

Mann-Ho Cho

List of Publications by Year in descending order

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119
papers

1,708
citations

361296

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times ranked

2719
citing authors

#	ARTICLE	IF	CITATIONS
1	GeTe Nanosheets as Theranostic Agents for Multimodal Imaging and Therapy of Inflammatory Bowel Disease. <i>Advanced Functional Materials</i> , 2022, 32, 2107433.	7.8	7
2	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
3	Switching to Hidden Metallic Crystal Phase in Phase-Change Materials by Photoenhanced Metavalent Bonding. <i>ACS Nano</i> , 2022, , .	7.3	2
4	Ferroelasticâ€“Ferroelectric Multiferroicity in van der Waals Rhenium Dichalcogenides. <i>Advanced Materials</i> , 2022, 34, e2108777.	11.1	10
5	Spatially inhomogeneous operation of phase-change memory. <i>Applied Surface Science</i> , 2022, 589, 153026.	3.1	1
6	Interaction- and defect-free van der Waals contacts between metals and two-dimensional semiconductors. <i>Nature Electronics</i> , 2022, 5, 241-247.	13.1	84
7	Topological Surfaceâ€“Dominated Spintronic THz Emission in Topologically Nontrivial Bi _{1-x} Sb _x Films. <i>Advanced Science</i> , 2022, 9, .	5.6	8
8	Enhanced reliability of phase-change memory via modulation of local structure and chemical bonding by incorporating carbon in Ge ₂ Sb ₂ Te ₅ . <i>RSC Advances</i> , 2021, 11, 22479-22488.	1.7	4
9	Optical characteristics of type-II hexagonal-shaped GaSb quantum dots on GaAs synthesized using nanowire self-growth mechanism from Ga metal droplet. <i>Scientific Reports</i> , 2021, 11, 7699.	1.6	3
10	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
11	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
12	Enhancement of photoresponse in Bi ₂ Se ₃ /graphene heterostructures by effective electronâ€“hole separation through internal band bending. <i>Applied Surface Science</i> , 2021, 554, 149623.	3.1	8
13	Improvements in Thermal Stability of Sb ₂ Te ₃ by Modulation of Microstructure via Carbon Incorporation. <i>ACS Applied Electronic Materials</i> , 2021, 3, 3472-3481.	2.0	4
14	Ferroelectric switching in GeTe through rotation of lone-pair electrons by Electric field-driven phase transition. <i>Applied Materials Today</i> , 2021, 24, 101122.	2.3	7
15	Ultrathin platinum diselenide synthesis controlling initial growth kinetics: Interfacial reaction depending on thickness and substrate. <i>Applied Surface Science</i> , 2021, 564, 150300.	3.1	7
16	Topological insulator bismuth selenide grown on black phosphorus for sensitive broadband photodetection. <i>Journal of Materials Chemistry C</i> , 2021, 9, 15150-15157.	2.7	6
17	Ternary Devices Based on Partially Aligned MoS ₂ / hâ€“BN/Graphene Heterostructures. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101109.	1.9	3
18	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

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19	Phase Change <i>in situ</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
20	Quasicrystalline phase-change memory. Scientific Reports, 2020, 10, 13673.	1.6	2
21	Enhanced Photoinduced Carrier Generation Efficiency through Surface Band Bending in Topological Insulator Bi ₂ Se ₃ Thin Films by the Oxidized Layer. ACS Applied Materials & Interfaces, 2020, 12, 26649-26658.	4.0	12
22	Phase-change properties related to anharmonicity of local structure. Current Applied Physics, 2020, 20, 807-816.	1.1	0
23	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
24	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
25	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
26	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
27	Ultrafast Photo-Response by Surface State-Mediated Optical Transitions in Topological Insulator Bi ₂ Te ₃ Nanowire. Advanced Optical Materials, 2019, 7, 1900621.	3.6	11
28	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
29	Phase-change like process through bond switching in distorted and resonantly bonded crystal. Scientific Reports, 2019, 9, 12816.	1.6	4
30	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
31	Closing the Surface Bandgap in Thin Bi ₂ Se ₃ /Graphene Heterostructures. ACS Nano, 2019, 13, 3931-3939.	7.3	20
32	p-n Junction Diode Using Plasma Boron-Doped Black Phosphorus for High-Performance Photovoltaic Devices. ACS Nano, 2019, 13, 1683-1693.	7.3	23
33	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
34	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
35	Evolution of the broadband optical transition in large-area MoS ₂ . Physical Review B, 2018, 97, .	1.1	13
36	Improving Electrical Properties by Effective Sulfur Passivation via Modifying the Surface State of Substrate in HfO ₂ /InP Systems. Journal of Physical Chemistry C, 2018, 122, 7226-7235.	1.5	13

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37	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
38	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
39	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
40	Effect of substrate on photo-induced persistent photoconductivity in InAs nanowires. Applied Surface Science, 2018, 458, 964-971.	3.1	6
41	Disorder-induced decoupled surface transport channels in thin films of doped topological insulators. Physical Review B, 2018, 98, .	1.1	9
42	Electronic Structure of C60/Zinc Phthalocyanine/V ₂ O ₅ Interfaces Studied Using Photoemission Spectroscopy for Organic Photovoltaic Applications. Molecules, 2018, 23, 449.	1.7	11
43	Growth of pure wurtzite InGaAs nanowires for photovoltaic and energy harvesting applications. Nano Energy, 2018, 53, 57-65.	8.2	11
44	Ultrafast photocarrier dynamics related to defect states of Si _{1-x} Ge _x nanowires measured by optical pump-probe spectroscopy. Nanoscale, 2017, 9, 8015-8023.	2.8	13
45	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
46	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
47	Modulation of phase change characteristics in Ag-incorporated Ge ₂ Sb ₂ Te ₅ owing to changes in structural distortion and bond strength. Journal of Materials Chemistry C, 2017, 5, 3973-3982.	2.7	20
48	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
49	Electrical properties and thermal stability in stack structure of HfO ₂ /Al ₂ O ₃ /InSb by atomic layer deposition. Scientific Reports, 2017, 7, 11337.	1.6	17
50	Characterization of Rotational Stacking Layers in Large-Area MoSe ₂ Film Grown by Molecular Beam Epitaxy and Interaction with Photon. ACS Applied Materials & Interfaces, 2017, 9, 30786-30796.	4.0	16
51	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
52	Evolution of crystal structures in GeTe during phase transition. Scientific Reports, 2017, 7, 955.	1.6	32
53	Time resolved terahertz spectroscopy of topological insulator Sb ₂ Te ₃ . , 2017, , .		0
54	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

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55	Terahertz spectroscopy of topological insulator Sb ₂ Te ₃ and its ultrafast nonequilibrium carrier dynamics. , 2016, , .		0
56	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
57	Enhancement of carrier lifetime by spin-orbit coupling in a topological insulator of an Sb ₂ Te ₃ thin film. Nanoscale, 2016, 8, 19025-19035.	2.8	15
58	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
59	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
60	MoS ₂ -InGaZnO Heterojunction Phototransistors with Broad Spectral Responsivity. ACS Applied Materials & Interfaces, 2016, 8, 8576-8582.	4.0	98
61	Structural and Electrical Properties of EOT HfO ₂ (<1 nm) Grown on InAs by Atomic Layer Deposition and Its Thermal Stability. ACS Applied Materials & Interfaces, 2016, 8, 7489-7498.	4.0	18
62	Filament Geometry Induced Bipolar, Complementary and Unipolar Resistive Switching under the Same Set Current Compliance in Pt/SiO _x /TiN. Scientific Reports, 2015, 5, 15374.	1.6	18
63	Phase-change-induced martensitic deformation and slip system in GeSbTe. RSC Advances, 2015, 5, 35792-35800.	1.7	3
64	Reversible Fermi Level Tuning of a Sb ₂ Te ₃ Topological Insulator by Structural Deformation. Nano Letters, 2015, 15, 3820-3826.	4.5	31
65	Ultrafast chemical lithiation of single crystalline silicon nanowires: in situ characterization and first principles modeling. RSC Advances, 2015, 5, 17438-17443.	1.7	11
66	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
67	Ultrafast nonequilibrium carrier dynamics of 2D materials measured by time resolved THz spectroscopy. , 2015, , .		0
68	Evolution of the surface state in Bi ₂ Se ₂ Te thin films during phase transition. Nanoscale, 2015, 7, 14924-14936.	2.8	12
69	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
70	Na-Dependent Ultrafast Carrier Dynamics of CdS/Cu(In,Ga)Se ₂ Measured by Optical Pump-Terahertz Probe Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 20231-20236.	1.5	19
71	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
72	Electric field effect dominated bipolar resistive switching through interface control in a Pt/TiO ₂ /TiN structure. RSC Advances, 2015, 5, 221-230.	1.7	18

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73	Terahertz single conductance quantum and topological phase transitions in topological insulator Bi ₂ Se ₃ ultrathin films. <i>Nature Communications</i> , 2015, 6, 6552.	5.8	79
74	Defect States below the Conduction Band Edge of HfO ₂ Grown on InP by Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2015, 119, 6001-6008.	1.5	8
75	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
76	Effect of the Thermal Conductivity on Resistive Switching in GeTe and Ge ₂ Sb ₂ Te ₅ Nanowires. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 21819-21827.	4.0	25
77	Structural evolution and carrier scattering of Si nanowires as a function of oxidation time. <i>Journal of Materials Chemistry C</i> , 2015, 3, 2123-2131.	2.7	5
78	Ultrafast phase change and long durability of BN-incorporated GeSbTe. <i>Journal of Materials Chemistry C</i> , 2015, 3, 1707-1715.	2.7	21
79	Investigation of silicon-germanium nanowires THz emission. , 2014, , .		3
80	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
81	High concentration of nitrogen doped into graphene using N ₂ plasma with an aluminum oxide buffer layer. <i>Journal of Materials Chemistry C</i> , 2014, 2, 933-939.	2.7	62
82	Structural deformation and void formation driven by phase transformation in the Ge ₂ Sb ₂ Te ₅ film. <i>Journal of Materials Chemistry C</i> , 2014, 2, 2001.	2.7	5
83	Non-toxically enhanced sulfur reaction for formation of chalcogenide thin films using a thermal cracker. <i>Journal of Materials Chemistry A</i> , 2014, 2, 14593-14599.	5.2	31
84	The effect of structural and chemical bonding changes on the optical properties of Si/Si _{1-x} C _x core/shell nanowires. <i>Journal of Materials Chemistry C</i> , 2013, 1, 5207.	2.7	3
85	Hall mobility manipulation in TiO _{2-x} semiconductor films by hydrogen-ion irradiation. <i>Journal of the Korean Physical Society</i> , 2013, 62, 781-786.	0.3	8
86	Control of the interfacial reaction in HfO ₂ on Si-passivated GaAs. <i>Applied Surface Science</i> , 2013, 283, 375-381.	3.1	2
87	Synthesis of self-ordered Sb ₂ Te ₂ films with atomically aligned Te layers and the effect of phonon scattering modulation. <i>Journal of Materials Chemistry C</i> , 2013, 1, 7043.	2.7	7
88	Structural Evolution and the Control of Defects in Atomic Layer Deposited HfO ₂ -Al ₂ O ₃ Stacked Films on GaAs. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 1982-1989.	4.0	34
89	Interfacial reaction induced strain relaxation in Hf-silicate film on strained Si _{0.7} Ge _{0.3} (001) as a function of annealing temperature. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2499-2502.	0.8	0
90	Electrical characteristics of HfO ₂ films on InP with different atomic-layer-deposition temperatures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 1381-1385.	0.8	4

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91	Change in crystalline structure and band alignment in atomic-layer-deposited HfO ₂ on InP using an annealing treatment. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 1612-1617.	0.8	4
92	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
93	Effect of nitrogen incorporation and oxygen vacancy on electronic structure and the absence of a gap state in HfSiO films. <i>Surface Science</i> , 2012, 606, L64-L68.	0.8	4
94	Change of resistive-switching in TiO ₂ films with additional HfO ₂ thin layer. <i>Journal of the Korean Physical Society</i> , 2012, 60, 1313-1316.	0.3	1
95	Temperature-dependent catalyst-free growth of ZnO nanostructures on Si and SiO ₂ /Si substrates via thermal evaporation. <i>Journal of the Korean Physical Society</i> , 2012, 60, 1877-1885.	0.3	1
96	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
97	Induction of the surface plasmon resonance from C-incorporated Au catalyst in Si _{1-x} C _x nanowires. <i>Journal of Materials Chemistry</i> , 2012, 22, 19744.	6.7	3
98	Generation of planar defects caused by the surface diffusion of Au atoms on SiNWs. <i>Materials Research Bulletin</i> , 2012, 47, 2739-2743.	2.7	4
99	Thermal instability of HfO ₂ on InP structure with ultrathin Al ₂ O ₃ interface passivation layer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2012, 6, 247-249.	1.2	6
100	High-mobility property of crystallized In-Te chalcogenide materials. <i>Electronic Materials Letters</i> , 2012, 8, 175-178.	1.0	4
101	The oxidation characteristics of silicon nanowires grown with an au catalyst. <i>Nano Research</i> , 2012, 5, 152-163.	5.8	6
102	Effects of hydrogen on Au migration and the growth kinetics of Si nanowires. <i>CrystEngComm</i> , 2011, 13, 690-696.	1.3	11
103	The modulation of Si _{1-x} Ge _x nanowires by correlation of inlet gas ratio with H ₂ gas content. <i>CrystEngComm</i> , 2011, 13, 5204.	1.3	9
104	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
105	A Triple-Layered Microcavity Structure for Electrophoretic Image Display. <i>IEEE Transactions on Electron Devices</i> , 2011, 58, 1116-1120.	1.6	3
106	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
107	Thermal Stability of ALD-HfO ₂ /GaAs Pretreated with Trimethylaluminium. <i>Journal of the Electrochemical Society</i> , 2011, 159, G6-G10.	1.3	10
108	The Phase Change Effect of Oxygen-Incorporation in GeSbTe Films. <i>Journal of the Electrochemical Society</i> , 2011, 158, H471.	1.3	12

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109	Effects of Interface Al ₂ O ₃ Passivation Layer for High-k HfO ₂ on GaAs. Electrochemical and Solid-State Letters, 2011, 14, H63.	2.2	12
110	The interfacial electronic structure of fullerene/ultra thin dielectrics of SiO ₂ and SiON. Chemical Physics Letters, 2010, 499, 136-140.	1.2	3
111	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
112	Effects of oxygen incorporation in GeSbTe films on electrical properties and thermal stability. Applied Physics Letters, 2010, 96, .	1.5	8
113	The electronic structure of C60/ZnPc interface for organic photovoltaic device with blended layer architecture. Applied Physics Letters, 2010, 96, .	1.5	50
114	Effect of In incorporated into SbTe on phase change characteristics resulting from changes in electronic structure. Applied Physics Letters, 2010, 96, 052112.	1.5	19
115	The effect of copper hexadecafluorophthalocyanine (F16CuPc) inter-layer on pentacene thin-film transistors. Synthetic Metals, 2010, 160, 108-112.	2.1	13
116	The origin of the resistance change in GeSbTe films. Applied Physics Letters, 2010, 97, 152113.	1.5	7
117	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
118	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
119	The Study of Hafnium Silicate by Various Nitrogen Gas Annealing Treatment. Materials Research Society Symposia Proceedings, 2008, 1073, 1.	0.1	0