Hyun You Kim

List of Publications by Year
in descending order

90	3,761	126858	133188
papers	citations	33 h-index	59 g-index

92	92	92	5321
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	CO Oxidation Mechanism on CeO₂-Supported Au Nanoparticles. Journal of the American Chemical Society, 2012, 134, 1560-1570.	6.6	496
2	Catalytic CO Oxidation over Au Nanoparticles Supported on CeO₂ Nanocrystals: Effect of the Auâ€“CeO₂ Interface. ACS Catalysis, 2018, 8, 11491-11501.	5.5	173
3	Bifunctional Mechanism of CO₂ Methanation on Pd-MgO/SiO₂ Catalyst: Independent Roles of MgO and Pd on CO₂ Methanation. Journal of Physical Chemistry C, 2010, 114, 7128-7131.	1.5	156
4	CO Oxidation at the Interface of Au Nanoclusters and the Stepped-CeO₂(111) Surface by the Marsâ€“van Krevelen Mechanism. Journal of Physical Chemistry Letters, 2013, 4, 216-221.	2.1	148
5	A tailored oxide interface creates dense Pt single-atom catalysts with high catalytic activity. Energy and Environmental Science, 2020, 13, 1231-1239.	15.6	140
6	Precious metal recovery from electronic waste by a porous porphyrin polymer. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16174-16180.	3.3	133
7	CO Oxidation by Rutile TiO₂(110) Doped with V, W, Cr, Mo, and Mn. Journal of Physical Chemistry C, 2008, 112, 12398-12408.	1.5	115
8	CO Oxidation at the Interface between Doped CeO₂ and Supported Au Nanoclusters. Journal of Physical Chemistry Letters, 2012, 3, 2194-2199.	2.1	102
9	Steering Epitaxial Alignment of Au, Pd, and AuPd Nanowire Arrays by Atom Flux Change. Nano Letters, 2010, 10, 432-438.	4.5	93
10	Unravelling inherent electrocatalysis of mixed-conducting oxide activated by metal nanoparticle for fuel cell electrodes. Nature Nanotechnology, 2019, 14, 245-251.	15.6	84
11	CO Adsorption-Driven Surface Segregation of Pd on Au/Pd Bimetallic Surfaces: Role of Defects and Effect on CO Oxidation. ACS Catalysis, 2013, 3, 2541-2546.	5.5	83
12	CO Oxidation at the Auâ€“Cu Interface of Bimetallic Nanoclusters Supported on CeO₂(111). Journal of Physical Chemistry Letters, 2013, 4, 2943-2947.	2.1	80
13	Effects of Mn on the crystal structure of Î±-Al(Mn,Fe)Si particles in A356 alloys. Journal of Crystal Growth, 2006, 291, 207-211.	0.7	77
14	Yellow-emitting Î³-Ca_2SiO_4:Ce^3+, Li^+ phosphor for solid-state lighting: luminescent properties, electronic structure, and white light-emitting diode application. Optics Express, 2012, 20, 2761.	1.7	76
15	The influence of Mn and Cr on the tensile properties of A356â€“0.20Fe alloy. Materials Letters, 2006, 60, 1880-1883.	1.3	58
16	Hydrothermally Grown In-doped ZnO Nanorods on p-GaN Films for Color-tunable Heterojunction Light-emitting-diodes. Scientific Reports, 2015, 5, 10410.	1.6	58
17	Preferential segregation of Pd atoms in the Ag-Pd bimetallic cluster: Density functional theory and molecular dynamics simulation. Physical Review B, 2007, 75, .	1.1	57
18	Surface properties of atomically flat poly-crystalline SrTiO3. Scientific Reports, 2015, 5, 8822.	1.6	57

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19	Defect-Free Graphene Synthesized Directly at 150 Â°C via Chemical Vapor Deposition with No Transfer. ACS Nano, 2018, 12, 2008-2016.	7.3	55
20	Facile synthesis of intense green light emitting LiGdF₄:Yb,Er-based upconversion bipyramidal nanocrystals and their polymer composites. Nanoscale, 2014, 6, 7461-7468.	2.8	53
21	Stabilization of Catalytically Active Cu⁺ Surface Sites on Titaniumâ€“Copper Mixedâ€Oxide Films. Angewandte Chemie - International Edition, 2014, 53, 5336-5340.	7.2	51
22	Synergistic effect of Indium and Gallium co-doping on growth behavior and physical properties of hydrothermally grown ZnO nanorods. Scientific Reports, 2017, 7, 41992.	1.6	50
23	Pt-based alloy/carbon black nanohybrid covered with ionic liquid supramolecules as an efficient catalyst for oxygen reduction reactions. Applied Catalysis B: Environmental, 2017, 204, 365-373.	10.8	45
24	Site-Selective Cu Deposition on Pt Dendrimer-Encapsulated Nanoparticles: Correlation of Theory and Experiment. Journal of the American Chemical Society, 2012, 134, 4153-4162.	6.6	44
25	Facile Route to the Controlled Synthesis of Tetragonal and Orthorhombic SnO₂ Films by Mist Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2015, 7, 12074-12079.	4.0	43
26	Insightful understanding of hot-carrier generation and transfer in plasmonic Au@CeO2 coreâ€“shell photocatalysts for light-driven hydrogen evolution improvement. Applied Catalysis B: Environmental, 2021, 286, 119947.	10.8	43
27	Phase diagram of Agâ€“Pd bimetallic nanoclusters by molecular dynamics simulations: solid-to-liquid transition and size-dependent behavior. Physical Chemistry Chemical Physics, 2009, 11, 5079.	1.3	41
28	In Situ Engineering of Pd Nanosponge Armored with Graphene Dots Using Br^{â€“} toward High-Performance and Stable Electrocatalyst for the Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2020, 12, 15500-15506.	4.0	39
29	Oxidative Dehydrogenation of Methanol to Formaldehyde by Isolated Vanadium, Molybdenum, and Chromium Oxide Clusters Supported on Rutile TiO2(110). Journal of Physical Chemistry C, 2009, 113, 16083-16093.	1.5	38
30	A study on the electron transport properties of ZnON semiconductors with respect to the relative anion content. Scientific Reports, 2016, 6, 24787.	1.6	38
31	Enhancement of heterogeneous nucleation of Î²-Sn phases in Sn-rich solders by adding minor alloying elements with hexagonal closed packed structures. Applied Physics Letters, 2009, 95, 021905.	1.5	37
32	Oxygen activation on the interface between Pt nanoparticles and mesoporous defective TiO2 during CO oxidation. Journal of Chemical Physics, 2019, 151, 234716.	1.2	37
33	Sub-micro droplet reactors for green synthesis of Li3VO4 anode materials in lithium ion batteries. Nature Communications, 2021, 12, 3081.	5.8	37
34	A Study on the Growth Behavior and Stability of Molecular Layer Deposited Alucone Films Using Diethylene Glycol and Trimethyl Aluminum Precursors, and the Enhancement of Diffusion Barrier Properties by Atomic Layer Deposited Al₂O₃ Capping. ACS Applied Materials & Interfaces, 2016, 8, 12263-12271.	4.0	36
35	Design of a Highly Nanodispersed Pdâ€“MgO/SiO₂ Composite Catalyst with Multifunctional Activity for CH₄ Reforming. ChemSusChem, 2012, 5, 1474-1481.	3.6	35
36	Metastable Rhombohedral Phase Transition of Semiconducting Indium Oxide Controlled by Thermal Atomic Layer Deposition. Chemistry of Materials, 2020, 32, 7397-7403.	3.2	33

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37	Design of Robust and Reactive Nanoparticles with Atomic Precision: 13Ag-Ih and 12Agâ^'1X (X = Pd, Pt, Au,) Tj ETQq1 1 0.784314 rgBT	1.5	32
38	Balance in Adsorption Energy of Reactants Steers CO Oxidation Mechanism of Ag13 and Ag12Pd1 Nanoparticles: Association Mechanism versus Carbonate-Mediated Mechanism. Journal of Physical Chemistry C, 2010, 114, 3156-3160.	1.5	32
39	Molecular Dynamic Simulation of Coalescence between Silver and Palladium Clusters. Materials Transactions, 2007, 48, 455-459.	0.4	31
40	Oxidative Dehydrogenation of Methanol to Formaldehyde by a Vanadium Oxide Cluster Supported on Rutile TiO₂(110): Which Oxygen is Involved?. Journal of Physical Chemistry C, 2010, 114, 13736-13738.	1.5	30
41	Probing adsorption sites for CO on ceria. Physical Chemistry Chemical Physics, 2013, 15, 15856.	1.3	30
42	Overstabilization of the Metastable Structure of Isolated Agâ^'Pd Bimetallic Clusters. Journal of Physical Chemistry C, 2008, 112, 17138-17142.	1.5	29
43	Controlled Growth of Ceria Nanoarrays on Anatase Titania Powder: A Bottom-up Physical Picture. Nano Letters, 2017, 17, 348-354.	4.5	29
44	Interface engineering for a rational design of poison-free bimetallic CO oxidation catalysts. Nanoscale, 2017, 9, 5244-5253.	2.8	28
45	Selective SnO_x Atomic Layer Deposition Driven by Oxygen Reactants. ACS Applied Materials & Interfaces, 2018, 10, 33335-33342.	4.0	28
46	Recyclable aqueous metal adsorbent: Synthesis and Cu(II) sorption characteristics of ternary nanocomposites of Fe3O4 nanoparticles@grapheneâ€“poly-N-phenylglycine nanofibers. Journal of Hazardous Materials, 2021, 401, 123283.	6.5	28
47	Influence of the Pt size and CeO₂ morphology at the Ptâ€“CeO₂ interface in CO oxidation. Journal of Materials Chemistry A, 2021, 9, 26381-26390.	5.2	28
48	Catalytic CO Oxidation by CO-Saturated Au Nanoparticles Supported on CeO₂: Effect of CO Coverage. Journal of Physical Chemistry C, 2017, 121, 26895-26902.	1.5	27
49	Understanding the atomic-level process of CO-adsorption-driven surface segregation of Pd in (AuPd)₁₄₇ bimetallic nanoparticles. Nanoscale, 2017, 9, 12077-12086.	2.8	25
50	The solid-to-liquid transition region of an Agâ€“Pd bimetallic nanocluster. Journal of Physics Condensed Matter, 2008, 20, 035208.	0.7	24
51	How Rh surface breaks CO2 molecules under ambient pressure. Nature Communications, 2020, 11, 5649.	5.8	24
52	Realization of Large-Area Wrinkle-Free Monolayer Graphene Films Transferred to Functional Substrates. Scientific Reports, 2015, 5, 9610.	1.6	22
53	Robust graphene-wrapped PtNi nanosponge for enhanced oxygen reduction reaction performance. Journal of Materials Chemistry A, 2018, 6, 8259-8264.	5.2	22
54	Solar-to-Steam Generation via Porous Black Membranes with Tailored Pore Structures. ACS Applied Materials & Interfaces, 2019, 11, 48300-48308.	4.0	21

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55	Zero-thermal-quenching and improved chemical stability of a UCr4C4-type phosphor via crystal site engineering. Chemical Engineering Journal, 2021, 420, 127664.	6.6	21
56	Reactive Structural Motifs of Au Nanoclusters for Oxygen Activation and Subsequent CO Oxidation. Journal of Physical Chemistry C, 2016, 120, 9292-9298.	1.5	20
57	Molecular Dynamics Simulation of the Diffusion of Au and Pt Nanoclusters on Carbon Nanotubes. Journal of Physical Chemistry C, 2009, 113, 10416-10421.	1.5	18
58	Complex Catalytic Behaviors of CuTiO_x Mixed-Oxide during CO Oxidation. Journal of Physical Chemistry C, 2015, 119, 22985-22991.	1.5	17
59	Design of Reduction Process of SnO2 by CH4 for Efficient Sn Recovery. Scientific Reports, 2017, 7, 14427.	1.6	16
60	Light-to-Hydrogen Improvement Based on Three-Factored Au@CeO₂/Gr Hierarchical Photocatalysts. ACS Nano, 2022, 16, 7848-7860.	7.3	16
61	Inâ€“Bi Electrocatalyst for the Reduction of CO₂ to Formate in a Wide Potential Window. ACS Applied Materials & Interfaces, 2022, 14, 28890-28899.	4.0	16
62	Tuning the Catalytic Selectivity of Copper Using TiO₂: Waterâ€Gas Shift versus CO Oxidation. ChemCatChem, 2013, 5, 3673-3679.	1.8	14
63	CO oxidation by MoS₂-supported Au₁₉ nanoparticles: effects of vacancy formation and tensile strain. Physical Chemistry Chemical Physics, 2016, 18, 13232-13238.	1.3	14
64	Prediction of the glass transition temperature and design of phase diagrams of butadiene rubber and styreneâ€“butadiene rubber via molecular dynamics simulations. Physical Chemistry Chemical Physics, 2017, 19, 16498-16506.	1.3	14
65	Most facile synthesis of Zn-Al:LDHs nanosheets at room temperature via environmentally friendly process and their high power generation by flexoelectricity. Materials Today Energy, 2018, 10, 254-263.	2.5	14
66	Immobilization of Au Nanoclusters Supported on Graphite: Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2010, 114, 2022-2026.	1.5	13
67	Resistance against water and acid water (pHÂ=Â4.0) via Al-doped ZnO thin films for environmentally friendly glass panels. Journal of Alloys and Compounds, 2017, 719, 271-280.	2.8	13
68	How to stabilize highly active Cu+ cations in a mixed-oxide catalyst. Catalysis Today, 2016, 263, 4-10.	2.2	11
69	Direct Growth of Highly Conductive Largeâ€Area Stretchable Graphene. Advanced Science, 2021, 8, 2003697.	5.6	11
70	Morphological diversity of AlN nano- and microstructures: synthesis, growth orientations and theoretical modelling. International Materials Reviews, 2020, 65, 323-355.	9.4	9
71	A measure of active interfaces in supported catalysts for high-temperature reactions. CheM, 2022, 8, 815-835.	5.8	9
72	Compositional effect of two-dimensional monodisperse AuPd bimetallic nanoparticle arrays fabricated by block copolymer nanopatterning on catalytic activity of CO oxidation. Chemical Communications, 2018, 54, 13734-13737.	2.2	8

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73	Segregation and Internal Structures in the Bimetallic Clusters: Density Functional Theory and Molecular Dynamics Simulation. Journal of Nanoscience and Nanotechnology, 2009, 9, 2553-2557.	0.9	7
74	Preparation of non-woven nanofiber webs for detoxification of nerve gases. Polymer, 2019, 179, 121664.	1.8	7
75	Efficient Sn Recovery from SnO2 by Alkane (CxHy=2x+2, 0â€‰â‰€â€‰xâ€‰â‰€â€‰4) Reduction. Scientific Reports, 2019, 9, 16702.	1.6	7
76	Enhancing the inherent catalytic activity and stability of TiO₂ supported Pt single-atoms at CeO_xâ€“TiO₂ interfaces. Journal of Materials Chemistry A, 2022, 10, 5942-5952.	5.2	7
77	Interspersing CeO_x Clusters to the Ptâ€“TiO₂ Interfaces for Catalytic Promotion of TiO₂-Supported Pt Nanoparticles. Journal of Physical Chemistry Letters, 2022, 13, 1719-1725.	2.1	7
78	Temperature and Composition Dependent Structural Evolution of AgPd Bimetallic Nanoparticle: Phase Diagram of (AgPd)₁₅₁ Nanoparticle. Journal of Nanoscience and Nanotechnology, 2011, 11, 2251-2255.	0.9	6
79	Surface-orientation-dependent growth of SrRuO3 epitaxial thin films. Applied Surface Science, 2020, 499, 143924.	3.1	6
80	Confined interfacial alloying of multilayered Pd-Ni nanocatalyst for widening hydrogen detection capacity. Sensors and Actuators B: Chemical, 2021, 330, 129378.	4.0	6
81	Minimising oxygen contamination through a liquid copper-aided group IV metal production process. Scientific Reports, 2018, 8, 17391.	1.6	4
82	Control and Theoretical Modeling of the Growth Process of AlN Six-fold and Multifold Armed Dendritic Crystals. Crystal Growth and Design, 2019, 19, 3244-3252.	1.4	3
83	Evenly transferred single-layered graphene membrane assisted by strong substrate adhesion. Nanotechnology, 2017, 28, 145706.	1.3	2
84	Polyhedral gold nanocrystals/polyelectrolyte composite film: One-pot synthesis via interfacial liquid plasma polymerization. Composites Science and Technology, 2017, 153, 198-208.	3.8	2
85	Modification of the Amount of CH4 Supplied for the Efficient CH4 Reduction of SnO2. Journal of Korean Institute of Metals and Materials, 2018, 56, 384-391.	0.4	2
86	Effects and Mechanism of Surface Water Wettability and Operating Frequency on Response Linearity of Flexible IDE Capacitive Humidity Sensor. Sensors, 2021, 21, 6633.	2.1	1
87	Reduction of SnO₂ by a Mixed Gas of Methane and Hydrogen. Korean Journal of Materials Research, 2018, 28, 725-731.	0.1	1
88	Theoretical Investigation of Water Adsorption Chemistry of CeO₂(111) Surfaces by Density Functional Theory. Korean Journal of Materials Research, 2020, 30, 267-271.	0.1	1
89	Density Functional Theory Studies of Oxygen Affinity of Small Au Nanoparticles. Korean Journal of Materials Research, 2017, 27, 229-235.	0.1	0
90	Density Functional Theory Study of Separated Adsorption of O₂ and CO on Pt@X(X = Pd,) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0