

Sang-Il Choi

List of Publications by Citations

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88

papers

5,957

citations

38

h-index

77

g-index

94

ext. papers

6,957

ext. citations

10.4

avg, IF

5.89

L-index

#	Paper	IF	Citations
88	NANOCATALYSTS. Platinum-based nanocages with subnanometer-thick walls and well-defined, controllable facets. <i>Science</i> , 2015 , 349, 412-6	33.3	724
87	Synthesis and characterization of 9 nm Pt-Ni octahedra with a record high activity of 3.3 A/mg(Pt) for the oxygen reduction reaction. <i>Nano Letters</i> , 2013 , 13, 3420-5	11.5	475
86	Atomic layer-by-layer deposition of Pt on Pd nanocubes for catalysts with enhanced activity and durability toward oxygen reduction. <i>Nano Letters</i> , 2014 , 14, 3570-6	11.5	380
85	Palladium-platinum core-shell icosahedra with substantially enhanced activity and durability towards oxygen reduction. <i>Nature Communications</i> , 2015 , 6, 7594	17.4	365
84	Morphology-Controlled Metal Sulfides and Phosphides for Electrochemical Water Splitting. <i>Advanced Materials</i> , 2019 , 31, e1806682	24	304
83	Atomic layer-by-layer deposition of platinum on palladium octahedra for enhanced catalysts toward the oxygen reduction reaction. <i>ACS Nano</i> , 2015 , 9, 2635-47	16.7	180
82	Facile Synthesis of Sub-20 nm Silver Nanowires through a Bromide-Mediated Polyol Method. <i>ACS Nano</i> , 2016 , 10, 7892-900	16.7	173
81	Polyol Synthesis of Ultrathin Pd Nanowires via Attachment-Based Growth and Their Enhanced Activity towards Formic Acid Oxidation. <i>Advanced Functional Materials</i> , 2014 , 24, 131-139	15.6	158
80	Electrochemical surface area measurements of platinum- and palladium-based nanoparticles. <i>Electrochemistry Communications</i> , 2013 , 31, 46-48	5.1	156
79	Ultrathin Free-Standing Ternary-Alloy Nanosheets. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 2753-8	16.4	150
78	Synthesis and characterization of Pd@Pt-Ni core-shell octahedra with high activity toward oxygen reduction. <i>ACS Nano</i> , 2014 , 8, 10363-71	16.7	148
77	Kinetically controlled synthesis of Pt-Cu alloy concave nanocubes with high-index facets for methanol electro-oxidation. <i>Chemical Communications</i> , 2014 , 50, 560-2	5.8	126
76	Facile synthesis of palladium right bipyramids and their use as seeds for overgrowth and as catalysts for formic acid oxidation. <i>Journal of the American Chemical Society</i> , 2013 , 135, 15706-9	16.4	125
75	Single-crystalline hollow face-centered-cubic cobalt nanoparticles from solid face-centered-cubic cobalt oxide nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 9504-8	16.4	119
74	Pd/Cu Bimetallic Tripods: A Mechanistic Understanding of the Synthesis and Their Enhanced Electrocatalytic Activity for Formic Acid Oxidation. <i>Advanced Functional Materials</i> , 2014 , 24, 7520-7529	15.6	118
73	Preparation and Optical Properties of Colloidal, Monodisperse, and Highly Crystalline ITO Nanoparticles. <i>Chemistry of Materials</i> , 2008 , 20, 2609-2611	9.6	99
72	Catalysis on faceted noble-metal nanocrystals: both shape and size matter. <i>Current Opinion in Chemical Engineering</i> , 2013 , 2, 142-150	5.4	96

71	Dendrite-Embedded Platinum-Nickel Multiframe as Highly Active and Durable Electrocatalyst toward the Oxygen Reduction Reaction. <i>Nano Letters</i> , 2018 , 18, 2930-2936	11.5	94
70	A Comprehensive Study of Formic Acid Oxidation on Palladium Nanocrystals with Different Types of Facets and Twin Defects. <i>ChemCatChem</i> , 2015 , 7, 2077-2084	5.2	91
69	Composition-controlled PtCo alloy nanocubes with tuned electrocatalytic activity for oxygen reduction. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 6228-34	9.5	89
68	Designed synthesis of well-defined Pd@Pt core-shell nanoparticles with controlled shell thickness as efficient oxygen reduction electrocatalysts. <i>Chemistry - A European Journal</i> , 2013 , 19, 8190-8	4.8	85
67	Radially Phase Segregated PtCu@PtCuNi Dendrite@Frame Nanocatalyst for the Oxygen Reduction Reaction. <i>ACS Nano</i> , 2017 , 11, 10844-10851	16.7	82
66	PtNi octahedral nanocrystals as a class of highly active electrocatalysts toward the hydrogen evolution reaction in an alkaline electrolyte. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12392-12397	13	82
65	Microscale polymer bottles corked with a phase-change material for temperature-controlled release. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 10468-71	16.4	77
64	Facile Synthesis of Ag Nanorods with No Plasmon Resonance Peak in the Visible Region by Using Pd Decahedra of 16 nm in Size as Seeds. <i>ACS Nano</i> , 2015 , 9, 10523-32	16.7	74
63	Controlling the size and composition of nanosized Pt-Ni octahedra to optimize their catalytic activities toward the oxygen reduction reaction. <i>ChemSusChem</i> , 2014 , 7, 1476-83	8.3	67
62	Theoretical and Experimental Understanding of Hydrogen Evolution Reaction Kinetics in Alkaline Electrolytes with Pt-Based Core-Shell Nanocrystals. <i>Journal of the American Chemical Society</i> , 2019 , 141, 18256-18263	16.4	58
61	Synthesis and characterization of Pt(9)Co nanocubes with high activity for oxygen reduction. <i>Chemical Communications</i> , 2010 , 46, 4950-2	5.8	58
60	Controlled synthesis of nanosized palladium icosahedra and their catalytic activity towards formic-acid oxidation. <i>ChemSusChem</i> , 2013 , 6, 1923-30	8.3	54
59	Pt and Pt-Ni(OH) Electrodes for the Hydrogen Evolution Reaction in Alkaline Electrolytes and Their Nanoscaled Electrocatalysts. <i>ChemSusChem</i> , 2018 , 11, 2643-2653	8.3	53
58	Shape-controlled synthesis of Pt ₃ Co nanocrystals with high electrocatalytic activity toward oxygen reduction. <i>Chemistry - A European Journal</i> , 2011 , 17, 12280-4	4.8	52
57	One-Pot Synthesis of Penta-twinned Palladium Nanowires and Their Enhanced Electrocatalytic Properties. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 31203-31212	9.5	50
56	NiOOH Exfoliation-Free Nickel Octahedra as Highly Active and Durable Electrocatalysts Toward the Oxygen Evolution Reaction in an Alkaline Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 10115-10122	9.5	45
55	Recent advances in electrocatalysts toward the oxygen reduction reaction: the case of PtNi octahedra. <i>Nanoscale</i> , 2018 , 10, 20073-20088	7.7	45
54	Metal-semiconductor yolk-shell heteronanostructures for plasmon-enhanced photocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 4068-4078	13	43

53	Recent Progress in Bifunctional Electrocatalysts for Overall Water Splitting under Acidic Conditions. <i>ChemElectroChem</i> , 2019 , 6, 3244-3253	4.3	42
52	Anisotropic Surface Modulation of Pt Catalysts for Highly Reversible LiO ₂ Batteries: High Index Facet as a Critical Descriptor. <i>ACS Catalysis</i> , 2018 , 8, 9006-9015	13.1	41
51	Structural Evolution of Sub-10 nm Octahedral Platinum-Nickel Bimetallic Nanocrystals. <i>Nano Letters</i> , 2017 , 17, 3926-3931	11.5	40
50	Universal sulfide-assisted synthesis of M-Ag heterodimers (M = Pd, Au, Pt) as efficient platforms for fabricating metal-semiconductor heteronanostructures. <i>Journal of the American Chemical Society</i> , 2014 , 136, 5221-4	16.4	38
49	New crystal structure: synthesis and characterization of hexagonal wurtzite MnO. <i>Journal of the American Chemical Society</i> , 2012 , 134, 8392-5	16.4	35
48	Template-Directed Rapid Synthesis of Pd-Based Ultrathin Porous Intermetallic Nanosheets for Efficient Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 10942-10949	16.4	35
47	Coating Pt-Ni Octahedra with Ultrathin Pt Shells to Enhance the Durability without Compromising the Activity toward Oxygen Reduction. <i>ChemSusChem</i> , 2016 , 9, 2209-15	8.3	31
46	Shape-controlled metal nanocrystals for catalytic applications. <i>MRS Bulletin</i> , 2014 , 39, 727-737	3.2	30
45	Nanocatalyst Design for Long-Term Operation of Proton/Anion Exchange Membrane Water Electrolysis. <i>Advanced Energy Materials</i> , 2021 , 11, 2003188	21.8	30
44	PtAu based nanocrystals as promising catalysts for various electrocatalytic reactions. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 17183-17203	13	29
43	Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media. <i>Advanced Functional Materials</i> , 2020 , 30, 2003935	15.6	27
42	Ligand Effect of Shape-Controlled Palladium Hydride Nanocrystals on Liquid-Fuel Oxidation Reactions. <i>Chemistry of Materials</i> , 2019 , 31, 5663-5673	9.6	26
41	Ultrathin Free-Standing Ternary-Alloy Nanosheets. <i>Angewandte Chemie</i> , 2016 , 128, 2803-2808	3.6	26
40	Achieving outstanding Li ⁺ -ORR and -OER activities via edge- and corner-embedded bimetallic nanocubes for rechargeable LiO ₂ batteries. <i>Nano Energy</i> , 2015 , 18, 71-80	17.1	25
39	Surface engineering in improving activity of Pt nanocubes for ammonia electrooxidation reaction. <i>Applied Catalysis B: Environmental</i> , 2020 , 269, 118821	21.8	25
38	Ultrathin-Polyaniline-Coated Pt-Ni Alloy Nanooctahedra for the Electrochemical Methanol Oxidation Reaction. <i>Chemistry - A European Journal</i> , 2019 , 25, 7185-7190	4.8	24
37	Facile Synthesis of Rhodium Icosahedra with Controlled Sizes up to 12 nm. <i>ChemNanoMat</i> , 2016 , 2, 61-66	9.5	22
36	Facile synthesis of fully ordered L10-FePt nanoparticles with controlled Pt-shell thicknesses for electrocatalysis. <i>Nano Research</i> , 2017 , 10, 2866-2880	10	21

35	Catalytic Surface Specificity of Ni(OH) ₂ -Decorated Pt Nanocubes for the Hydrogen Evolution Reaction in an Alkaline Electrolyte. <i>ChemSusChem</i> , 2019 , 12, 4021-4028	8.3	20
34	Single-Crystalline Hollow Face-Centered-Cubic Cobalt Nanoparticles from Solid Face-Centered-Cubic Cobalt Oxide Nanoparticles. <i>Angewandte Chemie</i> , 2008 , 120, 9646-9650	3.6	20
33	Shape-controlled Pt nanocubes directly grown on carbon supports and their electrocatalytic activity toward methanol oxidation. <i>Science Bulletin</i> , 2017 , 62, 943-949	10.6	19
32	Facile synthesis of highly crystalline ZnO nanorods with controlled aspect ratios and their optical properties. <i>CrystEngComm</i> , 2017 , 19, 1454-1458	3.3	17
31	Impact of Heat Treatment on the Electrochemical Properties of Carbon-Supported Octahedral PtNi Nanoparticles. <i>ACS Catalysis</i> , 2019 , 9, 11189-11198	13.1	17
30	RuO ₂ -decorated multimetallic hetero-nanocages as highly efficient electrocatalysts toward the methanol oxidation reaction. <i>Nanoscale</i> , 2018 , 10, 21178-21185	7.7	17
29	Seed-mediated synthesis of gold tetrahedra in high purity and with tunable, well-controlled sizes. <i>Chemistry - an Asian Journal</i> , 2014 , 9, 2635-40	4.5	16
28	Boosting Activity and Selectivity of CO Electroreduction by Pre-Hydrizing Pd Nanocubes. <i>Small</i> , 2020 , 16, e2005305	11	16
27	FexNi ₂ WP Alloy Nanocatalysts with Electron-Deficient Phosphorus Enhancing the Hydrogen Evolution Reaction in Acidic Media. <i>ACS Catalysis</i> , 2020 , 10, 11665-11673	13.1	16
26	Surface elemental distribution effect of Pt-Pb hexagonal nanoplates for electrocatalytic methanol oxidation reaction. <i>Chinese Journal of Catalysis</i> , 2020 , 41, 813-819	11.3	15
25	Microscale Polymer Bottles Corked with a Phase-Change Material for Temperature-Controlled Release. <i>Angewandte Chemie</i> , 2013 , 125, 10662-10665	3.6	14
24	Sonochemical synthesis of ZnO-ZnS core-shell nanorods for enhanced photoelectrochemical water oxidation. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 3825-3834	3.8	11
23	Regulating the Catalytic Dynamics Through a Crystal Structure Modulation of Bimetallic Catalyst. <i>Advanced Energy Materials</i> , 2020 , 10, 1903225	21.8	10
22	Novel Cobalt(II) complexes containing N,N-di(2-picoyl)amine based ligands; Synthesis, characterization and application towards methyl methacrylate polymerisation. <i>Journal of Molecular Structure</i> , 2016 , 1113, 24-31	3.4	9
21	Ni(OH) ₂ Decorated Pt-Cu Octahedra for Ethanol Electrooxidation Reaction. <i>Frontiers in Chemistry</i> , 2019 , 7, 608	5	8
20	One-pot Syntheses of Metallic Hollow Nanoparticles of Tin and Lead. <i>Bulletin of the Korean Chemical Society</i> , 2009 , 30, 1135-1138	1.2	8
19	Pd@Rh core-shell nanocrystals with well-defined facets and their enhanced catalytic performance towards CO oxidation. <i>Nanoscale Horizons</i> , 2019 , 4, 1232-1238	10.8	7
18	Crystal Phase Transition Creates a Highly Active and Stable RuC Nanosurface for Hydrogen Evolution Reaction in Alkaline Media. <i>Advanced Materials</i> , 2021 , 33, e2105248	24	7

17	Synthesis and structural characterization of 5-coordinate cobalt(II), copper(II) and 4-coordinate zinc(II) complexes containing N ² -cyclopentyl substituted N,N-bispyrazolylmethylamine. <i>Polyhedron</i> , 2016 , 110, 149-156	2.7	6
16	Nitrogen-Doped Pt/C Electrocatalysts with Enhanced Activity and Stability toward the Oxygen Reduction Reaction. <i>ChemPlusChem</i> , 2013 , 78, 1252-1257	2.8	6
15	Autocatalytic Surface Reduction-Assisted Synthesis of PtW Ultrathin Alloy Nanowires for Highly Efficient Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2103943	21.8	6
14	Solvothermal Doping of Lanthanum on Nanoscale Platinum Surfaces to Improve Oxygen Electroreduction Performance. <i>ChemElectroChem</i> , 2020 , 7, 2643-2650	4.3	5
13	Sustainable Method for the Large-Scale Preparation of Fe ₃ O ₄ Nanocrystals. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 2578-2584	3.8	5
12	Synthesis of Pd-Pt Ultrathin Assembled Nanosheets as Highly Efficient Electrocatalysts for Ethanol Oxidation. <i>Chemistry - an Asian Journal</i> , 2020 , 15, 1324-1329	4.5	4
11	Facile synthesis of platinum octahedra and cubes through the manipulation of reduction kinetics. <i>Advanced Powder Technology</i> , 2016 , 27, 1862-1867	4.6	4
10	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. <i>Journal of Materials Chemistry A</i> , 2021 , 10, 50-88	13	4
9	Template-Directed Rapid Synthesis of Pd-Based Ultrathin Porous Intermetallic Nanosheets for Efficient Oxygen Reduction. <i>Angewandte Chemie</i> , 2021 , 133, 11037-11044	3.6	4
8	Vertical-crystalline Fe-doped Ni oxyhydroxides for highly active and stable oxygen evolution reaction. <i>Matter</i> , 2021 ,	12.7	4
7	Electrocatalysts: Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media (Adv. Funct. Mater. 38/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070253	15.6	3
6	Etching to unveil active sites of nanocatalysts for electrocatalysis. <i>Materials Chemistry Frontiers</i> , 2021 , 5, 3962-3985	7.8	3
5	Achieving complete electrooxidation of ethanol by single atomic Rh decoration of Pt nanocubes.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2112109119 ^{11.5}	11.5	3
4	Understanding the Grain Boundary Behavior of Bimetallic Platinum-Cobalt Alloy Nanowires toward Oxygen Electro-Reduction. <i>ACS Catalysis</i> , 2022 , 12, 3516-3523	13.1	3
3	The Effects of Surface Modifications on the Electrochemical Properties of LiMn ₂ Ni _x O ₄ (0 ≤ x ≤ 0.5) as Cathode Materials for Secondary Lithium Batteries. <i>Bulletin of the Korean Chemical Society</i> , 2018 , 39, 946-950	1.2	2
2	Shape and Hydrating Effects of Palladium Nanocatalyst Toward Oxygen Electroreduction Reaction. <i>Bulletin of the Korean Chemical Society</i> , 2021 , 42, 802-805	1.2	2
1	Utilization of room temperature ionic liquids in the synthesis of Pt-based catalysts toward oxygen reduction reaction. <i>APL Materials</i> , 2021 , 9, 020702	5.7	2