

Mann-Ho Cho

List of Publications by Year in descending order

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papers

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citations

361296

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docs citations

119
times ranked

2719
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement in thermoelectric properties of Te-embedded Bi ₂ Te ₃ by preferential phonon scattering in heterostructure interface. Nano Energy, 2018, 47, 374-384.	8.2	101
2	MoS ₂ –InGaZnO Heterojunction Phototransistors with Broad Spectral Responsivity. ACS Applied Materials & Interfaces, 2016, 8, 8576-8582.	4.0	98
3	Interaction- and defect-free van der Waals contacts between metals and two-dimensional semiconductors. Nature Electronics, 2022, 5, 241-247.	13.1	84
4	Wafer-scale synthesis of thickness-controllable MoS ₂ films via solution-processing using a dimethylformamide/n-butylamine/2-aminoethanol solvent system. Nanoscale, 2015, 7, 9311-9319.	2.8	82
5	Terahertz single conductance quantum and topological phase transitions in topological insulator Bi ₂ Se ₃ ultrathin films. Nature Communications, 2015, 6, 6552.	5.8	79
6	High concentration of nitrogen doped into graphene using N ₂ plasma with an aluminum oxide buffer layer. Journal of Materials Chemistry C, 2014, 2, 933-939.	2.7	62
7	Improved thermal stability of Al ₂ O ₃ /HfO ₂ /Al ₂ O ₃ high-k gate dielectric stack on GaAs. Applied Physics Letters, 2010, 96, .	1.5	55
8	The electronic structure of C ₆₀ /ZnPc interface for organic photovoltaic device with blended layer architecture. Applied Physics Letters, 2010, 96, .	1.5	50
9	Thermal and Electrical Conduction of Single-crystal Bi ₂ Te ₃ Nanostructures grown using a one step process. Scientific Reports, 2016, 6, 19132.	1.6	45
10	Structural Evolution and the Control of Defects in Atomic Layer Deposited HfO ₂ –Al ₂ O ₃ Stacked Films on GaAs. ACS Applied Materials & Interfaces, 2013, 5, 1982-1989.	4.0	34
11	Evolution of crystal structures in GeTe during phase transition. Scientific Reports, 2017, 7, 955.	1.6	32
12	Non-toxically enhanced sulfur reaction for formation of chalcogenide thin films using a thermal cracker. Journal of Materials Chemistry A, 2014, 2, 14593-14599.	5.2	31
13	Reversible Fermi Level Tuning of a Sb ₂ Te ₃ Topological Insulator by Structural Deformation. Nano Letters, 2015, 15, 3820-3826.	4.5	31
14	Controlling the defects and transition layer in SiO ₂ films grown on 4H-SiC via direct plasma-assisted oxidation. Scientific Reports, 2016, 6, 34945.	1.6	29
15	Effect of the Thermal Conductivity on Resistive Switching in GeTe and Ge ₂ Sb ₂ Te ₅ Nanowires. ACS Applied Materials & Interfaces, 2015, 7, 21819-21827.	4.0	25
16	Tuning the Fermi level with topological phase transition by internal strain in a topological insulator Bi ₂ Se ₃ thin film. Nanoscale, 2016, 8, 741-751.	2.8	23
17	p–n Junction Diode Using Plasma Boron-Doped Black Phosphorus for High-Performance Photovoltaic Devices. ACS Nano, 2019, 13, 1683-1693.	7.3	23
18	Al ₂ O ₃ Passivation Effect in HfO ₂ –Al ₂ O ₃ Laminate Structures Grown on InP Substrates. ACS Applied Materials & Interfaces, 2017, 9, 17526-17535.	4.0	22

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19	Ultrafast phase change and long durability of BN-incorporated GeSbTe. <i>Journal of Materials Chemistry C</i> , 2015, 3, 1707-1715.	2.7	21
20	The effect of ZnO surface conditions on the electronic structure of the ZnO/CuPc interface. <i>Applied Physics Letters</i> , 2011, 98, 082111.	1.5	20
21	Modulation of phase change characteristics in Ag-incorporated Ge ₂ Sb ₂ Te ₅ owing to changes in structural distortion and bond strength. <i>Journal of Materials Chemistry C</i> , 2017, 5, 3973-3982.	2.7	20
22	Closing the Surface Bandgap in Thin Bi ₂ Se ₃ /Graphene Heterostructures. <i>ACS Nano</i> , 2019, 13, 3931-3939.	7.3	20
23	Effect of In incorporated into SbTe on phase change characteristics resulting from changes in electronic structure. <i>Applied Physics Letters</i> , 2010, 96, 052112.	1.5	19
24	Na-Dependent Ultrafast Carrier Dynamics of CdS/Cu(In,Ga)Se ₂ Measured by Optical Pump-Terahertz Probe Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2015, 119, 20231-20236.	1.5	19
25	Filament Geometry Induced Bipolar, Complementary and Unipolar Resistive Switching under the Same Set Current Compliance in Pt/SiO _x /TiN. <i>Scientific Reports</i> , 2015, 5, 15374.	1.6	18
26	Electric field effect dominated bipolar resistive switching through interface control in a Pt/TiO ₂ /TiN structure. <i>RSC Advances</i> , 2015, 5, 221-230.	1.7	18
27	Structural and Electrical Properties of EOT HfO ₂ (<1 nm) Grown on InAs by Atomic Layer Deposition and Its Thermal Stability. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 7489-7498.	4.0	18
28	Ultra-low Energy Phase Change Memory with Improved Thermal Stability by Tailoring the Local Structure through Ag Doping. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 37285-37294.	4.0	18
29	Electrical properties and thermal stability in stack structure of HfO ₂ /Al ₂ O ₃ /InSb by atomic layer deposition. <i>Scientific Reports</i> , 2017, 7, 11337.	1.6	17
30	Characterization of Rotational Stacking Layers in Large-Area MoSe ₂ Film Grown by Molecular Beam Epitaxy and Interaction with Photon. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 30786-30796.	4.0	16
31	Effects of Nitrogen Incorporation in HfO ₂ Grown on InP by Atomic Layer Deposition: An Evolution in Structural, Chemical, and Electrical Characteristics. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 3896-3906.	4.0	15
32	Enhancement of carrier lifetime by spin-orbit coupling in a topological insulator of an Sb ₂ Te ₃ thin film. <i>Nanoscale</i> , 2016, 8, 19025-19035.	2.8	15
33	Phase Transformation of Alternately Layered Bi/Se Structures to Well-Ordered Single Crystalline Bi ₂ Se ₃ Structures by a Self-Organized Ordering Process. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3737-3746.	1.5	14
34	The effect of copper hexadecafluorophthalocyanine (F16CuPc) inter-layer on pentacene thin-film transistors. <i>Synthetic Metals</i> , 2010, 160, 108-112.	2.1	13
35	Phase Transformation through Metastable Structures in Atomically Controlled Se/Sb MultiLayers. <i>Journal of Physical Chemistry C</i> , 2011, 115, 13462-13470.	1.5	13
36	Effect of amorphization on the structural stability and reversibility of Ge ₂ Sb ₂ Te ₅ and oxygen incorporated Ge ₂ Sb ₂ Te ₅ films. <i>Journal of Materials Chemistry</i> , 2012, 22, 16527.	6.7	13

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37	Ultrafast photocarrier dynamics related to defect states of Si _{1-x} Ge _x nanowires measured by optical pump-probe spectroscopy. <i>Nanoscale</i> , 2017, 9, 8015-8023.	2.8	13
38	Evolution of the broadband optical transition in large-area MoS ₂ . <i>Physical Review B</i> , 2018, 97, .	1.1	13
39	Improving Electrical Properties by Effective Sulfur Passivation via Modifying the Surface State of Substrate in HfO ₂ /InP Systems. <i>Journal of Physical Chemistry C</i> , 2018, 122, 7226-7235.	1.5	13
40	The Phase Change Effect of Oxygen-Incorporation in GeSbTe Films. <i>Journal of the Electrochemical Society</i> , 2011, 158, H471.	1.3	12
41	Effects of Interface Al ₂ O ₃ Passivation Layer for High-k HfO ₂ on GaAs. <i>Electrochemical and Solid-State Letters</i> , 2011, 14, H63.	2.2	12
42	Evolution of the surface state in Bi ₂ Se ₃ Te thin films during phase transition. <i>Nanoscale</i> , 2015, 7, 14924-14936.	2.8	12
43	Laser irradiation-induced modification of the amorphous phase in GeTe films: the role of intermediate Ge-Te bonding in the crystallization mechanism. <i>Journal of Materials Chemistry C</i> , 2015, 3, 9393-9402.	2.7	12
44	Enhanced Photoinduced Carrier Generation Efficiency through Surface Band Bending in Topological Insulator Bi ₂ Se ₃ Thin Films by the Oxidized Layer. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26649-26658.	4.0	12
45	Effects of hydrogen on Au migration and the growth kinetics of Si nanowires. <i>CrystEngComm</i> , 2011, 13, 690-696.	1.3	11
46	Ultrafast chemical lithiation of single crystalline silicon nanowires: in situ characterization and first principles modeling. <i>RSC Advances</i> , 2015, 5, 17438-17443.	1.7	11
47	Electronic Structure of C60/Zinc Phthalocyanine/V2O5 Interfaces Studied Using Photoemission Spectroscopy for Organic Photovoltaic Applications. <i>Molecules</i> , 2018, 23, 449.	1.7	11
48	Growth of pure wurtzite InGaAs nanowires for photovoltaic and energy harvesting applications. <i>Nano Energy</i> , 2018, 53, 57-65.	8.2	11
49	Ultrafast Photo-Response by Surface State-Mediated Optical Transitions in Topological Insulator Bi ₂ Te ₃ Nanowire. <i>Advanced Optical Materials</i> , 2019, 7, 1900621.	3.6	11
50	Enhanced Spin-to-Charge Conversion Efficiency in Ultrathin Bi ₂ Se ₃ Observed by Spintronic Terahertz Spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 23153-23160.	4.0	11
51	Improvement of electrical performance using PtSe ₂ /PtTe ₂ edge contact synthesized by molecular beam epitaxy. <i>Applied Surface Science</i> , 2022, 585, 152507.	3.1	11
52	Thermal Stability of ALD-HfO ₂ /GaAs Pretreated with Trimethylaluminium. <i>Journal of the Electrochemical Society</i> , 2011, 159, G6-G10.	1.3	10
53	Modulation of optoelectronic properties of the Bi ₂ Te ₃ nanowire by controlling the formation of selective surface oxidation. <i>Applied Surface Science</i> , 2021, 548, 149069.	3.1	10
54	Ferroelastic-Ferroelectric Multiferroicity in van der Waals Rhenium Dichalcogenides. <i>Advanced Materials</i> , 2022, 34, e2108777.	11.1	10

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55	Electronic Structure of Te/Sb/Ge and Sb/Te/Ge Multi Layer Films Using Photoelectron Spectroscopy. Journal of the American Chemical Society, 2009, 131, 13634-13638.	6.6	9
56	The modulation of Si _{1-x} Gex nanowires by correlation of inlet gas ratio with H ₂ gas content. CrystEngComm, 2011, 13, 5204.	1.3	9
57	Anomalous Stagewise Lithiation of Gold-Coated Silicon Nanowires: A Combined In Situ Characterization and First-Principles Study. ACS Applied Materials & Interfaces, 2015, 7, 16976-16983.	4.0	9
58	Tuning of Topological Dirac States via Modification of van der Waals Gap in Strained Ultrathin Bi ₂ Se ₃ Films. Journal of Physical Chemistry C, 2018, 122, 23739-23748.	1.5	9
59	Disorder-induced decoupled surface transport channels in thin films of doped topological insulators. Physical Review B, 2018, 98, .	1.1	9
60	Trap-assisted high responsivity of a phototransistor using bi-layer MoSe ₂ grown by molecular beam epitaxy. Applied Surface Science, 2019, 494, 37-45.	3.1	9
61	Effects of oxygen incorporation in GeSbTe films on electrical properties and thermal stability. Applied Physics Letters, 2010, 96, .	1.5	8
62	Hall mobility manipulation in TiO _{2-x} semiconductor films by hydrogen-ion irradiation. Journal of the Korean Physical Society, 2013, 62, 781-786.	0.3	8
63	Defect States below the Conduction Band Edge of HfO ₂ Grown on InP by Atomic Layer Deposition. Journal of Physical Chemistry C, 2015, 119, 6001-6008.	1.5	8
64	Surface chemical structure and doping characteristics of boron-doped Si nanowires fabricated by plasma doping. Applied Surface Science, 2017, 419, 1-8.	3.1	8
65	Effects of thermal and electrical stress on defect generation in InAs metal-oxide-semiconductor capacitor. Applied Surface Science, 2019, 467-468, 1161-1169.	3.1	8
66	Enhancement of photoresponse in Bi ₂ Se ₃ /graphene heterostructures by effective electron-hole separation through internal band bending. Applied Surface Science, 2021, 554, 149623.	3.1	8
67	Topological Surface-Dominated Spintronic THz Emission in Topologically Nontrivial Bi _{1-x} Sb _x Films. Advanced Science, 2022, 9, .	5.6	8
68	Relaxation of misfit strain in silicon-germanium (Si _{1-x} Gex) films during dry oxidation. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 1298-1303.	0.6	7
69	The origin of the resistance change in GeSbTe films. Applied Physics Letters, 2010, 97, 152113.	1.5	7
70	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.	2.7	7
71	Effects of spontaneous nitrogen incorporation by a 4H-SiC(0001) surface caused by plasma nitridation. Journal of Materials Chemistry C, 2015, 3, 5078-5088.	2.7	7
72	Effects of resonant bonding and structural distortion on the phase change properties of Sn ₂ Sb ₂ Se ₅ . Journal of Materials Chemistry C, 2017, 5, 7820-7829.	2.7	7

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73	Ferroelectric switching in GeTe through rotation of lone-pair electrons by Electric field-driven phase transition. Applied Materials Today, 2021, 24, 101122.	2.3	7
74	Ultrathin platinum diselenide synthesis controlling initial growth kinetics: Interfacial reaction depending on thickness and substrate. Applied Surface Science, 2021, 564, 150300.	3.1	7
75	GeTe Nanosheets as Theranostic Agents for Multimodal Imaging and Therapy of Inflammatory Bowel Disease. Advanced Functional Materials, 2022, 32, 2107433.	7.8	7
76	Thermal instability of HfO ₂ on InP structure with ultrathin Al ₂ O ₃ interface passivation layer. Physica Status Solidi - Rapid Research Letters, 2012, 6, 247-249.	1.2	6
77	The oxidation characteristics of silicon nanowires grown with an au catalyst. Nano Research, 2012, 5, 152-163.	5.8	6
78	Interface engineering for a stable chemical structure of oxidized-black phosphorus <i>via</i> self-reduction in AlO _x atomic layer deposition. Nanoscale, 2018, 10, 22896-22907.	2.8	6
79	Effect of substrate on photo-induced persistent photoconductivity in InAs nanowires. Applied Surface Science, 2018, 458, 964-971.	3.1	6
80	Structural Evolution and Electrical Properties of Highly Active Plasma Process on 4H-SiC. Applied Science and Convergence Technology, 2017, 26, 133-138.	0.3	6
81	Topological insulator bismuth selenide grown on black phosphorus for sensitive broadband photodetection. Journal of Materials Chemistry C, 2021, 9, 15150-15157.	2.7	6
82	Structural deformation and void formation driven by phase transformation in the Ge ₂ Sb ₂ Te ₅ film. Journal of Materials Chemistry C, 2014, 2, 2001.	2.7	5
83	Structural evolution and carrier scattering of Si nanowires as a function of oxidation time. Journal of Materials Chemistry C, 2015, 3, 2123-2131.	2.7	5
84	Effect of nitrogen incorporation and oxygen vacancy on electronic structure and the absence of a gap state in HfSiO films. Surface Science, 2012, 606, L64-L68.	0.8	4
85	Generation of planar defects caused by the surface diffusion of Au atoms on SiNWs. Materials Research Bulletin, 2012, 47, 2739-2743.	2.7	4
86	High-mobility property of crystallized In-Te chalcogenide materials. Electronic Materials Letters, 2012, 8, 175-178.	1.0	4
87	Electrical characteristics of HfO ₂ films on InP with different atomic-layer-deposition temperatures. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1381-1385.	0.8	4
88	Change in crystalline structure and band alignment in atomic-layer-deposited HfO ₂ on InP using an annealing treatment. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1612-1617.	0.8	4
89	Phase-change like process through bond switching in distorted and resonantly bonded crystal. Scientific Reports, 2019, 9, 12816.	1.6	4
90	Topological Phase Control of Surface States in Bi ₂ Se ₃ via Spin-Orbit Coupling Modulation through Interface Engineering between HfO ₂ -X. ACS Applied Materials & Interfaces, 2020, 12, 12215-12226.	4.0	4

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91	Enhanced reliability of phase-change memory <i>via</i> modulation of local structure and chemical bonding by incorporating carbon in Ge ₂ Sb ₂ Te ₅ . RSC Advances, 2021, 11, 22479-22488.	1.7	4
92	Improvements in Thermal Stability of Sb ₂ Te ₃ by Modulation of Microstructure via Carbon Incorporation. ACS Applied Electronic Materials, 2021, 3, 3472-3481.	2.0	4
93	The interfacial electronic structure of fullerene/ultra thin dielectrics of SiO ₂ and SiON. Chemical Physics Letters, 2010, 499, 136-140.	1.2	3
94	A Triple-Layered Microcavity Structure for Electrophoretic Image Display. IEEE Transactions on Electron Devices, 2011, 58, 1116-1120.	1.6	3
95	Induction of the surface plasmon resonance from C-incorporated Au catalyst in Si _{1-x} C _x nanowires. Journal of Materials Chemistry, 2012, 22, 19744.	6.7	3
96	The effect of structural and chemical bonding changes on the optical properties of Si/Si _{1-x} C _x core/shell nanowires. Journal of Materials Chemistry C, 2013, 1, 5207.	2.7	3
97	Investigation of silicon-germanium nanowires THz emission. , 2014, , .		3
98	Phase-change-induced martensitic deformation and slip system in GeSbTe. RSC Advances, 2015, 5, 35792-35800.	1.7	3
99	In situ thermal behavior of resistance drift in GeTe and Ge ₂ Sb ₂ Te ₅ nanowires via Raman thermometry. Journal of Materials Chemistry C, 2020, 8, 11032-11041.	2.7	3
100	Optical characteristics of type-II hexagonal-shaped GaSb quantum dots on GaAs synthesized using nanowire self-growth mechanism from Ga metal droplet. Scientific Reports, 2021, 11, 7699.	1.6	3
101	Ternary Devices Based on Partially Aligned MoS ₂ / h-BN/Graphene Heterostructures. Advanced Materials Interfaces, 2021, 8, 2101109.	1.9	3
102	Control of the interfacial reaction in HfO ₂ on Si-passivated GaAs. Applied Surface Science, 2013, 283, 375-381.	3.1	2
103	Preparation of Ge-Sb-Te Thin Films by Tellurization of Ge-Sb Thin Film for Phase-Change Random-Access Memory Application. ECS Journal of Solid State Science and Technology, 2019, 8, P298-P302.	0.9	2
104	Quasicrystalline phase-change memory. Scientific Reports, 2020, 10, 13673.	1.6	2
105	Switching to Hidden Metallic Crystal Phase in Phase-Change Materials by Photoenhanced Metavalent Bonding. ACS Nano, 2022, , .	7.3	2
106	Change of resistive-switching in TiO ₂ films with additional HfO ₂ thin layer. Journal of the Korean Physical Society, 2012, 60, 1313-1316.	0.3	1
107	Temperature-dependent catalyst-free growth of ZnO nanostructures on Si and SiO ₂ /Si substrates via thermal evaporation. Journal of the Korean Physical Society, 2012, 60, 1877-1885.	0.3	1
108	Phase Change <i>via</i> Intermediary Metastable Local Structure of Ge Atoms in Ge ₂ Sb ₂ Te ₅ Nanowires during Electrical Switching. ACS Applied Electronic Materials, 2020, 2, 2418-2428.	2.0	1

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109	Quantification of point and line defects in Si _{0.6} Ge _{0.4} alloys with thickness variation via optical pump-THz probe measurement. Applied Surface Science, 2020, 513, 145815.	3.1	1
110	Suppression of the Hybridization of Surface States and Transport Property in Ultrathin Bi ₂ Se ₃ /graphene Heterostructure. Applied Science and Convergence Technology, 2019, 28, 207-212.	0.3	1
111	Spatially inhomogeneous operation of phase-change memory. Applied Surface Science, 2022, 589, 153026.	3.1	1
112	The Study of Hafnium Silicate by Various Nitrogen Gas Annealing Treatment. Materials Research Society Symposia Proceedings, 2008, 1073, 1.	0.1	0
113	Interfacial reaction induced strain relaxation in Hf-silicate film on strained Si _{0.7} Ge _{0.3} (001) as a function of annealing temperature. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2499-2502.	0.8	0
114	Ultrafast nonequilibrium carrier dynamics of 2D materials measured by time resolved THz spectroscopy. , 2015, , .		0
115	Terahertz spectroscopy of topological insulator Sb ₂ Te ₃ and its ultrafast nonequilibrium carrier dynamics. , 2016, , .		0
116	Oxidation Mechanism of Si _{1-x} Ge _x Nanowires with Au Catalyst Tip as a Function of Ge Content. ACS Applied Materials & Interfaces, 2017, 9, 37411-37418.	4.0	0
117	Time resolved terahertz spectroscopy of topological insulator Sb ₂ Te ₃ . , 2017, , .		0
118	Phase-change properties related to anharmonicity of local structure. Current Applied Physics, 2020, 20, 807-816.	1.1	0
119	Controlling the Charge Carrier Density of Black Phosphorus in a Rapid Plasma Doping Process. Applied Science and Convergence Technology, 2020, 29, 176-179.	0.3	0