O9. Journal of Electronic Materials, 2015, 44, 3621-3626.	2.2	12
65	Large linear magnetoresistance in heavily-doped Nb:SrTiO3 epitaxial thin films. Scientific Reports, 2016, 6, 34295.	3.3	12
66	Comprehensive study on critical role of surface oxygen vacancies for 2DEG formation and annihilation in LaAlO3/SrTiO3 heterointerfaces. Electronic Materials Letters, 2016, 12, 243-250.	2.2	12
67	Thickness-Dependent Electrocaloric Effect in Pb0.9La0.1Zr0.65Ti0.35O3 Films Grown by Solâ€“Gel Process. Journal of Electronic Materials, 2016, 45, 1057-1064.	2.2	12
68	Texture-induced reduction in electrical resistivity of p-type (Bi,Sb)2Te3 by a hot extrusion. Journal of Alloys and Compounds, 2018, 764, 261-266.	5.5	12
69	Dynamic temperature response of electrocaloric multilayer capacitors. Applied Physics Letters, 2014, 104, .	3.3	11
70	Correction of the Electrical and Thermal Extrinsic Effects in Thermoelectric Measurements by the Harman Method. Scientific Reports, 2016, 6, 26507.	3.3	11
71	Atomic layer deposition of Ta-doped SnO2 films with enhanced dopant distribution for thermally stable capacitor electrode applications. Applied Surface Science, 2019, 497, 143804.	6.1	11
72	Combined hot extrusion and spark plasma sintering method for producing highly textured thermoelectric Bi2Te3 alloys. Journal of the European Ceramic Society, 2020, 40, 3042-3048.	5.7	11

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73	Enhanced thermal stability of Bi2Te3-based alloys via interface engineering with atomic layer deposition. Journal of the European Ceramic Society, 2020, 40, 3592-3599.	5.7	11
74	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
75	Giant Electroresistive Ferroelectric Diode on 2DEG. Scientific Reports, 2015, 5, 10548.	3.3	10
76	Carrier Modulation in Bi2Te3-Based Alloys via Interfacial Doping with Atomic Layer Deposition. Coatings, 2020, 10, 572.	2.6	10
77	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
78	Thermopower Enhancement of Bi2Te3 Films by Doping I Ions. Journal of Electronic Materials, 2014, 43, 2000-2005.	2.2	9
79	Orientation-Controlled Growth of Pt Films on SrTiO₃ (001) by Atomic Layer Deposition. Chemistry of Materials, 2015, 27, 6779-6783.	6.7	9
80	Substrate Surface Modification for Enlarging Two-Dimensional SnS Grains at Low Temperatures. Chemistry of Materials, 2020, 32, 9026-9033.	6.7	9
81	3D architectures of single-crystalline complex oxides. Materials Horizons, 2020, 7, 1552-1557.	12.2	9
82	Largeâ€Scale Synthesis of Vertically Aligned <scp><scp>ZnO</scp></scp> Hexagonal Nanotubeâ€Rod Hybrids Using a Twoâ€Step Growth Method. Journal of the American Ceramic Society, 2013, 96, 3500-3503.	3.8	8
83	Capacitanceâ€“voltage analysis of LaAlO3/SrTiO3 heterostructures. Applied Physics Letters, 2013, 102, 112906.	3.3	8
84	Effect of Sn Doping on the Thermoelectric Properties of n-type Bi2(Te,Se)3 Alloys. Journal of Electronic Materials, 2015, 44, 1926-1930.	2.2	8
85	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
86	The Effect of Annealing in Controlled Vapor Pressure on the Thermoelectric Properties of RF-Sputtered Bi2Te3 Film. Journal of Electronic Materials, 2012, 41, 1519-1523.	2.2	7
87	Synthesis of self-ordered Sb2Te2 films with atomically aligned Te layers and the effect of phonon scattering modulation. Journal of Materials Chemistry C, 2013, 1, 7043.	5.5	7
88	High mobility, large linear magnetoresistance, and quantum transport phenomena in Bi₂Te₃films grown by metallo-organic chemical vapor deposition (MOCVD). Nanoscale, 2015, 7, 17359-17365.	5.6	7
89	Symmetry-dependent interfacial reconstruction to compensate polar discontinuity at perovskite oxide interfaces (LaAlO3/SrTiO3 and LaAlO3/CaTiO3). Applied Physics Letters, 2015, 106, .	3.3	7
90	Growth Enhancement and Nitrogen Loss in ZnO_xN_y Low-Temperature Atomic Layer Deposition with NH₃. Journal of Physical Chemistry C, 2015, 119, 23470-23477.	3.1	7

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91	Mapping thermoelectric properties of polycrystalline n-type Bi2Te3-xSex alloys by composition and doping level. Journal of Alloys and Compounds, 2020, 844, 155828.	5.5	7
92	Low-energy ion beam treatment of Î±-Al2O3(0001) and improvement of photoluminescence of ZnO thin films. Metals and Materials International, 2004, 10, 351-355.	3.4	6
93	Composition-Dependent Thermoelectric Properties of n-Type Bi2Te2.7Se0.3 Doped with In4Se3. Journal of Electronic Materials, 2013, 42, 2178-2183.	2.2	6
94	A two-step synthesis process of thermoelectric alloys for the separate control of carrier density and mobility. Journal of Alloys and Compounds, 2017, 727, 191-195.	5.5	6
95	A novel class of oxynitrides stabilized by nitrogen dimer formation. Scientific Reports, 2018, 8, 14471.	3.3	6
96	Domain engineering of epitaxial (001) Bi2Te3 thin films by miscut GaAs substrate. Acta Materialia, 2020, 197, 309-315.	7.9	6
97	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
98	Nonvolatile Resistance Switching on Two-Dimensional Electron Gas. ACS Applied Materials & Interfaces, 2014, 6, 17785-17791.	8.0	5
99	Thermal stability of 2DEG at amorphous LaAlO3/crystalline SrTiO3 heterointerfaces. Nano Convergence, 2016, 3, 7.	12.1	5
100	Suppression of bulk conductivity and large phase relaxation length in topological insulator Bi2-Î´SnÎ´Te3 epitaxial thin films grown by Metal-Organic Chemical Vapor Deposition (MOCVD). Journal of Alloys and Compounds, 2017, 723, 942-947.	5.5	5
101	Surface acoustic wave sensors to detect volatile gases by measuring output phase shift. Journal of Electroceramics, 2006, 17, 1013-1017.	2.0	4
102	Constructions and characteristics of a tiny piezoelectric linear motor using radial mode vibrations. Journal of Electroceramics, 2006, 17, 603-608.	2.0	4
103	Thermoelectric Properties of Highly Deformed and Subsequently Annealed p-Type (Bi0.25Sb0.75)2Te3 Alloys. Journal of Electronic Materials, 2014, 43, 1726-1732.	2.2	4
104	A Ruâ€“Pt alloy electrode to suppress leakage currents of dynamic random-access memory capacitors. Nanotechnology, 2018, 29, 455202.	2.6	4
105	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
106	Structural Characteristics of Bi2Te3 and Sb2Te3 films on (001) GaAs Substrates grown by MOCVD. , 2006, , .		3
107	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
108	Three-Dimensional Bi2Te3 Nanocrystallites Embedded in 2D Bi2Te3 Films Grown by MOCVD. Journal of Electronic Materials, 2012, 41, 1237-1241.	2.2	3

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109	Thermoelectric Properties of Sn-Doped Bi0.4Sb1.6Te3 Thin Films. Journal of Electronic Materials, 2015, 44, 1573-1578.	2.2	3
110	MOCVD Growth of Thermoelectric BiSbTe3 Films on Surface-Treated Sapphire Substrates. Journal of the Korean Physical Society, 2009, 54, 1589-1593.	0.7	3
111	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
112	Hot rolling process for texture development and grain refinement of n-type Bi2Te3 alloys. Materials Letters, 2021, 301, 130278.	2.6	2
113	Oxidation of thermoelectric Bi2Te3-based alloys by atomic layer deposition of Ru metal. Materials Letters, 2022, 320, 132321.	2.6	2
114	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
115	The effect of ammonium sulfide treatment on interfacial properties in ZnS/HgCdTe heterostructure. Journal of Electroceramics, 2006, 17, 1041-1045.	2.0	1
116	The effect of substrate on the thermoelectric properties of rf sputtered Bi2Te3 film. AIP Conference Proceedings, 2012, , .	0.4	1
117	IONIC LIQUID CATALYZED ELECTROLYTE FOR ELECTROCHEMICAL POLYANILINE SUPERCAPACITORS. , 2013, , .		0
118	Nanomaterials for Thermoelectrics. Journal of Nanomaterials, 2014, 2014, 1-1.	2.7	0
119	Impedance-based interpretations in 2-dimensional electron gas conduction formed in the LaAlO 3 /Sr x Ca 1â^'x TiO 3 /SrTiO 3 system. Journal of Physics and Chemistry of Solids, 2016, 93, 131-136.	4.0	0
120	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
121	Growth of Nano Structure Bi2Te3Films using Modified MOCVD Technique. Journal of the Korean Institute of Electrical and Electronic Material Engineers, 2010, 23, 497-501.	0.0	0