Sang-Il Choi

List of Publications by Year in Descending Order

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	Achieving complete electrooxidation of ethanol by single atomic Rh decoration of Pt nanocubes.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2112109119	11.5	3
87	Understanding the Grain Boundary Behavior of Bimetallic Platinum□Cobalt Alloy Nanowires toward Oxygen Electro-Reduction. *ACS Catalysis*, **2022**, 12, 3516-3523	13.1	3
86	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. *Journal of Materials Chemistry A*, **2021**, 10, 50-88	13	4
85	Crystal Phase Transition Creates a Highly Active and Stable RuC Nanosurface for Hydrogen Evolution Reaction in Alkaline Media. *Advanced Materials*, **2021**, 33, e2105248	24	7
84	Template-Directed Rapid Synthesis of Pd-Based Ultrathin Porous Intermetallic Nanosheets for Efficient Oxygen Reduction. *Angewandte Chemie*, **2021**, 133, 11037-11044	3.6	4
83	Template-Directed Rapid Synthesis of Pd-Based Ultrathin Porous Intermetallic Nanosheets for Efficient Oxygen Reduction. *Angewandte Chemie - International Edition*, **2021**, 60, 10942-10949	16.4	35
82	Nanocatalyst Design for Long-Term Operation of Proton/Anion Exchange Membrane Water Electrolysis. *Advanced Energy Materials*, **2021**, 11, 2003188	21.8	30
81	Shape and Hydriding Effects of Palladium Nanocatalyst Toward Oxygen Electroreduction Reaction. *Bulletin of the Korean Chemical Society*, **2021**, 42, 802-805	1.2	2
80	Utilization of room temperature ionic liquids in the synthesis of Pt-based catalysts toward oxygen reduction reaction. *APL Materials*, **2021**, 9, 020702	5.7	2
79	Vertical-crystalline Fe-doped □Ni oxyhydroxides for highly active and stable oxygen evolution reaction. *Matter*, **2021**,	12.7	4
78	Etching to unveil active sites of nanocatalysts for electrocatalysis. *Materials Chemistry Frontiers*, **2021**, 5, 3962-3985	7.8	3
77	Solvothermal Doping of Lanthanum on Nanoscale Platinum Surfaces to Improve Oxygen Electroreduction Performance. *ChemElectroChem*, **2020**, 7, 2643-2650	4.3	5
76	Surface engineering in improving activity of Pt nanocubes for ammonia electrooxidation reaction. *Applied Catalysis B: Environmental*, **2020**, 269, 118821	21.8	25
75	Synthesis of Pd-Pt Ultrathin Assembled Nanosheets as Highly Efficient Electrocatalysts for Ethanol Oxidation. *Chemistry - an Asian Journal*, **2020**, 15, 1324-1329	4.5	4
74	Regulating the Catalytic Dynamics Through a Crystal Structure Modulation of Bimetallic Catalyst. *Advanced Energy Materials*, **2020**, 10, 1903225	21.8	10
73	Surface elemental distribution effect of Pt-Pb hexagonal nanoplates for electrocatalytic methanol oxidation reaction. *Chinese Journal of Catalysis*, **2020**, 41, 813-819	11.3	15
72	Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media. *Advanced Functional Materials*, **2020**, 30, 2003935	15.6	27

71	Boosting Activity and Selectivity of CO Electroreduction by Pre-Hydridizing Pd Nanocubes. *Small*, **2020**, 16, e2005305	11	16
70	FexNi2−xP Alloy Nanocatalysts with Electron-Deficient Phosphorus Enhancing the Hydrogen Evolution Reaction in Acidic Media. *ACS Catalysis*, **2020**, 10, 11665-11673	13.1	16
69	Electrocatalysts: Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media (Adv. Funct. Mater. 38/2020). *Advanced Functional Materials*, **2020**, 30, 2070253	15.6	3
68	Ni(OH) Decorated Pt-Cu Octahedra for Ethanol Electrooxidation Reaction. *Frontiers in Chemistry*, **2019**, 7, 608	5	8
67	Pt□u based nanocrystals as promising catalysts for various electrocatalytic reactions. *Journal of Materials Chemistry A*, **2019**, 7, 17183-17203	13	29
66	Recent Progress in Bifunctional Electrocatalysts for Overall Water Splitting under Acidic Conditions. *ChemElectroChem*, **2019**, 6, 3244-3253	4.3	42
65	Ultrathin-Polyaniline-Coated Pt-Ni Alloy Nanooctahedra for the Electrochemical Methanol Oxidation Reaction. *Chemistry - A European Journal*, **2019**, 25, 7185-7190	4.8	24
64	Morphology-Controlled Metal Sulfides and Phosphides for Electrochemical Water Splitting. *Advanced Materials*, **2019**, 31, e1806682	24	304
63	Ligand Effect of Shape-Controlled □Palladium Hydride Nanocrystals on Liquid-Fuel Oxidation Reactions. *Chemistry of Materials*, **2019**, 31, 5663-5673	9.6	26
62	Catalytic Surface Specificity of Ni(OH) -Decorated Pt Nanocubes for the Hydrogen Evolution Reaction in an Alkaline Electrolyte. *ChemSusChem*, **2019**, 12, 4021-4028	8.3	20
61	Pd@Rh core□hell nanocrystals with well-defined facets and their enhanced catalytic performance towards CO oxidation. *Nanoscale Horizons*, **2019**, 4, 1232-1238	10.8	7
60	Theoretical and Experimental Understanding of Hydrogen Evolution Reaction Kinetics in Alkaline Electrolytes with Pt-Based Core-Shell Nanocrystals. *Journal of the American Chemical Society*, **2019**, 141, 18256-18263	16.4	58
59	Impact of Heat Treatment on the Electrochemical Properties of Carbon-Supported Octahedral Pt□Ni Nanoparticles. *ACS Catalysis*, **2019**, 9, 11189-11198	13.1	17
58	NiOOH Exfoliation-Free Nickel Octahedra as Highly Active and Durable Electrocatalysts Toward the Oxygen Evolution Reaction in an Alkaline Electrolyte. *ACS Applied Materials & Interfaces*, **2018**, 10, 10115-10122	9.5	45
57	Dendrite-Embedded Platinum-Nickel Multiframes as Highly Active and Durable Electrocatalyst toward the Oxygen Reduction Reaction. *Nano Letters*, **2018**, 18, 2930-2936	11.5	94
56	Metal□emiconductor yolk□hell heteronanostructures for plasmon-enhanced photocatalytic hydrogen evolution. *Journal of Materials Chemistry A*, **2018**, 6, 4068-4078	13	43
55	The Effects of Surface Modifications on the Electrochemical Properties of LiMn2−xNixO4 (0 □x □ 0.5) as Cathode Materials for Secondary Lithium Batteries. *Bulletin of the Korean Chemical Society*, **2018**, 39, 946-950	1.2	2
54	Anisotropic Surface Modulation of Pt Catalysts for Highly Reversible Li□2 Batteries: High Index Facet as a Critical Descriptor. *ACS Catalysis*, **2018**, 8, 9006-9015	13.1	41

53	RuO-decorated multimetallic hetero-nanocages as highly efficient electrocatalysts toward the methanol oxidation reaction. *Nanoscale*, **2018**, 10, 21178-21185	7.7	17
52	Recent advances in electrocatalysts toward the oxygen reduction reaction: the case of PtNi octahedra. *Nanoscale*, **2018**, 10, 20073-20088	7.7	45
51	Pt and Pt-Ni(OH) Electrodes for the Hydrogen Evolution Reaction in Alkaline Electrolytes and Their Nanoscaled Electrocatalysts. *ChemSusChem*, **2018**, 11, 2643-2653	8.3	53
50	Facile synthesis of highly crystalline ZnO nanorods with controlled aspect ratios and their optical properties. *CrystEngComm*, **2017**, 19, 1454-1458	3.3	17
49	Structural Evolution of Sub-10 nm Octahedral Platinum-Nickel Bimetallic Nanocrystals. *Nano Letters* , **2017**, 17, 3926-3931	11.5	40
48	Facile synthesis of fully ordered L10-FePt nanoparticles with controlled Pt-shell thicknesses for electrocatalysis. *Nano Research*, **2017**, 10, 2866-2880	10	21
47	Sonochemical synthesis of ZnO-ZnS core-shell nanorods for enhanced photoelectrochemical water oxidation. *Journal of the American Ceramic Society*, **2017**, 100, 3825-3834	3.8	11
46	Radially Phase Segregated PtCu@PtCuNi Dendrite@Frame Nanocatalyst for the Oxygen Reduction Reaction. *ACS Nano*, **2017**, 11, 10844-10851	16.7	82
45	One-Pot Synthesis of Penta-twinned Palladium Nanowires and Their Enhanced Electrocatalytic Properties. *ACS Applied Materials & Interfaces*, **2017**, 9, 31203-31212	9.5	50
44	Shape-controlled Pt nanocubes directly grown on carbon supports and their electrocatalytic activity toward methanol oxidation. *Science Bulletin*, **2017**, 62, 943-949	10.6	19
43	Coating Pt-Ni Octahedra with Ultrathin Pt Shells to Enhance the Durability without Compromising the Activity toward Oxygen Reduction. *ChemSusChem*, **2016**, 9, 2209-15	8.3	31
42	Facile synthesis of platinum octahedra and cubes through the manipulation of reduction kinetics. *Advanced Powder Technology*, **2016**, 27, 1862-1867	4.6	4
41	Synthesis and structural characterization of 5-coordinate cobalt(II), copper(II) and 4-coordinate zinc(II) complexes containing N?-cyclopentyl substituted N,N-bispyrazolylmethylamine. *Polyhedron*, **2016**, 110, 149-156	2.7	6
40	Novel Cobalt(II) complexes containing N,N-di(2-picolyl)amine based ligands; Synthesis, characterization and application towards methyl methacrylate polymerisation. *Journal of Molecular Structure*, **2016**, 1113, 24-31	3.4	9
39	Pt□Ni octahedral nanocrystals as a class of highly active electrocatalysts toward the hydrogen evolution reaction in an alkaline electrolyte. *Journal of Materials Chemistry A*, **2016**, 4, 12392-12397	13	82
38	Sustainable Method for the Large-Scale Preparation of Fe3O4 Nanocrystals. *Journal of the American Ceramic Society*, **2016**, 99, 2578-2584	3.8	5
37	Ultrathin Free-Standing Ternary-Alloy Nanosheets. *Angewandte Chemie*, **2016**, 128, 2803-2808	3.6	26
36	Ultrathin Free-Standing Ternary-Alloy Nanosheets. *Angewandte Chemie - International Edition*, **2016** , 55, 2753-8	16.4	150

35	Facile Synthesis of Sub-20 nm Silver Nanowires through a Bromide-Mediated Polyol Method. *ACS Nano*, **2016**, 10, 7892-900	16.7	173
34	Facile Synthesis of Rhodium Icosahedra with Controlled Sizes up to 12 nm. *ChemNanoMat*, **2016**, 2, 61-66	3.5	22
33	NANOCATALYSTS. Platinum-based nanocages with subnanometer-thick walls and well-defined, controllable facets. *Science*, **2015**, 349, 412-6	33.3	724
32	Palladium-platinum core-shell icosahedra with substantially enhanced activity and durability towards oxygen reduction. *Nature Communications*, **2015**, 6, 7594	17.4	365
31	Achieving outstanding Li+-ORR and -OER activities via edge- and corner-embedded bimetallic nanocubes for rechargeable Li□2 batteries. *Nano Energy*, **2015**, 18, 71-80	17.1	25
30	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. *ACS Nano*, **2015**, 9, 10523-32	16.7	74
29	A Comprehensive Study of Formic Acid Oxidation on Palladium Nanocrystals with Different Types of Facets and Twin Defects. *ChemCatChem*, **2015**, 7, 2077-2084	5.2	91
28	Atomic layer-by-layer deposition of platinum on palladium octahedra for enhanced catalysts toward the oxygen reduction reaction. *ACS Nano*, **2015**, 9, 2635-47	16.7	180
27	Controlling the size and composition of nanosized Pt-Ni octahedra to optimize their catalytic activities toward the oxygen reduction reaction. *ChemSusChem*, **2014**, 7, 1476-83	8.3	67
26	Atomic layer-by-layer deposition of Pt on Pd nanocubes for catalysts with enhanced activity and durability toward oxygen reduction. *Nano Letters*, **2014**, 14, 3570-6	11.5	380
25	Polyol Synthesis of Ultrathin Pd Nanowires via Attachment-Based Growth and Their Enhanced Activity towards Formic Acid Oxidation. *Advanced Functional Materials*, **2014**, 24, 131-139	15.6	158
24	Synthesis and characterization of Pd@Pt-Ni core-shell octahedra with high activity toward oxygen reduction. *ACS Nano*, **2014**, 8, 10363-71	16.7	148
23	Seed-mediated synthesis of gold tetrahedra in high purity and with tunable, well-controlled sizes. *Chemistry - an Asian Journal*, **2014**, 9, 2635-40	4.5	16
22	Universal sulfide-assisted synthesis of M-Ag heterodimers (M = Pd, Au, Pt) as efficient platforms for fabricating metal-semiconductor heteronanostructures. *Journal of the American Chemical Society*, **2014**, 136, 5221-4	16.4	38
21	Kinetically controlled synthesis of Pt-Cu alloy concave nanocubes with high-index facets for methanol electro-oxidation. *Chemical Communications*, **2014**, 50, 560-2	5.8	126
20	Pd□Cu Bimetallic Tripods: A Mechanistic Understanding of the Synthesis and Their Enhanced Electrocatalytic Activity for Formic Acid Oxidation. *Advanced Functional Materials*, **2014**, 24, 7520-7529	15.6	118
19	Shape-controlled metal nanocrystals for catalytic applications. *MRS Bulletin*, **2014**, 39, 727-737	3.2	30
18	Microscale polymer bottles corked with a phase-change material for temperature-controlled release. *Angewandte Chemie - International Edition*, **2013**, 52, 10468-71	16.4	77

17	Facile synthesis of palladium right bipyramids and their use as seeds for overgrowth and as catalysts for formic acid oxidation. *Journal of the American Chemical Society*, **2013**, 135, 15706-9	16.4	125
16	Microscale Polymer Bottles Corked with a Phase-Change Material for Temperature-Controlled Release. *Angewandte Chemie*, **2013**, 125, 10662-10665	3.6	14
15	Catalysis on faceted noble-metal nanocrystals: both shape and size matter. *Current Opinion in Chemical Engineering*, **2013**, 2, 142-150	5.4	96
14	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. *Nano Letters*, **2013**, 13, 3420-5	11.5	475
13	Electrochemical surface area measurements of platinum- and palladium-based nanoparticles. *Electrochemistry Communications*, **2013**, 31, 46-48	5.1	156
12	Controlled synthesis of nanosized palladium icosahedra and their catalytic activity towards formic-acid oxidation. *ChemSusChem*, **2013**, 6, 1923-30	8.3	54
11	Designed synthesis of well-defined Pd@Pt core-shell nanoparticles with controlled shell thickness as efficient oxygen reduction electrocatalysts. *Chemistry - A European Journal*, **2013**, 19, 8190-8	4.8	85
10	Nitrogen-Doped Pt/C Electrocatalysts with Enhanced Activity and Stability toward the Oxygen Reduction Reaction. *ChemPlusChem*, **2013**, 78, 1252-1257	2.8	6
9	Composition-controlled PtCo alloy nanocubes with tuned electrocatalytic activity for oxygen reduction. *ACS Applied Materials & Interfaces*, **2012**, 4, 6228-34	9.5	89
8	New crystal structure: synthesis and characterization of hexagonal wurtzite MnO. *Journal of the American Chemical Society*, **2012**, 134, 8392-5	16.4	35
7	Shape-controlled synthesis of Pt3Co nanocrystals with high electrocatalytic activity toward oxygen reduction. *Chemistry - A European Journal*, **2011**, 17, 12280-4	4.8	52
6	Synthesis and characterization of Pt(9)Co nanocubes with high activity for oxygen reduction. *Chemical Communications*, **2010**, 46, 4950-2	5.8	58
5	One-pot Syntheses of Metallic Hollow Nanoparticles of Tin and Lead. *Bulletin of the Korean Chemical Society*, **2009**, 30, 1135-1138	1.2	8
4	Preparation and Optical Properties of Colloidal, Monodisperse, and Highly Crystalline ITO Nanoparticles. *Chemistry of Materials*, **2008**, 20, 2609-2611	9.6	99
3	Single-crystalline hollow face-centered-cubic cobalt nanoparticles from solid face-centered-cubic cobalt oxide nanoparticles. *Angewandte Chemie - International Edition*, **2008**, 47, 9504-8	16.4	119
2	Single-Crystalline Hollow Face-Centered-Cubic Cobalt Nanoparticles from Solid Face-Centered-Cubic Cobalt Oxide Nanoparticles. *Angewandte Chemie*, **2008**, 120, 9646-9650	3.6	20
1	Autocatalytic Surface Reduction-Assisted Synthesis of PtW Ultrathin Alloy Nanowires for Highly Efficient Hydrogen Evolution Reaction. *Advanced Energy Materials*,2103943	21.8	6