Hyung Koun Cho

List of Publications by Citations

312 papers	5,288 citations	36 h-index	56 g-index
331 ext. papers	5,813 ext. citations	3.8 avg, IF	5.61 L-index

#	Paper	IF	Citations
312	A comparative analysis of deep level emission in ZnO layers deposited by various methods. *Journal of Applied Physics*, **2009**, 105, 013502	2.5	505
311	Formation mechanism of V defects in the InGaN/GaN multiple quantum wells grown on GaN layers with low threading dislocation density. *Applied Physics Letters*, **2001**, 79, 215-217	3.4	144
310	Effect of annealing temperature on the electrical performances of solution-processed InGaZnO thin film transistors. *Thin Solid Films*, **2011**, 519, 5146-5149	2.2	100
309	p-Channel oxide thin film transistors using solution-processed copper oxide. *ACS Applied Materials & Interfaces*, **2013**, 5, 2417-21	9.5	92
308	Highly selective spectral response with enhanced responsivity of n-ZnO/p-Si radial heterojunction nanowire photodiodes. *Applied Physics Letters*, **2011**, 98, 033102	3.4	83
307	Enhanced light output from aligned micropit InGaN-based light emitting diodes using wet-etch sapphire patterning. *Applied Physics Letters*, **2007**, 90, 131107	3.4	80
306	Fabrication of the hybrid ZnO LED structure grown on p-type GaN by metal organic chemical vapor deposition. *Physica B: Condensed Matter*, **2007**, 401-402, 386-390	2.8	79
305	Heteroepitaxy of AlGaN on bulk AlN substrates for deep ultraviolet light emitting diodes. *Applied Physics Letters*, **2007**, 91, 051116	3.4	70
304	Two-step growth of high quality GaN using V/III ratio variation in the initial growth stage. *Journal of Crystal Growth*, **2004**, 262, 7-13	1.6	68
303	Morphological and microstructural evolution in the two-step growth of nonpolar a-plane GaN on r-plane sapphire. *Journal of Applied Physics*, **2009**, 106, 123519	2.5	67
302	Investigation of Mg doping in high-Al content p-type AlxGa1⊠N (0.3. *Applied Physics Letters*, **2005**, 86, 082107	3.4	67
301	Effect of growth interruptions on the light emission and indium clustering of InGaN/GaN multiple quantum wells. *Applied Physics Letters*, **2001**, 79, 2594-2596	3.4	62
300	Artificial semiconductor/insulator superlattice channel structure for high-performance oxide thin-film transistors. *Scientific Reports*, **2013**, 3, 2737	4.9	61
299	Drastic improvement of oxide thermoelectric performance using thermal and plasma treatments of the InGaZnO thin films grown by sputtering. *Acta Materialia*, **2011**, 59, 6743-6750	8.4	61
298	A study on the origin of emission of the annealed n-ZnO/p-GaN heterostructure LED. *Thin Solid Films*, **2009**, 517, 5157-5160	2.2	60
297	Nitrogen-polar GaN growth evolution on c-plane sapphire. *Applied Physics Letters*, **2008**, 93, 131912	3.4	57
296	Microstructural characterization of InGaN/GaN multiple quantum wells with high indium composition. *Journal of Crystal Growth*, **2001**, 231, 466-473	1.6	55

295	Enhanced exciton-phonon interactions in photoluminescence of ZnO nanopencils. *Applied Physics Letters*, **2009**, 94, 261904	3.4	51
294	Multidimensional ZnO light-emitting diode structures grown by metal organic chemical vapor deposition on p-Si. *Applied Physics Letters*, **2007**, 91, 231901	3.4	50
293	Reduction of stacking fault density in m-plane GaN grown on SiC. *Applied Physics Letters*, **2008**, 93, 111904	3.4	48
292	Influence of strain relaxation on structural and optical characteristics of InGaN/GaN multiple quantum wells with high indium composition. *Journal of Applied Physics*, **2002**, 91, 1166-1170	2.5	48
291	Enhancement of Electrical Stability in Oxide Thin-Film Transistors Using Multilayer Channels Grown by Atomic Layer Deposition. *IEEE Transactions on Electron Devices*, **2014**, 61, 73-78	2.9	47
290	Effect of buffer layers and stacking faults on the reduction of threading dislocation density in GaN overlayers grown by metalorganic chemical vapor deposition. *Journal of Applied Physics*, **2001**, 89, 2617-2621	2.5	47
289	Ultraviolet light emitting diode based on p-NiO/n-ZnO nanowire heterojunction. *Journal of Crystal Growth*, **2013**, 370, 314-318	1.6	46
288	ZnO decorated flexible and strong graphene fibers for sensing NO2 and H2S at room temperature. *Sensors and Actuators B: Chemical*, **2020**, 308, 127690	8.5	43
287	Dramatically enhanced ultraviolet photosensing mechanism in a n-ZnO nanowires/i-MgO/n-Si structure with highly dense nanowires and ultrathin MgO layers. *Nanotechnology*, **2011**, 22, 265506	3.4	42
286	Deposition of Al doped ZnO layers with various electrical types by atomic layer deposition. *Thin Solid Films*, **2010**, 519, 747-750	2.2	42
285	Formation of vertically aligned ZnO nanorods on ZnO templates with the preferred orientation through thermal evaporation. *Journal of Crystal Growth*, **2006**, 289, 370-375	1.6	42
284	Improved Electrical Stability in the Al Doped ZnO Thin-Film-Transistors Grown by Atomic Layer Deposition. *Journal of the Electrochemical Society*, **2011**, 158, H170	3.9	41
283	Conformal Coating of Conductive ZnO:Al Films as Transparent Electrodes on High Aspect Ratio Si Microrods. *Electrochemical and Solid-State Letters*, **2010**, 13, K12		41
282	Tunable Electrical and Optical Properties in Composition Controlled Hf:ZnO Thin Films Grown by Atomic Layer Deposition. *Journal of the Electrochemical Society*, **2012**, 159, H384-H387	3.9	41
281	Improvement of luminous intensity of InGaN light emitting diodes grown on hemispherical patterned sapphire. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2006**, 3, 2169-2173		40
280	A stamped PEDOT:PSS-silicon nanowire hybrid solar cell. *Nanotechnology*, **2012**, 23, 145401	3.4	39
279	Ga-doped ZnO nanorod arrays grown by thermal evaporation and their electrical behavior. *Nanotechnology*, **2009**, 20, 015601	3.4	39
278	Ultralow Lattice Thermal Conductivity and Significantly Enhanced Near-Room-Temperature Thermoelectric Figure of Merit in □Cu2Se through Suppressed Cu Vacancy Formation by Overstoichiometric Cu Addition. *Chemistry of Materials*, **2018**, 30, 3276-3284	9.6	38

277	Effects of In or Ga doping on the growth behavior and optical properties of ZnO nanorods fabricated by hydrothermal process. *Physica Status Solidi (A) Applications and Materials Science*, **2013**, 210, 1552-1556	1.6	38
276	Realization of Vertically Well-Aligned ZnO:Ga Nanorods by Magnetron Sputtering and Their Field Emission Behavior. *Crystal Growth and Design*, **2008**, 8, 1458-1460	3.5	36
275	Toward Adequate Operation of Amorphous Oxide Thin-Film Transistors for Low-Concentration Gas Detection. *ACS Applied Materials & Interfaces*, **2018**, 10, 10185-10193	9.5	34
274	Irregular Electrical Conduction Types in Tin Oxide Thin Films Induced by Nanoscale Phase Separation. *Journal of the American Ceramic Society*, **2012**, 95, 324-327	3.8	34
273	Effects of buffer layer thickness on growth and properties of ZnO nanorods grown by metalorganic chemical vapour deposition. *Nanotechnology*, **2007**, 18, 015603	3.4	34
272	Low voltage-driven oxide phototransistors with fast recovery, high signal-to-noise ratio, and high responsivity fabricated via a simple defect-generating process. *Scientific Reports*, **2016**, 6, 31991	4.9	33
271	Ultraviolet light emitting diode with n-ZnO:Ga/i-ZnO/p-GaN:Mg heterojunction. *Thin Solid Films*, **2009**, 517, 5106-5109	2.2	33
270	Structural and optical properties of ZnO nanorods grown by metal organic chemical vapor deposition. *Journal of Crystal Growth*, **2008**, 310, 3208-3213	1.6	33
269	Role of ultrathin Al2O3 layer in organic/inorganic hybrid gate dielectrics for flexibility improvement of InGaZnO thin film transistors. *Organic Electronics*, **2014**, 15, 1458-1464	3.5	32
268	Characterization of pit formation in III-nitrides grown by metalorganic chemical vapor deposition. *Applied Physics Letters*, **2002**, 80, 1370-1372	3.4	32
267	Synthesis and microstructural characterization of growth direction controlled ZnO nanorods using a buffer layer. *Nanotechnology*, **2006**, 17, 5238-5243	3.4	31
266	Liquid-solid spinodal decomposition mediated synthesis of Sb_2Se_3 nanowires and their photoelectric behavior. *Nanoscale*, **2015**, 7, 12913-20	7.7	30
265	Influence of growth temperature on the electrical and structural characteristics of conductive Al-doped ZnO thin films grown by atomic layer deposition. *Thin Solid Films*, **2013**, 545, 106-110	2.2	30
264	Enhanced oxygen reduction and evolution by in situ decoration of hematite nanoparticles on carbon nanotube cathodes for high-capacity nonaqueous lithium–oxygen batteries. *Journal of Materials Chemistry A*, **2015**, 3, 13767-13775	13	30
263	Bi-layer channel structure-based oxide thin-film transistors consisting of ZnO and Al-doped ZnO with different Al compositions and stacking sequences. *Electronic Materials Letters*, **2015**, 11, 198-205	2.9	29
262	Formation of V-shaped pits in GaN thin films grown on high temperature GaN. *Journal of Crystal Growth*, **2004**, 261, 50-54	1.6	29
261	Tuning the morphology of copper nanowires by controlling the growth processes in electrodeposition. *Journal of Materials Chemistry*, **2011**, 21, 17967		28
260	Multi-spectral gate-triggered heterogeneous photonic neuro-transistors for power-efficient brain-inspired neuromorphic computing. *Nano Energy*, **2019**, 66, 104097	17.1	27

259	High-temperature growth and in-situ annealing of MgZnO thin films by RF sputtering. *Thin Solid Films*, **2008**, 516, 5602-5606	2.2	27
258	Influence of strain-induced indium clustering on characteristics of InGaN/GaN multiple quantum wells with high indium composition. *Journal of Applied Physics*, **2002**, 91, 1104-1107	2.5	27
257	Defects in interfacial layers and their role in the growth of ZnO nanorods by metallorganic chemical vapor deposition. *Applied Physics Letters*, **2007**, 91, 143115	3.4	26
256	Codoping characteristics of Zn with Mg in GaN. *Applied Physics Letters*, **2000**, 77, 1123-1125	3.4	26
255	Biepitaxial Growth of High-Quality Semiconducting NiO Thin Films on (0001) Al2O3 Substrates: Microstructural Characterization and Electrical Properties. *Crystal Growth and Design*, **2012**, 12, 2495-2500	3.5	25
254	Effects of channel thickness on electrical properties and stability of zinc tin oxide thin-film transistors. *Journal Physics D: Applied Physics*, **2013**, 46, 475106	3	25
253	Highly Sensible ZnO Nanowire Ultraviolet Photodetectors Based on Mechanical Schottky Contact. *Journal of the Electrochemical Society*, **2011**, 159, K10-K14	3.9	25
252	Enhancement of band-edge emission of ZnO from one-dimensional ZnO/MgZnO core/shell nanostructures. *Journal Physics D: Applied Physics*, **2009**, 42, 115106	3	25
251	V-defects and dislocations in InGaN/GaN heterostructures. *Thin Solid Films*, **2005**, 479, 316-320	2.2	25
250	Classification of stacking faults and dislocations observed in nonpolar a-plane GaN epilayers using transmission electron microscopy. *Applied Surface Science*, **2012**, 258, 2522-2528	6.7	24
249	Effect of post-annealing temperatures on thin-film transistors with ZnO/Al2O3 superlattice channels. *Thin Solid Films*, **2015**, 584, 336-340	2.2	23
248	Photoelectrochemical water splitting properties of hydrothermally-grown ZnO nanorods with controlled diameters. *Electronic Materials Letters*, **2015**, 11, 65-72	2.9	23
247	Oxide p-n Heterojunction of Cu2O/ZnO Nanowires and Their Photovoltaic Performance. *Journal of Nanomaterials*, **2013**, 2013, 1-7	3.2	23
246	Fully transparent vertically aligned ZnO nanostructure-based ultraviolet photodetectors with high responsivity. *Sensors and Actuators B: Chemical*, **2011**, 160, 740-746	8.5	22
245	Dependency of oxygen partial pressure on the characteristics of ZnO films grown by radio frequency magnetron sputtering. *Journal of Materials Science: Materials in Electronics*, **2008**, 19, 744-748	2.1	22
244	Influence of growth temperature and reactor pressure on microstructural and optical properties of InAlGaN quaternary epilayers. *Journal of Crystal Growth*, **2004**, 267, 67-73	1.6	22
243	Optical Properties of ZnO Nanorods and Hybrid Structures Grown on p-type GaN/Sapphire and Silicon-on-Insulator Substrates. *Science of Advanced Materials*, **2010**, 2, 64-68	2.3	22
242	Anomalous tin chemical bonding in indium-zinc-tin oxide films and their thin film transistor performance. *Journal Physics D: Applied Physics*, **2014**, 47, 485101	3	21

241	Growth of ZnO nanorod arrays by hydrothermal method using homo-seed layers annealed at various temperatures. *Surface and Interface Analysis*, **2010**, 42, 978-982	1.5	21
240	Growth and characteristics of ternary Zn1− Mg x O films using magnetron co-sputtering. *Journal of Materials Science: Materials in Electronics*, **2008**, 19, 755-759	2.1	21
239	Dual electrical behavior of multivalent metal cation-based oxide and its application to thin-film transistors with high mobility and excellent photobias stability. *ACS Applied Materials & Interfaces*, **2015**, 7, 6118-24	9.5	20
238	Vertically arrayed Ga-doped ZnO nanorods grown by magnetron sputtering: The effect of Ga contents and microstructural evaluation. *Journal of Crystal Growth*, **2011**, 330, 17-21	1.6	20
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236	Superlattice-like stacking fault and phase separation of InxGa1−N grown on sapphire substrate by metalorganic chemical vapor deposition. *Applied Physics Letters*, **2000**, 77, 247-249	3.4	20
235	Chemical durability engineering of solution-processed oxide thin films and its application in chemically-robust patterned oxide thin-film transistors. *Journal of Materials Chemistry C*, **2017**, 5, 339-349	7.1	19
234	Over 95% of large-scale length uniformity in template-assisted electrodeposited nanowires by subzero-temperature electrodeposition. *Nanoscale Research Letters*, **2011**, 6, 467	5	19
233	Control of the shell structure of ZnO−ZnS core-shell structure. *Journal of Nanoparticle Research*, **2011**, 13, 5825-5831	2.3	19
232	Effects of the thickness of the channel layer on the device performance of InGaZnO thin-film-transistors. *Surface and Coatings Technology*, **2010**, 205, S168-S171	4.4	19
231	Structural and optical investigation of InGaN/GaN multiple quantum well structures with various indium compositions. *Journal of Electronic Materials*, **2001**, 30, 1348-1352	1.9	19
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229	Low-Temperature Processable High-Performance Electrochemically Deposited p-Type Cuprous Oxides Achieved by Incorporating a Small Amount of Antimony. *Advanced Functional Materials*, **2015**, 25, 5214-5221	15.6	18
228	All oxide ultraviolet photodetectors based on a p-Cu2O film/n-ZnO heterostructure nanowires. *Thin Solid Films*, **2014**, 570, 282-287	2.2	17
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226	Influence of the thermal annealing temperature of the channel layers grown at room temperature on the device performance in the ZnO thin-film-transistors. *Physica B: Condensed Matter*, **2009**, 404, 4835-4838	2.8	17
225	Improved microstructural properties of a ZnO thin film using a buffer layer in-situ annealed in argon ambient. *Thin Solid Films*, **2007**, 515, 6721-6725	2.2	17
224	Epitaxial growth of ZnO layers using nanorods with high crystalline quality. *Nanotechnology*, **2007**, 18, 395605	3.4	17

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222	Double-layer channel structure based ZnO thin-film transistor grown by atomic layer deposition. *Physica Status Solidi - Rapid Research Letters*, **2014**, 8, 328-331	2.5	16
221	Effect of NH3 flow rate on m-plane GaN growth on m-plane SiC by metalorganic chemical vapor deposition. *Journal of Crystal Growth*, **2009**, 311, 3824-3829	1.6	16
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219	Generation of misfit dislocations in high indium content InGaN layer grown on GaN. *Journal of Crystal Growth*, **2002**, 243, 124-128	1.6	16
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217	Effects of growth temperature on performance and stability of zinc oxide thin film transistors fabricated by thermal atomic layer deposition. *Thin Solid Films*, **2014**, 562, 597-602	2.2	15
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214	Influence of active layer thickness and annealing in zinc oxide TFT grown by atomic layer deposition. *Surface and Interface Analysis*, **2010**, 42, 955-958	1.5	15
213	Observation of phase separation and ordering in the InAlAs epilayer grown on InP at the low temperature. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **1999**, 64, 174-179	3.1	15
212	Enhanced Gas Sensing Performance of Hydrothermal MoS2 Nanosheets by Post-Annealing in Hydrogen Ambient. *Bulletin of the Chemical Society of Japan*, **2019**, 92, 1094-1099	5.1	14
211	Exciton recombination in ZnO nanorods grown on GaN/sapphire template. *Applied Physics Letters*, **2009**, 94, 041901	3.4	14
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209	Characterization of low mole fraction In-doped-ZnO/Si (111) heterostructure grown by pulsed laser deposition. *Thin Solid Films*, **2009**, 517, 4086-4089	2.2	14
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202	Electrochemical surface charge-inversion from semi-insulating Sb2Se3 photoanodes and abrupt photocurrent generation for water splitting. *Energy and Environmental Science*, **2018**, 11, 2540-2549	35.4	13
201	An All Oxide-Based Imperceptible Thin-Film Transistor with Humidity Sensing Properties. *Materials*, **2017**, 10,	3.5	13
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199	Strain relaxation behavior of the InGaN/GaN multiple quantum wells observed by transmission electron microscopy. *Applied Surface Science*, **2004**, 221, 288-292	6.7	13
198	Controlled nanostructured morphology of BiVO4 photoanodes for efficient on-demand catalysis in solar water-splitting and sustainable water-treatment. *Applied Surface Science*, **2020**, 514, 146075	6.7	13
197	Effects of Cu incorporation as an acceptor on the thermoelectric transport properties of Cu Bi2Te2.7Se0.3 compounds. *Journal of Alloys and Compounds*, **2017**, 696, 213-219	5.7	12
196	Design of step composition gradient thin film transistor channel layers grown by atomic layer deposition. *Applied Physics Letters*, **2014**, 105, 223513	3.4	12
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194	Composition Controlled Superlattice InGaO3(ZnO)mThin Films by Thickness of ZnO Buffer Layers and Thermal Treatment. *Crystal Growth and Design*, **2010**, 10, 4638-4641	3.5	12
193	Phosphorus-doped ZnO films grown nitrogen ambience by magnetron sputtering on sapphire substrates. *Physica B: Condensed Matter*, **2007**, 401-402, 370-373	2.8	12
192	Shape control and characterization of one-dimensional ZnO nanostructures through the synthesis procedure. *Physica B: Condensed Matter*, **2006**, 376-377, 726-730	2.8	12
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190	Low-temperature growth and characterization of epitaxial ZnO nanorods by metalorganic chemical vapor deposition. *Journal of Materials Research*, **2007**, 22, 2032-2036	2.5	12
189	Microstructural and Electrical Investigation of Low Resistance and Thermally Stable Pd/Ni Contact on p-Type GaN. *Journal of the Electrochemical Society*, **2003**, 150, G212	3.9	12
188	Precise control of 1.55 μm vertical-cavity surface-emitting laser structure with InAlGaAs/InAlAs Bragg reflectors by in situ growth monitoring. *Applied Physics Letters*, **1999**, 75, 1500-1502	3.4	12

187	Periodically pulsed wet annealing approach for low-temperature processable amorphous InGaZnO thin film transistors with high electrical performance and ultrathin thickness. *Scientific Reports*, **2016**, 6, 26287	4.9	12
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184	Transparent and flexible oxide thin-film-transistors using an aluminum oxide gate insulator grown at low temperature by atomic layer deposition. *Metals and Materials International*, **2012**, 18, 1055-1060	2.4	11
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181	Behavior of ultraviolet emission from nanocrystalline embedded ZnO film synthesized by solution-based route. *Journal of Crystal Growth*, **2009**, 311, 1539-1544	1.6	11
180	Vertically Aligned Ultraslim ZnO Nanowires Formed by Homobuffer: Growth Evolution and Emission Properties. *Crystal Growth and Design*, **2009**, 9, 4725-4729	3.5	11
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177	Determination of electrical types in the P-doped ZnO thin films by the control of ambient gas flow. *Applied Surface Science*, **2010**, 256, 4438-4441	6.7	11
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175	The effects of thermal annealing in NH3 -ambient on the p-type ZnO films. *Superlattices and Microstructures*, **2007**, 42, 62-67	2.8	11
174	Influence of GaAs/InAs quasi-monolayer on the structural and optical properties of InAs/GaAs quantum dots. *Journal of Crystal Growth*, **2003**, 252, 493-498	1.6	11
173	Rapid thermal annealing effect of transparent ITO source and drain electrode for transparent thin film transistors. *Ceramics International*, **2021**, 47, 3149-3158	5.1	11
172	Atomically tunable photo-assisted electrochemical oxidation process design for the decoration of ultimate-thin CuO on Cu2O photocathodes and their enhanced photoelectrochemical performances. *Journal of Materials Chemistry A*, **2020**, 8, 21744-21755	13	10
171	Binary Oxide p-n Heterojunction Piezoelectric Nanogenerators with an Electrochemically Deposited High p-Type Cu2O Layer. *ACS Applied Materials & Interfaces*, **2016**, 8, 22135-41	9.5	10
170	Chemically robust solution-processed indium zinc oxide thin film transistors fabricated by back channel wet-etched Mo electrodes. *RSC Advances*, **2016**, 6, 53310-53318	3.7	10

169	Carrier confinement effect-driven channel design and achievement of robust electrical/photostability and high mobility in oxide thin-film transistors. *Journal of Materials Chemistry C*, **2016**, 4, 727-735	7.1	10
168	Controllable band-gap engineering of the ternary MgxNi1□O thin films deposited by radio frequency magnetron sputtering for deep ultra-violet optical devices. *Thin Solid Films*, **2013**, 529, 417-420	2.2	10
167	Characterization of a-plane GaN layers grown on patterned r-sapphire substrate by metal organic chemical vapor deposition. *Current Applied Physics*, **2011**, 11, S90-S94	2.6	10
166	Regrowth of Semipolar GaN on Nanoporous GaN Template by Metal Organic Chemical Vapor Deposition. *Japanese Journal of Applied Physics*, **2010**, 49, 058001	1.4	10
165	Structural transition from MgZnO nanowires to ultrathin nanowalls by surface separation: growth evolution and gas sensing properties. *Nanotechnology*, **2010**, 21, 425503	3.4	10
164	Influence of VI/II ratios on the growth of ZnO thin films on sapphire substrates by low temperature MOCVD. *Thin Solid Films*, **2010**, 518, 2975-2979	2.2	10
163	Composition-dependent charge transport and temperature-dependent density of state effective mass interpreted by temperature-normalized Pisarenko plot in Bi2□SbxTe3 compounds. *APL Materials*, **2016**, 4, 104812	5.7	10
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161	Direct Formation of Transparent ITO Top Electrodes on High-Density ZnO Nanowires by Magnetron Sputtering. *Electrochemical and Solid-State Letters*, **2011**, 14, H446		9
160	Ni-catalyzed growth of silicon wire arrays for a Schottky diode. *Applied Physics Letters*, **2010**, 97, 042103	3.4	9
159	Effect of a ZnO buffer layer on the characteristics of MgZnO thin films grown on Si (100) substrates by radio-frequency magnetron sputtering. *Thin Solid Films*, **2009**, 517, 3931-3934	2.2	9
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