

Byung Hyo Kim

List of Publications by Year in descending order

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51
papers

4,971
citations

236612

25
h-index

214527

47
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51
all docs

51
docs citations

51
times ranked

8983
citing authors

#	ARTICLE	IF	CITATIONS
1	Large-Scale Synthesis of Uniform and Extremely Small-Sized Iron Oxide Nanoparticles for High-Resolution ^1T Magnetic Resonance Imaging Contrast Agents. <i>Journal of the American Chemical Society</i> , 2011, 133, 12624-12631.	6.6	835
2	Galvanic Replacement Reactions in Metal Oxide Nanocrystals. <i>Science</i> , 2013, 340, 964-968.	6.0	472
3	Multifunctional Tumor pH-Sensitive Self-Assembled Nanoparticles for Bimodal Imaging and Treatment of Resistant Heterogeneous Tumors. <i>Journal of the American Chemical Society</i> , 2014, 136, 5647-5655.	6.6	452
4	Synthesis of Uniform Ferrimagnetic Magnetite Nanocubes. <i>Journal of the American Chemical Society</i> , 2009, 131, 454-455.	6.6	434
5	Ni/NiO Core/Shell Nanoparticles for Selective Binding and Magnetic Separation of Histidine-Tagged Proteins. <i>Journal of the American Chemical Society</i> , 2006, 128, 10658-10659.	6.6	425
6	Synthesis, Characterization, and Application of Ultrasmall Nanoparticles. <i>Chemistry of Materials</i> , 2014, 26, 59-71.	3.2	347
7	Multifunctional $\text{Fe}_3\text{O}_4/\text{TaO}_x$ Core/Shell Nanoparticles for Simultaneous Magnetic Resonance Imaging and X-ray Computed Tomography. <i>Journal of the American Chemical Society</i> , 2012, 134, 10309-10312.	6.6	219
8	Magnetosome-like ferrimagnetic iron oxide nanocubes for highly sensitive MRI of single cells and transplanted pancreatic islets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 2662-2667.	3.3	183
9	Iron oxide nanoclusters for T1 magnetic resonance imaging of non-human primates. <i>Nature Biomedical Engineering</i> , 2017, 1, 637-643.	11.6	151
10	Various-Shaped Uniform Mn_3O_4 Nanocrystals Synthesized at Low Temperature in Air Atmosphere. <i>Chemistry of Materials</i> , 2009, 21, 2272-2279.	3.2	135
11	Simple synthesis of Pd-Fe $_3\text{O}_4$ heterodimer nanocrystals and their application as a magnetically recyclable catalyst for Suzuki cross-coupling reactions. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 2512.	1.3	126
12	Enhancement of neurite outgrowth in PC12 cells by iron oxide nanoparticles. <i>Biomaterials</i> , 2011, 32, 2871-2877.	5.7	111
13	Critical differences in 3D atomic structure of individual ligand-protected nanocrystals in solution. <i>Science</i> , 2020, 368, 60-67.	6.0	103
14	Route to the Smallest Doped Semiconductor: Mn ²⁺ -Doped (CdSe) $_{13}$ Clusters. <i>Journal of the American Chemical Society</i> , 2015, 137, 12776-12779.	6.6	91
15	Multifunctional mesoporous silica nanocomposite nanoparticles for pH controlled drug release and dual modal imaging. <i>Journal of Materials Chemistry</i> , 2011, 21, 16869.	6.7	78
16	Liquid-Phase Transmission Electron Microscopy for Studying Colloidal Inorganic Nanoparticles. <i>Advanced Materials</i> , 2018, 30, 1703316.	11.1	77
17	Amorphous-Phase-Mediated Crystallization of Ni Nanocrystals Revealed by High-Resolution Liquid-Phase Electron Microscopy. <i>Journal of the American Chemical Society</i> , 2019, 141, 763-768.	6.6	76
18	Magnetically separable carbon nanocomposite catalysts for efficient nitroarene reduction and Suzuki reactions. <i>Applied Catalysis A: General</i> , 2014, 476, 133-139.	2.2	73

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19	Molecular-Level Understanding of Continuous Growth from Iron-Oxo Clusters to Iron Oxide Nanoparticles. <i>Journal of the American Chemical Society</i> , 2019, 141, 7037-7045.	6.6	58
20	Sizing by Weighing: Characterizing Sizes of Ultrasmall-Sized Iron Oxide Nanocrystals Using MALDI-TOF Mass Spectrometry. <i>Journal of the American Chemical Society</i> , 2013, 135, 2407-2410.	6.6	57
21	High Mobility in Nanocrystal-Based Transparent Conducting Oxide Thin Films. <i>ACS Nano</i> , 2018, 12, 3200-3208.	7.3	55
22	Transformation of hydrophobic iron oxide nanoparticles to hydrophilic and biocompatible maghemite nanocrystals for use as highly efficient MRI contrast agent. <i>Journal of Materials Chemistry</i> , 2011, 21, 11472.	6.7	49
23	Large-Scale Synthesis of Ultra-Small-Sized Silver Nanoparticles. <i>ChemPhysChem</i> , 2012, 13, 2540-2543.	1.0	44
24	Liquid Cell Electron Microscopy of Nanoparticle Self-Assembly Driven by Solvent Drying. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 647-654.	2.1	41
25	Synthesis of CsPbX ₃ (X = Cl/Br, Br, and Br/I)@SiO ₂ /PMMA composite films as color-conversion materials for achieving tunable multi-color and white light emission. <i>Nano Research</i> , 2021, 14, 1187-1194.	5.8	40
26	Structural Insights into Multi-Metal Spinel Oxide Nanoparticles for Boosting Oxygen Reduction Electrocatalysis. <i>Advanced Materials</i> , 2022, 34, e2107868.	11.1	30
27	Redox-Sensitive Facet Dependency in Etching of Ceria Nanocrystals Directly Observed by Liquid Cell TEM. <i>Journal of the American Chemical Society</i> , 2019, 141, 18395-18399.	6.6	27
28	Zinc Oxo Clusters Improve the Optoelectronic Properties on Indium Phosphide Quantum Dots. <i>Chemistry of Materials</i> , 2020, 32, 2795-2802.	3.2	20
29	Correlating 3D Surface Atomic Structure and Catalytic Activities of Pt Nanocrystals. <i>Nano Letters</i> , 2021, 21, 1175-1183.	4.5	20
30	A Large-Scale Array of Ordered Graphene-Sandwiched Chambers for Quantitative Liquid-Phase Transmission Electron Microscopy. <i>Advanced Materials</i> , 2020, 32, e2002889.	11.1	19
31	Ligand-Dependent Coalescence Behaviors of Gold Nanoparticles Studied by Multichamber Graphene Liquid Cell Transmission Electron Microscopy. <i>Nano Letters</i> , 2020, 20, 8704-8710.	4.5	15
32	SINGLE: Atomic-resolution structure identification of nanocrystals by graphene liquid cell EM. <i>Science Advances</i> , 2021, 7, .	4.7	13
33	Role of the Precursor Composition in the Synthesis of Metal Ferrite Nanoparticles. <i>Inorganic Chemistry</i> , 2021, 60, 4261-4268.	1.9	13
34	Real-space imaging of nanoparticle transport and interaction dynamics by graphene liquid cell TEM. <i>Science Advances</i> , 2021, 7, eabi5419.	4.7	13
35	Unraveling the mystery of ultrafine bubbles: Establishment of thermodynamic equilibrium for sub-micron bubbles and its implications. <i>Journal of Colloid and Interface Science</i> , 2020, 570, 173-181.	5.0	12
36	Determination of the 3D Atomic Structures of Nanoparticles. <i>Small Science</i> , 2021, 1, 2000045.	5.8	12

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37	Synthesis of spherical and cubic magnetic iron oxide nanocrystals at low temperature in air. Journal of Colloid and Interface Science, 2018, 518, 27-33.	5.0	11
38	Size Characterization of Ultrasmall Silver Nanoparticles Using MALDI-TOF Mass Spectrometry. Bulletin of the Korean Chemical Society, 2014, 35, 961-964.	1.0	7
39	To inorganic nanoparticles via nanoclusters: Nonclassical nucleation and growth pathway. Bulletin of the Korean Chemical Society, 2021, 42, 1386-1399.	1.0	5
40	Preparation of conductive Si/C/N/Ni ceramic nanocomposites using phenyl-substituted polysilazane and nickelocene as precursors. Ceramics International, 2022, 48, 16576-16583.	2.3	5
41	Metal Oxide Nanoparticles: Large-scale Synthesis and Medical Applications of Uniform-sized Metal Oxide Nanoparticles (Adv. Mater. 42/2018). Advanced Materials, 2018, 30, 1870319.	11.1	4
42	In Situ Liquid Phase TEM of Nanoparticle Formation and Diffusion in a Phase-Separated Medium. ACS Applied Materials & Interfaces, 2022, 14, 22810-22817.	4.0	4
43	Liquid-cell Transmission Electron Microscopy for Tracking Self-assembly of Nanoparticles. Journal of Visualized Experiments, 2017, , .	0.2	3
44	Rational design and observation of the tight interface between graphene and ligand protected nanocrystals. Physical Chemistry Chemical Physics, 2019, 21, 329-335.	1.3	2
45	Liquid Cell TEM and Automated Image Analysis for Nanoparticle Growth Study. Microscopy and Microanalysis, 2018, 24, 1680-1681.	0.2	1
46	Self-Assembled Nanochamber Arrays for in-situ TEM Observation of Liquid-Phase Samples. , 2019, , .		1
47	Graphene Oxide-supported Microwell Grids for Preparing Cryo-EM Samples with Controlled Ice Thickness. Advanced Materials, 2021, 33, e2102991.	11.1	1
48	Coalescence dynamics of platinum group metal nanoparticles revealed by liquid-phase transmission electron microscopy. IScience, 2022, 25, 104699.	1.9	1
49	Designed synthesis and assembly of uniform-sized iron oxide nanoparticles for multifunctional medical applications. , 2011, , .		0
50	Structural Insights into Multi-metal Spinel Oxide Nanoparticles for Boosting Oxygen Reduction Electrocatalysis (Adv. Mater. 8/2022). Advanced Materials, 2022, 34, .	11.1	0
51	3-dimensional Scanning of Entire Unit Cells in Single Nanoparticles.. ChemNanoMat, 2022, 8, .	1.5	0