Sang Ho Oh

List of Publications by Year
in descending order

126 papers	5,334 citations	94433 37 h-index	91884 69 g-index
131 all docs	131 docs citations	131 times ranked	8546 citing authors

#	Article	IF	Citations
1	A two-photon tandem black phosphorus quantum dot-sensitized BiVO₄ photoanode for solar water splitting. Energy and Environmental Science, 2022, 15, 672-679.	30.8	64
2	Ghost-Template-Faceted Synthesis of Tunable Amorphous Hollow Silica Nanostructures and Their Ordered Mesoscale Assembly. Nano Letters, 2022, 22, 1159-1166.	9.1	0
3	c-Axis-Oriented Platelets of Crystalline Hydroxyapatite in Biomimetic Intrafibrillar Mineralization of Polydopamine-Functionalized Collagen Type I. ACS Omega, 2022, 7, 4821-4831.	3.5	12
4	Non-oxidized bare copper nanoparticles with surface excess electrons in air. Nature Nanotechnology, 2022, 17, 285-291.	31.5	34
5	Oxide Twoâ€Dimensional Electron Gas with High Mobility at Roomâ€Temperature. Advanced Science, 2022, 9, e2105652.	11.2	7
6	Shapeâ€Tuned Multiphotonâ€Emitting InP Nanotetrapods. Advanced Materials, 2022, 34, e2110665.	21.0	8
7	A Study on Dislocation Mechanisms of Toughening in Cu-Graphene Nanolayered Composite. Nano Letters, 2022, 22, 188-195.	9.1	9
8	Shapeâ€Tuned Multiphotonâ€Emitting InP Nanotetrapods (Adv. Mater. 19/2022). Advanced Materials, 2022, 34, .	21.0	0
9	Highâ€Resolution Mapping of Strain Partitioning and Relaxation in InGaN/GaN Nanowire Heterostructures. Advanced Science, 2022, 9, .	11.2	12
10	Atomic-scale operando observation of oxygen diffusion during topotactic phase transition of a perovskite oxide. Matter, 2022, 5, 3009-3022.	10.0	6
11	Corrosion-engineered bimetallic oxide electrode as anode for high-efficiency anion exchange membrane water electrolyzer. Chemical Engineering Journal, 2021, 420, 127670.	12.7	51
12	Prospects of Using Small Scale Testing to Examine Different Deformation Mechanisms in Nanoscale Single Crystalsâ€”A Case Study in Mg. Crystals, 2021, 11, 61.	2.2	6
13	Analysis of Local Charges at Hetero-interfaces by Electron Holography â€“ A Comparative Study of Different Techniques. Ultramicroscopy, 2021, 231, 113236.	1.9	4
14	Crystallographic Orientation Analysis of Nanocrystalline Tungsten Thin Film Using TEM Precession Electron Diffraction and SEM Transmission Kikuchi Diffraction. Microscopy and Microanalysis, 2021, 27, 237-249.	0.4	7
15	Cooperative evolution of polar distortion and nonpolar rotation of oxygen octahedra in oxide heterostructures. Science Advances, 2021, 7, .	10.3	20
16	Electronic and Structural Transitions of LaAlO₃/SrTiO₃ Heterostructure Driven by Polar Fieldâ€Assisted Oxygen Vacancy Formation at the Surface. Advanced Science, 2021, 8, e2002073.	11.2	23
17	Disordered-Layer-Mediated Reverse Metalâ€“Oxide Interactions for Enhanced Photocatalytic Water Splitting. Nano Letters, 2021, 21, 5247-5253.	9.1	18
18	Coexistence of Surface Superconducting and Three-Dimensional Topological Dirac States in Semimetal KZnBi. Physical Review X, 2021, 11, .	8.9	8

#	Article	IF	Citations
19	Atomically Conformal Metal Laminations on Plasmonic Nanocrystals for Efficient Catalysis. Journal of the American Chemical Society, 2021, 143, 10582-10589.	13.7	12
20	Electronically reconfigurable complex oxide heterostructure freestanding membranes. Science Advances, 2021, 7, .	10.3	15
21	Defect engineered MoWS alloy catalyst boost the polysulfide conversion in lithiumâ€“sulfur battery. Journal of Power Sources, 2021, 511, 230426.	7.8	13
22	In-situ observation of the initiation of plasticity by nucleation of prismatic dislocation loops. Nature Communications, 2020, 11, 2367.	12.8	23
23	Mixed phase 2D Mo_{0.5}W_{0.5}S₂ alloy as a multi-functional electrocatalyst for a high-performance cathode in Liâ€“S batteries. Journal of Materials Chemistry A, 2020, 8, 12436-12445.	10.3	30
24	Water- and acid-stable self-passivated dihafnium sulfide electride and its persistent electrocatalytic reaction. Science Advances, 2020, 6, eaba7416.	10.3	30
25	In situ TEM observation of void formation and migration in phase change memory devices with confined nanoscale Ge₂Sb₂Te₅. Nanoscale Advances, 2020, 2, 3841-3848.	4.6	19
26	Dislocation plasticity in FeCoCrMnNi high-entropy alloy: quantitative insights from in situ transmission electron microscopy deformation. Materials Research Letters, 2020, 8, 216-224.	8.7	35
27	In situ Negative Cs HRTEM Imaging of Topotactic Phase Transformation from Perovskite SrFeO3 to Brownmillerite SrFeO2.5. Microscopy and Microanalysis, 2019, 25, 1482-1483.	0.4	1
28	Creation of two-dimensional layered Zintl phase by dimensional manipulation of crystal structure. Science Advances, 2019, 5, eaax0390.	10.3	19
29	Atomically thin three-dimensional membranes of van der Waals semiconductors by wafer-scale growth. Science Advances, 2019, 5, eaaw3180.	10.3	22
30	Direct Observation of Field-induced Modulation of Two-dimensional Electron Gas at Oxide Interfaces. Microscopy and Microanalysis, 2019, 25, 1848-1849.	0.4	0
31	Insights into fundamental deformation processes from advanced in situ transmission electron microscopy. MRS Bulletin, 2019, 44, 443-449.	3.5	16
32	Direct observation of an electrically degenerate interface layer in a GaN/sapphire heterostructure. Nanoscale, 2019, 11, 8281-8292.	5.6	12
33	In Operando Stacking of Reduced Graphene Oxide for Active Hydrogen Evolution. ACS Applied Materials & Interfaces, 2019, 11, 43460-43465.	8.0	17
34	Fabrication of a Stable New Polymorph Gold Nanowire with Sixfold Rotational Symmetry. Advanced Materials, 2018, 30, e1706261.	21.0	16
35	Direct observation of a two-dimensional hole gas at oxide interfaces. Nature Materials, 2018, 17, 231-236.	27.5	151
36	Direct imaging of the electron liquid at oxide interfaces. Nature Nanotechnology, 2018, 13, 198-203.	31.5	40

#	Article	IF	Citations
37	Strain-induced indium clustering in non-polar a-plane InGaN quantum wells. Acta Materialia, 2018, 145, 109-122.	7.9	7
38	Composition-Tunable Synthesis of Large-Scale Mo_{1â€“<i>x</i>}W_{<i>x</i>}S₂ Alloys with Enhanced Photoluminescence. ACS Nano, 2018, 12, 6301-6309.	14.6	51
39	In-situ TEM observation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:mo>{</mml:mo><mml:mn>10</mml:mn><mml:mrow><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo>Â¯</mml:mo></mml:mover></mml:mrow><mml:mn>2</mml:mn><mml:mo>}</mm twin-dominated deformation of Mg pillars: Twinning mechanism, size effects and rate dependency. Acta Materialia, 2018, 158, 407-421.	7.9	92
40	Highly fluidic liquid at homointerface generates grain-boundary dislocation arrays for high-performance bulk thermoelectrics. Acta Materialia, 2018, 159, 266-275.	7.9	19
41	Multiple Heterojunction in Single Titanium Dioxide Nanoparticles for Novel Metal-Free Photocatalysis. Nano Letters, 2018, 18, 4257-4262.	9.1	45
42	Hardening and toughening mechanisms in nanotwinned ceramics. Scripta Materialia, 2017, 133, 105-112.	5.2	38
43	Active hydrogen evolution through lattice distortion in metallic MoTe ₂. 2D Materials, 2017, 4, 025061.	4.4	103
44	Nanometerâ€Scale Phase Transformation Determines Threshold and Memory Switching Mechanism. Advanced Materials, 2017, 29, 1701752.	21.0	59
45	Defect-Induced Epitaxial Growth for Efficient Solar Hydrogen Production. Nano Letters, 2017, 17, 6676-6683.	9.1	96
46	Role of Graphene in Reducing Fatigue Damage in Cu/Gr Nanolayered Composite. Nano Letters, 2017, 17, 4740-4745.	9.1	63
47	Sharpened VO₂ Phase Transition via Controlled Release of Epitaxial Strain. Nano Letters, 2017, 17, 5614-5619.	9.1	93
48	In situ TEM observation on the interface-type resistive switching by electrochemical redox reactions at a TiN/PCMO interface. Nanoscale, 2017, 9, 582-593.	5.6	76
49	Synthesis and Mechanical Characterisation of an Ultra-Fine Grained Ti-Mg Composite. Materials, 2016, 9, 688.	2.9	5
50	FIB-induced dislocations in Al submicron pillars: Annihilation by thermal annealing and effects on deformation behavior. Acta Materialia, 2016, 110, 283-294.	7.9	66
51	Interface dominated mechanical properties of ultra-fine grained and nanoporous Au at elevated temperatures. Acta Materialia, 2016, 121, 104-116.	7.9	32
52	Analog Synapse Device With 5-b MLC and Improved Data Retention for Neuromorphic System. IEEE Electron Device Letters, 2016, 37, 1067-1070.	3.9	42
53	Nanotwin-governed toughening mechanism in hierarchically structured biological materials. Nature Communications, 2016, 7, 10772.	12.8	127
54	Nanoscale graphene coating on commercially pure titanium for accelerated bone regeneration. RSC Advances, 2016, 6, 26719-26724.	3.6	32

#	Article	IF	Citations
55	Electron Holography: Correlative Highâ€Resolution Mapping of Strain and Charge Density in a Strained Piezoelectric Multilayer (Adv. Mater. Interfaces 1/2015). Advanced Materials Interfaces, 2015, 2, .	3.7	3
56	Microstructure-dependent DC set switching behaviors of Geâ€“Sbâ€“Te-based phase-change random access memory devices accessed by in situ TEM. NPG Asia Materials, 2015, 7, e194-e194.	7.9	18
57	Effect of a high angle grain boundary on deformation behavior of Al nanopillars. Scripta Materialia, 2015, 107, 5-9.	5.2	35
58	Two-dimensional mapping of strain and piezoelectric polarization in InGaN/GaN MQWs by electron dark-field holography. , 2015, , .		0
59	Direct mapping of strain state in nonpolar InGaN/GaN multilayers using dark-field inline electron holography. , 2015, , .		0
60	Correlative Highâ€Resolution Mapping of Strain and Charge Density in a Strained Piezoelectric Multilayer. Advanced Materials Interfaces, 2015, 2, 1400281.	3.7	18
61	Three-dimensional real structure-based finite element analysis of mechanical behavior for porous titanium manufactured by a space holder method. Computational Materials Science, 2015, 100, 2-7.	3.0	24
62	Microstructural evolution and strain-hardening behavior of multi-pass caliber-rolled Tiâ€“13Nbâ€“13Zr. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 648, 359-366.	5.6	31
63	Solid-State Conversion Chemistry of Multicomponent Nanocrystals Cast in a Hollow Silica Nanosphere: Morphology-Controlled Syntheses of Hybrid Nanocrystals. ACS Nano, 2015, 9, 10719-10728.	14.6	23
64	Effect of surface energy on size-dependent deformation twinning of defect-free Au nanowires. Nanoscale, 2015, 7, 15657-15664.	5.6	30
65	Enhancement of the anisotropic photocurrent in ferroelectric oxides by strain gradients. Nature Nanotechnology, 2015, 10, 972-979.	31.5	134
66	Emergence of room-temperature ferroelectricity at reduced dimensions. Science, 2015, 349, 1314-1317.	12.6	259
67	Enhanced power conversion efficiency of dye-sensitized solar cells with multifunctional photoanodes based on a three-dimensional TiO2 nanohelix array. Solar Energy Materials and Solar Cells, 2015, 132, 47-55.	6.2	33
68	Bioinspired Silica Nanocomposite with Autoencapsulated Carbonic Anhydrase as a Robust Biocatalyst for CO₂ Sequestration. ACS Catalysis, 2014, 4, 4332-4340.	11.2	88
69	Microstructural refinement of Ni/Ce0.8Gd0.2O2âˆ'Î´ anodes for low-temperature solid oxide fuel cell by wet infiltration loading of PdCl2. Ceramics International, 2014, 40, 12299-12312.	4.8	9
70	Threeâ€Dimensional Nanostructured Indiumâ€Tinâ€Oxide Electrodes for Enhanced Performance of Bulk Heterojunction Organic Solar Cells. Advanced Energy Materials, 2014, 4, 1301566.	19.5	27
71	Reversible cyclic deformation mechanism of gold nanowires by twinningâ€“detwinning transition evidenced from in situ TEM. Nature Communications, 2014, 5, 3033.	12.8	137
72	Efficient photoelectrochemical hydrogen production from bismuth vanadate-decorated tungsten trioxide helix nanostructures. Nature Communications, 2014, 5, 4775.	12.8	367

#	Article	IF	Citations
73	Enhanced power conversion efficiency of quantum dot sensitized solar cells with near single-crystalline TiO_2 nanohelixes used as photoanodes. Optics Express, 2014, 22, A867.	3.4	16
74	Enhanced surface hardening of AISI D2 steel by atomic attrition during ion nitriding. Surface and Coatings Technology, 2014, 251, 115-121.	4.8	21
75	Space-holder effect on designing pore structure and determining mechanical properties in porous titanium. Materials & Design, 2014, 57, 712-718.	5.1	64
76	Microstructural evolution of a focused ion beam fabricated Mg nanopillar at high temperatures: Defect annihilation and sublimation. Scripta Materialia, 2014, 86, 44-47.	5.2	7
77	Critical evaluation and thermodynamic optimization of Mgâ€“Ga system and effect of low pressure on phase equilibria. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2014, 46, 168-175.	1.6	10
78	Direct observation of asymmetric domain wall motion in a ferroelectric capacitor. Acta Materialia, 2013, 61, 6765-6777.	7.9	41
79	Surface hardening of shot peened H13 steel by enhanced nitrogen diffusion. Surface and Coatings Technology, 2013, 232, 912-919.	4.8	40
80	In situ TEM observation of phase transition of the nanoscopic patterns on baroplastic block copolymer films during nanoindentation. Nanoscale, 2013, 5, 4351.	5.6	4
81	Strain mapping of LED devices by dark-field inline electron holography: Comparison between deterministic and iterative phase retrieval approaches. Ultramicroscopy, 2013, 127, 119-125.	1.9	13
82	Transmission electron microscopy and thermodynamic studies of CaO-added AZ31 Mg alloys. Acta Materialia, 2013, 61, 3267-3277.	7.9	55
83	A near single crystalline TiO₂nanohelix array: enhanced gas sensing performance and its application as a monolithically integrated electronic nose. Analyst, The, 2013, 138, 443-450.	3.5	73
84	A suspended nanogap formed by field-induced atomically sharp tips. Applied Physics Letters, 2012, 101, .	3.3	10
85	Cation Disordering by Rapid Crystal Growth in Olivine-Phosphate Nanocrystals. Nano Letters, 2012, 12, 3068-3073.	9.1	24
86	Surface hardening of aluminum alloy by shot peening treatment with Zn based ball. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 543, 44-49.	5.6	43
87	In-situ TEM biasing experiments to study thickness-dependent ferroelectric domain switching of Pb(Zr,Ti)O<inf>3</inf> films. , 2011, , .		0
88	Graphenes Converted from Polymers. Journal of Physical Chemistry Letters, 2011, 2, 493-497.	4.6	158
89	Dislocation plasticity of Al film on polyimide investigated by cross-sectional in situ transmission electron microscopy straining. Scripta Materialia, 2011, 65, 456-459.	5.2	11
90	Quantitative analysis of layering and in-plane structural ordering at an aluminaâ€“aluminum solidâ€“liquid interface. Acta Materialia, 2011, 59, 4378-4386.	7.9	58

#	Article	IF	Citations
91	In Situ TEM Observation of Heterogeneous Phase Transition of a Constrained Single-Crystalline Ag₂Te Nanowire. Nano Letters, 2010, 10, 4501-4504.	9.1	23
92	Oscillatory Mass Transport in Vapor-Liquid-Solid Growth of Sapphire Nanowires. Science, 2010, 330, 489-493.	12.6	166
93	In situ observation of dislocation nucleation andÂescape in a submicrometre aluminium singleÂcrystal. Nature Materials, 2009, 8, 95-100.	27.5	400
94	Structural and flux-pinning properties of laser ablated YBa2Cu3O7âˆ'Î´ thin films: Effects of self-assembled CeO2 nanodots on LaAlO3 substrates. Physica C: Superconductivity and Its Applications, 2008, 468, 2313-2316.	1.2	5
95	Point Defect Configurations of Supersaturated Au Atoms Inside Si Nanowires. Nano Letters, 2008, 8, 1016-1019.	9.1	119
96	Dipolar interactions and their influence on the critical single domain grain size of Ni in layered Ni/Al₂O₃composites. Journal of Physics Condensed Matter, 2008, 20, 385213.	1.8	9
97	Effect of spacer layer thickness on magnetic interactions in self-assembled single domain iron nanoparticles. Journal of Applied Physics, 2008, 103, 07D515.	2.5	10
98	Scaling exponent within the side-jump mechanism of Hall effect size-dependence in Ni nanocrystals. Applied Physics Letters, 2008, 93, 133105.	3.3	4
99	The effect of matrix and substrate on the coercivity and blocking temperature of self-assembled Ni nanoparticles. Journal of Applied Physics, 2008, 104, .	2.5	8
100	Defects in Strained Epitaxial SrRuO₃ Films on SrTiO₃ Substrates. Materials Transactions, 2007, 48, 2556-2562.	1.2	2
101	Control of bonding and epitaxy at copper/sapphire interface. Applied Physics Letters, 2007, 91, 141912.	3.3	21
102	In situ TEM straining of single crystal Au films on polyimide: Change of deformation mechanisms at the nanoscale. Acta Materialia, 2007, 55, 5558-5571.	7.9	116
103	Strain compensation by twinning in Au thin films: Experiment and model. Acta Materialia, 2007, 55, 6659-6665.	7.9	27
104	Surface evolution of strained SrRuO3 films deposited at various temperatures on SrTiO3 (001) substrates. Journal of Materials Research, 2006, 21, 1550-1560.	2.6	5
105	Epitaxy and bonding of Cu films on oxygen-terminated Î±-Al2O3(0001) surfaces. Acta Materialia, 2006, 54, 2685-2696.	7.9	25
106	Ordered Liquid Aluminum at the Interface with Sapphire. Science, 2005, 310, 661-663.	12.6	307
107	Investigation of Taâ•Tiâ•Alâ•Niâ•Au ohmic contact to AlGaNâ•GaN heterostructure field-effect transistor. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 322.	1.6	27
108	Microstructural Changes in (1-x)Nd2/3TiO3â€"xNdAlO3System. Japanese Journal of Applied Physics, 2004, 43, 7587-7591.	1.5	5

#	Article	IF	Citations
109	Microstructures in Complex Perovskite (Li1/2Ln1/2)TiO3(Ln= Pr, Nd, Sm). Japanese Journal of Applied Physics, 2004, 43, 7592-7595.	1.5	3
110	Misfit strain relaxation by dislocations in SrRuO3/SrTiO3 (001) heteroepitaxy. Journal of Applied Physics, 2004, 95, 4691-4704.	2.5	49
111	Effects of neutralizers on the crystal orientation of YSZ films grown by using ion beam sputtering. Vacuum, 2004, 74, 423-430.	3.5	4
112	Synthesis of Carbon Nanotubes Using Microwave Radiation. Advanced Functional Materials, 2003, 13, 961-966.	14.9	76
113	Microstructural Analysis of Au/Ni/Al/Ti/Ta Ohmic Contact on AlGaN/GaN Heterostructure. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 223-226.	0.8	1
114	Microstructural accommodation of excess Ru in epitaxial SrRuO3 films. Philosophical Magazine, 2003, 83, 1307-1327.	1.6	6
115	Improved thermal stability of Ni silicide on Si (100) through reactive deposition of Ni. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 319.	1.6	24
116	Electrical Properties of Bi 3.25 La 0.75 Ti3O12 Thin Films with Various Grain Orientations Deposited by r.f. Magnetron Sputtering. Materials Research Society Symposia Proceedings, 2003, 768, 3151.	0.1	0
117	Metal-ZnO Heterostructure Nanorods with an Abrupt Interface. Japanese Journal of Applied Physics, 2002, 41, L1206-L1208.	1.5	17
118	Packing Density Control of Aligned Carbon Nanotubes. Chemistry of Materials, 2002, 14, 4003-4005.	6.7	22
119	In-Situ Synthesis of Carbon Nanotubes on Organic Polymer Substrates at Atmospheric Pressure. Advanced Materials, 2002, 14, 676-679.	21.0	29
120	Preparation of Aligned Carbon Nanotubes with Prescribed Dimensions:Â Template Synthesis and Sonication Cutting Approach. Chemistry of Materials, 2002, 14, 1859-1862.	6.7	72
121	Growth behavior and defects in conductive SrRuO₃ thin films grown on a Si(100) substrate by sputtering. Journal of Materials Research, 2001, 16, 1998-2006.	2.6	13
122	Nano-scale Interfacial Reactions of SrRuO3 Thin Film on Si (100) Substrate. Materials Research Society Symposia Proceedings, 2001, 666, 781.	0.1	0
123	Nanoscale characterization of interfacial reactions in SrRuO3 thin film on Si substrate. Surface and Interface Analysis, 2001, 31, 796-798.	1.8	6
124	Improvement of the SiO[sub 2]/Si interface characteristics by two-step deposition with intermediate plasma treatment using O[sub 2]/He gas. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 2067.	1.6	3
125	Thermal stability of RuO2/Ru bilayer thin film in oxygen atmosphere. Thin Solid Films, 2000, 359, 118-123.	1.8	33
126	Reaction of Co and capping layers and its effect on CoSi2 formation in Si/SiOx/Co system. Applied Physics Letters, 2000, 77, 1443-1445.	3.3	5