

Peter Strasser

List of Publications by Year in descending order

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388
papers

55,724
citations

831

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h-index

1371

228
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412
all docs

412
docs citations

412
times ranked

35600
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Lattice-strain control of the activity in dealloyed core-shell fuel cell catalysts. <i>Nature Chemistry</i> , 2010, 2, 454-460. | 6.6 | 2,489 |
| 2 | Electrocatalytic Oxygen Evolution Reaction (OER) on Ru, Ir, and Pt Catalysts: A Comparative Study of Nanoparticles and Bulk Materials. <i>ACS Catalysis</i> , 2012, 2, 1765-1772. | 5.5 | 2,019 |
| 3 | The Mechanism of Water Oxidation: From Electrolysis via Homogeneous to Biological Catalysis. <i>ChemCatChem</i> , 2010, 2, 724-761. | 1.8 | 1,493 |
| 4 | Particle Size Effects in the Catalytic Electroreduction of CO ₂ on Cu Nanoparticles. <i>Journal of the American Chemical Society</i> , 2014, 136, 6978-6986. | 6.6 | 1,145 |
| 5 | Compositional segregation in shaped Pt alloy nanoparticles and their structural behaviour during electrocatalysis. <i>Nature Materials</i> , 2013, 12, 765-771. | 13.3 | 1,121 |
| 6 | Highly selective plasma-activated copper catalysts for carbon dioxide reduction to ethylene. <i>Nature Communications</i> , 2016, 7, 12123. | 5.8 | 896 |
| 7 | Understanding activity and selectivity of metal-nitrogen-doped carbon catalysts for electrochemical reduction of CO ₂ . <i>Nature Communications</i> , 2017, 8, 944. | 5.8 | 890 |
| 8 | Oxygen Evolution Reaction Dynamics, Faradaic Charge Efficiency, and the Active Metal Redox States of Ni ^{II} -Fe Oxide Water Splitting Electrocatalysts. <i>Journal of the American Chemical Society</i> , 2016, 138, 5603-5614. | 6.6 | 888 |
| 9 | Electrocatalytic Oxygen Evolution Reaction in Acidic Environments – Reaction Mechanisms and Catalysts. <i>Advanced Energy Materials</i> , 2017, 7, 1601275. | 10.2 | 847 |
| 10 | NiFe-Based (Oxy)hydroxide Catalysts for Oxygen Evolution Reaction in Non-Acidic Electrolytes. <i>Advanced Energy Materials</i> , 2016, 6, 1600621. | 10.2 | 765 |
| 11 | Engineering the electronic structure of single atom Ru sites via compressive strain boosts acidic water oxidation electrocatalysis. <i>Nature Catalysis</i> , 2019, 2, 304-313. | 16.1 | 757 |
| 12 | Electrocatalysis on Bimetallic Surfaces: Modifying Catalytic Reactivity for Oxygen Reduction by Voltammetric Surface Dealloying. <i>Journal of the American Chemical Society</i> , 2007, 129, 12624-12625. | 6.6 | 742 |
| 13 | Reversible amorphization and the catalytically active state of crystalline Co ₃ O ₄ during oxygen evolution. <i>Nature Communications</i> , 2015, 6, 8625. | 5.8 | 694 |
| 14 | Nanostructured electrocatalysts with tunable activity and selectivity. <i>Nature Reviews Materials</i> , 2016, 1, . | 23.3 | 675 |
| 15 | Mesoporous Nitrogen-Doped Carbon for the Electrocatalytic Synthesis of Hydrogen Peroxide. <i>Journal of the American Chemical Society</i> , 2012, 134, 4072-4075. | 6.6 | 609 |
| 16 | Exceptional Size-Dependent Activity Enhancement in the Electroreduction of CO ₂ over Au Nanoparticles. <i>Journal of the American Chemical Society</i> , 2014, 136, 16473-16476. | 6.6 | 600 |
| 17 | In-situ structure and catalytic mechanism of NiFe and CoFe layered double hydroxides during oxygen evolution. <i>Nature Communications</i> , 2020, 11, 2522. | 5.8 | 594 |
| 18 | Electrolysis of low-grade and saline surface water. <i>Nature Energy</i> , 2020, 5, 367-377. | 19.8 | 579 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Direct Electrolytic Splitting of Seawater: Opportunities and Challenges. ACS Energy Letters, 2019, 4, 933-942. | 8.8 | 578 |
| 20 | Unification of Catalytic Water Oxidation and Oxygen Reduction Reactions: Amorphous Beat Crystalline Cobalt Iron Oxides. Journal of the American Chemical Society, 2014, 136, 17530-17536. | 6.6 | 575 |
| 21 | The Stability Challenges of Oxygen Evolving Catalysts: Towards a Common Fundamental Understanding and Mitigation of Catalyst Degradation. Angewandte Chemie - International Edition, 2017, 56, 5994-6021. | 7.2 | 573 |
| 22 | Molecular Insight in Structure and Activity of Highly Efficient, Low-Ir Ir ⁰ /Ni Oxide Catalysts for Electrochemical Water Splitting (OER). Journal of the American Chemical Society, 2015, 137, 13031-13040. | 6.6 | 565 |
| 23 | A Highly Ordered Meso@Microporous Carbon-Supported Sulfur@Smaller Sulfur Core@Shell Structured Cathode for Li-S Batteries. ACS Nano, 2014, 8, 9295-9303. | 7.3 | 552 |
| 24 | Electrochemical CO ₂ Reduction: A Classification Problem. ChemPhysChem, 2017, 18, 3266-3273. | 1.0 | 534 |
| 25 | Octahedral PtNi Nanoparticle Catalysts: Exceptional Oxygen Reduction Activity by Tuning the Alloy Particle Surface Composition. Nano Letters, 2012, 12, 5885-5889. | 4.5 | 522 |
| 26 | Tracking Catalyst Redox States and Reaction Dynamics in Ni ⁰ /Fe Oxyhydroxide Oxygen Evolution Reaction Electrocatalysts: The Role of Catalyst Support and Electrolyte pH. Journal of the American Chemical Society, 2017, 139, 2070-2082. | 6.6 | 518 |
| 27 | Metal-Doped Nitrogenated Carbon as an Efficient Catalyst for Direct CO ₂ Electroreduction to CO and Hydrocarbons. Angewandte Chemie - International Edition, 2015, 54, 10758-10762. | 7.2 | 504 |
| 28 | Activity-Selectivity Trends in the Electrochemical Production of Hydrogen Peroxide over Single-Site Metal-Nitrogen-Carbon Catalysts. Journal of the American Chemical Society, 2019, 141, 12372-12381. | 6.6 | 493 |
| 29 | Design Criteria, Operating Conditions, and Nickel-Iron Hydroxide Catalyst Materials for Selective Seawater Electrolysis. ChemSusChem, 2016, 9, 962-972. | 3.6 | 467 |
| 30 | Quantifying the density and utilization of active sites in non-precious metal oxygen electroreduction catalysts. Nature Communications, 2015, 6, 8618. | 5.8 | 461 |
| 31 | Electrochemical Catalyst-Support Effects and Their Stabilizing Role for IrO ₂ Nanoparticle Catalysts during the Oxygen Evolution Reaction. Journal of the American Chemical Society, 2016, 138, 12552-12563. | 6.6 | 451 |
| 32 | Carbon as catalyst and support for electrochemical energy conversion. Carbon, 2014, 75, 5-42. | 5.4 | 443 |
| 33 | Dealloyed Pt ⁰ /Cu Core@Shell Nanoparticle Electrocatalysts for Use in PEM Fuel Cell Cathodes. Journal of Physical Chemistry C, 2008, 112, 2770-2778. | 1.5 | 432 |
| 34 | A unique oxygen ligand environment facilitates water oxidation in hole-doped IrNiOx core@shell electrocatalysts. Nature Catalysis, 2018, 1, 841-851. | 16.1 | 424 |
| 35 | Controlling the selectivity of CO ₂ electroreduction on copper: The effect of the electrolyte concentration and the importance of the local pH. Catalysis Today, 2016, 260, 8-13. | 2.2 | 417 |
| 36 | Unified structural motifs of the catalytically active state of Co(oxyhydr)oxides during the electrochemical oxygen evolution reaction. Nature Catalysis, 2018, 1, 711-719. | 16.1 | 415 |

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|----|---|------|-----------|
| 37 | Key role of chemistry versus bias in electrocatalytic oxygen evolution. <i>Nature</i> , 2020, 587, 408-413. | 13.7 | 405 |
| 38 | Ionomer distribution control in porous carbon-supported catalyst layers for high-power and low Pt-loaded proton exchange membrane fuel cells. <i>Nature Materials</i> , 2020, 19, 77-85. | 13.3 | 400 |
| 39 | Oxide-supported IrNiO ₂ Core-Shell Particles as Efficient, Cost-Effective, and Stable Catalysts for Electrochemical Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2975-2979. | 7.2 | 384 |
| 40 | Efficient Electrochemical Hydrogen Peroxide Production from Molecular Oxygen on Nitrogen-Doped Mesoporous Carbon Catalysts. <i>ACS Catalysis</i> , 2018, 8, 2844-2856. | 5.5 | 372 |
| 41 | Reversible magnesium and aluminium ions insertion in cation-deficient anatase TiO ₂ . <i>Nature Materials</i> , 2017, 16, 1142-1148. | 13.3 | 366 |
| 42 | Record activity and stability of dealloyed bimetallic catalysts for proton exchange membrane fuel cells. <i>Energy and Environmental Science</i> , 2015, 8, 258-266. | 15.6 | 358 |
| 43 | Efficient CO ₂ to CO electrolysis on solid Ni-Ni ₃ C catalysts at industrial current densities. <i>Energy and Environmental Science</i> , 2019, 12, 640-647. | 15.6 | 357 |
| 44 | Dealloyed binary PtM ₃ (M=Cu, Co, Ni) and ternary PtNi ₃ M (M=Cu, Co, Fe, Cr) electrocatalysts for the oxygen reduction reaction: Performance in polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2011, 196, 666-673. | 4.0 | 352 |
| 45 | Core-Shell Compositional Fine Structures of Dealloyed PtNi Nanoparticles and Their Impact on Oxygen Reduction Catalysis. <i>Nano Letters</i> , 2012, 12, 5423-5430. | 4.5 | 352 |
| 46 | Pt-Based Core-Shell Catalyst Architectures for Oxygen Fuel Cell Electrodes. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3273-3291. | 2.1 | 346 |
| 47 | Tuning the Catalytic Activity and Selectivity of Cu for CO ₂ Electroreduction in the Presence of Halides. <i>ACS Catalysis</i> , 2016, 6, 2136-2144. | 5.5 | 344 |
| 48 | Surface distortion as a unifying concept and descriptor in oxygen reduction reaction electrocatalysis. <i>Nature Materials</i> , 2018, 17, 827-833. | 13.3 | 344 |
| 49 | Efficient Oxygen Reduction Fuel Cell Electrocatalysis on Voltammetrically Dealloyed Pt-Cu-Co Nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 8988-8991. | 7.2 | 343 |
| 50 | Size-Dependent Morphology of Dealloyed Bimetallic Catalysts: Linking the Nano to the Macro Scale. <i>Journal of the American Chemical Society</i> , 2012, 134, 514-524. | 6.6 | 340 |
| 51 | Oxide-supported Ir nanodendrites with high activity and durability for the oxygen evolution reaction in acid PEM water electrolyzers. <i>Chemical Science</i> , 2015, 6, 3321-3328. | 3.7 | 332 |
| 52 | The Achilles' heel of iron-based catalysts during oxygen reduction in an acidic medium. <i>Energy and Environmental Science</i> , 2018, 11, 3176-3182. | 15.6 | 332 |
| 53 | A CoFe ₂ O ₄ /graphene nanohybrid as an efficient bi-functional electrocatalyst for oxygen reduction and oxygen evolution. <i>Journal of Power Sources</i> , 2014, 250, 196-203. | 4.0 | 312 |
| 54 | A comparative perspective of electrochemical and photochemical approaches for catalytic H ₂ O ₂ production. <i>Chemical Society Reviews</i> , 2020, 49, 6605-6631. | 18.7 | 308 |

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|----|---|------|-----------|
| 55 | Noble Metal-Free Hydrazine Fuel Cell Catalysts: EPOC Effect in Competing Chemical and Electrochemical Reaction Pathways. <i>Journal of the American Chemical Society</i> , 2011, 133, 5425-5431. | 6.6 | 294 |
| 56 | N-, P-, and S-doped graphene-like carbon catalysts derived from onium salts with enhanced oxygen chemisorption for Zn-air battery cathodes. <i>Applied Catalysis B: Environmental</i> , 2019, 241, 442-451. | 10.8 | 284 |
| 57 | Electrochemical Reduction of CO ₂ on Metal-Nitrogen-Doped Carbon Catalysts. <i>ACS Catalysis</i> , 2019, 9, 7270-7284. | 5.5 | 282 |
| 58 | IrOx core-shell nanocatalysts for cost- and energy-efficient electrochemical water splitting. <i>Chemical Science</i> , 2014, 5, 2955-2963. | 3.7 | 278 |
| 59 | P-block single-metal-site tin/nitrogen-doped carbon fuel cell cathode catalyst for oxygen reduction reaction. <i>Nature Materials</i> , 2020, 19, 1215-1223. | 13.3 | 278 |
| 60 | Element-specific anisotropic growth of shaped platinum alloy nanocrystals. <i>Science</i> , 2014, 346, 1502-1506. | 6.0 | 277 |
| 61 | Mechanistic reaction pathways of enhanced ethylene yields during electroreduction of CO ₂ co-feeds on Cu and Cu-tandem electrocatalysts. <i>Nature Nanotechnology</i> , 2019, 14, 1063-1070. | 15.6 | 267 |
| 62 | Understanding and Controlling Nanoporosity Formation for Improving the Stability of Bimetallic Fuel Cell Catalysts. <i>Nano Letters</i> , 2013, 13, 1131-1138. | 4.5 | 261 |
| 63 | Alloy Nanocatalysts for the Electrochemical Oxygen Reduction (ORR) and the Direct Electrochemical Carbon Dioxide Reduction Reaction (CO ₂ RR). <i>Advanced Materials</i> , 2019, 31, e1805617. | 11.1 | 255 |
| 64 | High-Performance Oxygen Redox Catalysis with Multifunctional Cobalt Oxide Nanochains: Morphology-Dependent Activity. <i>ACS Catalysis</i> , 2015, 5, 2017-2027. | 5.5 | 249 |
| 65 | Electrochemical water splitting by layered and 3D cross-linked manganese oxides: correlating structural motifs and catalytic activity. <i>Energy and Environmental Science</i> , 2013, 6, 2745. | 15.6 | 248 |
| 66 | High loading of single atomic iron sites in Fe-NC oxygen reduction catalysts for proton exchange membrane fuel cells. <i>Nature Catalysis</i> , 2022, 5, 311-323. | 16.1 | 248 |
| 67 | Rh-Doped Pt-Ni Octahedral Nanoparticles: Understanding the Correlation between Elemental Distribution, Oxygen Reduction Reaction, and Shape Stability. <i>Nano Letters</i> , 2016, 16, 1719-1725. | 4.5 | 238 |
| 68 | Oxidation of biomass derived 5-hydroxymethylfurfural using heterogeneous and electrochemical catalysis. <i>Catalysis Today</i> , 2012, 195, 144-154. | 2.2 | 236 |
| 69 | Cobalt-Manganese-Based Spinel as Multifunctional Materials that Unify Catalytic Water Oxidation and Oxygen Reduction Reactions. <i>ChemSusChem</i> , 2015, 8, 164-171. | 3.6 | 233 |
| 70 | High Throughput Experimental and Theoretical Predictive Screening of Materials - A Comparative Study of Search Strategies for New Fuel Cell Anode Catalysts. <i>Journal of Physical Chemistry B</i> , 2003, 107, 11013-11021. | 1.2 | 231 |
| 71 | Stability of nanostructured iridium oxide electrocatalysts during oxygen evolution reaction in acidic environment. <i>Electrochemistry Communications</i> , 2014, 48, 81-85. | 2.3 | 229 |
| 72 | Activity of dealloyed PtCo ₃ and PtCu ₃ nanoparticle electrocatalyst for oxygen reduction reaction in polymer electrolyte membrane fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 5240-5249. | 4.0 | 227 |

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|----|---|------|-----------|
| 73 | Recent Advances in Non-Noble Bifunctional Oxygen Electrocatalysts toward Large-Scale Production. <i>Advanced Functional Materials</i> , 2020, 30, 2000503. | 7.8 | 226 |
| 74 | Phosphorus-doped porous carbons as efficient electrocatalysts for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2013, 1, 9889. | 5.2 | 223 |
| 75 | An efficient bifunctional two-component catalyst for oxygen reduction and oxygen evolution in reversible fuel cells, electrolyzers and rechargeable air electrodes. <i>Energy and Environmental Science</i> , 2016, 9, 2020-2024. | 15.6 | 221 |
| 76 | Noble-Metal-Free Electrocatalysts with Enhanced ORR Performance by Task-Specific Functionalization of Carbon using Ionic Liquid Precursor Systems. <i>Journal of the American Chemical Society</i> , 2014, 136, 14486-14497. | 6.6 | 219 |
| 77 | Electrochemical activity and stability of dealloyed Pt-Cu and Pt-Cu-Co electrocatalysts for the oxygen reduction reaction (ORR). <i>Journal of Power Sources</i> , 2009, 186, 261-267. | 4.0 | 216 |
| 78 | In-Plane Carbon Lattice-Defect Regulating Electrochemical Oxygen Reduction to Hydrogen Peroxide Production over Nitrogen-Doped Graphene. <i>ACS Catalysis</i> , 2019, 9, 1283-1288. | 5.5 | 216 |
| 79 | PtCu ₃ , PtCu and Pt ₃ Cu Alloy Nanoparticle Electrocatalysts for Oxygen Reduction Reaction in Alkaline and Acidic Media. <i>Journal of the Electrochemical Society</i> , 2012, 159, B444-B454. | 1.3 | 215 |
| 80 | Efficient direct seawater electrolyzers using selective alkaline NiFe-LDH as OER catalyst in asymmetric electrolyte feeds. <i>Energy and Environmental Science</i> , 2020, 13, 1725-1729. | 15.6 | 215 |
| 81 | Hierarchically Structured Nanomaterials for Electrochemical Energy Conversion. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 122-148. | 7.2 | 207 |
| 82 | Establishing reactivity descriptors for platinum group metal (PGM)-free Fe-N-C catalysts for PEM fuel cells. <i>Energy and Environmental Science</i> , 2020, 13, 2480-2500. | 15.6 | 205 |
| 83 | Electrocatalytic Oxygen Evolution on Iridium Oxide: Uncovering Catalyst-Substrate Interactions and Active Iridium Oxide Species. <i>Journal of the Electrochemical Society</i> , 2014, 161, F876-F882. | 1.3 | 199 |
| 84 | Comparative Study of the Electrocatalytically Active Surface Areas (ECSAs) of Pt Alloy Nanoparticles Evaluated by Hupd and CO-stripping voltammetry. <i>Electrocatalysis</i> , 2014, 5, 408-418. | 1.5 | 194 |
| 85 | Voltammetric surface dealloying of Pt bimetallic nanoparticles: an experimental and DFT computational analysis. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 3670. | 1.3 | 192 |
| 86 | Structure-Activity-Stability Relationships of Pt-Co Alloy Electrocatalysts in Gas-Diffusion Electrode Layers. <i>Journal of Physical Chemistry C</i> , 2007, 111, 3744-3752. | 1.5 | 188 |
| 87 | Direct Electrolytic Splitting of Seawater: Activity, Selectivity, Degradation, and Recovery Studied from the Molecular Catalyst Structure to the Electrolyzer Cell Level. <i>Advanced Energy Materials</i> , 2018, 8, 1800338. | 10.2 | 185 |
| 88 | Mechanistic classification of electrochemical oscillators – an operational experimental strategy. <i>Journal of Electroanalytical Chemistry</i> , 1999, 478, 50-66. | 1.9 | 176 |
| 89 | Structure of Dealloyed PtCu ₃ Thin Films and Catalytic Activity for Oxygen Reduction. <i>Chemistry of Materials</i> , 2010, 22, 4712-4720. | 3.2 | 173 |
| 90 | Uncovering the prominent role of metal ions in octahedral versus tetrahedral sites of cobalt-zinc oxide catalysts for efficient oxidation of water. <i>Journal of Materials Chemistry A</i> , 2016, 4, 10014-10022. | 5.2 | 171 |

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| 91 | Electrochemical CO ₂ Reduction: Classifying Cu Facets. ACS Catalysis, 2019, 9, 7894-7899. | 5.5 | 170 |
| 92 | Intrinsic Electrocatalytic Activity for Oxygen Evolution of Crystalline 3d-Transition Metal Layered Double Hydroxides. Angewandte Chemie - International Edition, 2021, 60, 14446-14457. | 7.2 | 170 |
| 93 | Controlling Catalytic Selectivities during CO ₂ Electroreduction on Thin Cu Metal Overlayers. Journal of Physical Chemistry Letters, 2013, 4, 2410-2413. | 2.1 | 168 |
| 94 | pH Effects on the Selectivity of the Electrocatalytic CO ₂ Reduction on Graphene-Embedded Fe-N-C Motifs: Bridging Concepts between Molecular Homogeneous and Solid-State Heterogeneous Catalysis. ACS Energy Letters, 2018, 3, 812-817. | 8.8 | 168 |
| 95 | Morphology and mechanism of highly selective Cu(II) oxide nanosheet catalysts for carbon dioxide electroreduction. Nature Communications, 2021, 12, 794. | 5.8 | 168 |
| 96 | Activity-stability relationships of ordered and disordered alloy phases of Pt ₃ Co electrocatalysts for the oxygen reduction reaction (ORR). Electrochimica Acta, 2007, 52, 2765-2774. | 2.6 | 159 |
| 97 | Activity, stability and degradation of multi walled carbon nanotube (MWCNT) supported Pt fuel cell electrocatalysts. Physical Chemistry Chemical Physics, 2010, 12, 15251. | 1.3 | 158 |
| 98 | Tantalum Nitride Nanorod Arrays: Introducing Ni-Fe Layered Double Hydroxides as a Cocatalyst Strongly Stabilizing Photoanodes in Water Splitting. Chemistry of Materials, 2015, 27, 2360-2366. | 3.2 | 158 |
| 99 | Bifunctional anode catalysts for direct methanol fuel cells. Energy and Environmental Science, 2012, 5, 8335. | 15.6 | 157 |
| 100 | Molecular Nitrogen-Carbon Catalysts, Solid Metal Organic Framework Catalysts, and Solid Metal/Nitrogen-Doped Carbon (MNC) Catalysts for the Electrochemical CO ₂ Reduction. Advanced Energy Materials, 2018, 8, 1703614. | 10.2 | 157 |
| 101 | Elemental Anisotropic Growth and Atomic-Scale Structure of Shape-Controlled Octahedral Pt-Ni-Co Alloy Nanocatalysts. Nano Letters, 2015, 15, 7473-7480. | 4.5 | 156 |
| 102 | Mesoporous IrO ₂ Films Templated by PEO-PB-PEO Block-Copolymers: Self-Assembly, Crystallization Behavior, and Electrocatalytic Performance. Chemistry of Materials, 2011, 23, 3201-3209. | 3.2 | 154 |
| 103 | Unified mechanistic understanding of CO ₂ reduction to CO on transition metal and single atom catalysts. Nature Catalysis, 2021, 4, 1024-1031. | 16.1 | 154 |
| 104 | Oxygen Electroreduction on PtCo ₃ , PtCo and Pt ₃ Co Alloy Nanoparticles for Alkaline and Acidic PEM Fuel Cells. Journal of the Electrochemical Society, 2012, 159, B394-B405. | 1.3 | 148 |
| 105 | Structure, Activity, and Faradaic Efficiency of Nitrogen-Doped Porous Carbon Catalysts for Direct Electrochemical Hydrogen Peroxide Production. ChemSusChem, 2018, 11, 3388-3395. | 3.6 | 148 |
| 106 | Bimetallic Ru Electrocatalysts for the OER and Electrolytic Water Splitting in Acidic Media. Electrochemical and Solid-State Letters, 2010, 13, B36. | 2.2 | 147 |
| 107 | Real-time imaging of activation and degradation of carbon supported octahedral Pt-Ni alloy fuel cell catalysts at the nanoscale using <i>in situ</i> electrochemical liquid cell STEM. Energy and Environmental Science, 2019, 12, 2476-2485. | 15.6 | 146 |
| 108 | Tuning the Electrocatalytic Oxygen Reduction Reaction Activity and Stability of Shape-Controlled Pt-Ni Nanoparticles by Thermal Annealing - Elucidating the Surface Atomic Structural and Compositional Changes. Journal of the American Chemical Society, 2017, 139, 16536-16547. | 6.6 | 144 |

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|-----|--|------|-----------|
| 109 | Dealloyed Pt-based core-shell oxygen reduction electrocatalysts. <i>Nano Energy</i> , 2016, 29, 166-177. | 8.2 | 143 |
| 110 | Nanostructured Manganese Oxide Supported on Carbon Nanotubes for Electrocatalytic Water Splitting. <i>ChemCatChem</i> , 2012, 4, 851-862. | 1.8 | 141 |
| 111 | Free Electrons to Molecular Bonds and Back: Closing the Energetic Oxygen Reduction (ORR)–Oxygen Evolution (OER) Cycle Using Core–Shell Nanoelectrocatalysts. <i>Accounts of Chemical Research</i> , 2016, 49, 2658-2668. | 7.6 | 140 |
| 112 | Nitrogen- and Phosphorus-Doped Biocarbon with Enhanced Electrocatalytic Activity for Oxygen Reduction. <i>ACS Catalysis</i> , 2015, 5, 920-927. | 5.5 | 139 |
| 113 | Unraveling Mechanistic Reaction Pathways of the Electrochemical CO ₂ Reduction on Fe–N–C Single-Site Catalysts. <i>ACS Energy Letters</i> , 2019, 4, 1663-1671. | 8.8 | 138 |
| 114 | Electrocatalytic CO ₂ Reduction on CuO Nanocubes: Tracking the Evolution of Chemical State, Geometric Structure, and Catalytic Selectivity using Operando Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17974-17983. | 7.2 | 138 |
| 115 | Experimental Activity Descriptors for Iridium-Based Catalysts for the Electrochemical Oxygen Evolution Reaction (OER). <i>ACS Catalysis</i> , 2019, 9, 6653-6663. | 5.5 | 136 |
| 116 | Electrochemical processes on solid shaped nanoparticles with defined facets. <i>Chemical Society Reviews</i> , 2018, 47, 715-735. | 18.7 | 129 |
| 117 | Oscillatory instabilities during formic acid oxidation on Pt(100), Pt(110) and Pt(111) under potentiostatic control. I. Experimental. <i>Journal of Chemical Physics</i> , 1997, 107, 979-990. | 1.2 | 128 |
| 118 | The chemical identity, state and structure of catalytically active centers during the electrochemical CO ₂ reduction on porous Fe–nitrogen–carbon (Fe–N–C) materials. <i>Chemical Science</i> , 2018, 9, 5064-5073. | 3.7 | 128 |
| 119 | Preparation of Mesoporous Sb, F, and In-Doped SnO ₂ Bulk Powder with High Surface Area for Use as Catalyst Supports in Electrolytic Cells. <i>Advanced Functional Materials</i> , 2015, 25, 1074-1081. | 7.8 | 127 |
| 120 | Long-Range Segregation Phenomena in Shape-Selected Bimetallic Nanoparticles: Chemical State Effects. <i>ACS Nano</i> , 2013, 7, 9195-9204. | 7.3 | 126 |
| 121 | Deconvolution of Utilization, Site Density, and Turnover Frequency of Fe–Nitrogen–Carbon Oxygen Reduction Reaction Catalysts Prepared with Secondary N-Precursors. <i>ACS Catalysis</i> , 2018, 8, 1640-1647. | 5.5 | 126 |
| 122 | Tuning Catalytic Selectivity at the Mesoscale via Interparticle Interactions. <i>ACS Catalysis</i> , 2016, 6, 1075-1080. | 5.5 | 123 |
| 123 | The Role of the Copper Oxidation State in the Electrocatalytic Reduction of CO ₂ into Valuable Hydrocarbons. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 1485-1492. | 3.2 | 121 |
| 124 | Advancements in cathode catalyst and cathode layer design for proton exchange membrane fuel cells. <i>Nature Communications</i> , 2021, 12, 5984. | 5.8 | 120 |
| 125 | In Situ Observation of Bimetallic Alloy Nanoparticle Formation and Growth Using High-Temperature XRD. <i>Chemistry of Materials</i> , 2011, 23, 2159-2165. | 3.2 | 118 |
| 126 | Single site porphyrine-like structures advantages over metals for selective electrochemical CO ₂ reduction. <i>Catalysis Today</i> , 2017, 288, 74-78. | 2.2 | 116 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 127 | MnCo ₂ O ₄ Anchored on P-Doped Hierarchical Porous Carbon as an Electrocatalyst for High-Performance Rechargeable Li ⁺ O ₂ Batteries. ACS Catalysis, 2015, 5, 4890-4896. | 5.5 | 115 |
| 128 | Oscillatory instabilities during formic acid oxidation on Pt(100), Pt(110) and Pt(111) under potentiostatic control. II. Model calculations. Journal of Chemical Physics, 1997, 107, 991-1003. | 1.2 | 114 |
| 129 | Iridium Oxide Coatings with Templated Porosity as Highly Active Oxygen Evolution Catalysts: Structure-Activity Relationships. ChemSusChem, 2015, 8, 1908-1915. | 3.6 | 112 |
| 130 | Current challenges related to the deployment of shape-controlled Pt alloy oxygen reduction reaction nanocatalysts into low Pt-loaded cathode layers of proton exchange membrane fuel cells. Current Opinion in Electrochemistry, 2019, 18, 61-71. | 2.5 | 111 |
| 131 | Stability of Dealloyed Porous Pt/Ni Nanoparticles. ACS Catalysis, 2015, 5, 5000-5007. | 5.5 | 110 |
| 132 | Indiscrete metal/metal-N-C synergic active sites for efficient and durable oxygen electrocatalysis toward advanced Zn-air batteries. Applied Catalysis B: Environmental, 2020, 272, 118967. | 10.8 | 110 |
| 133 | Core-Shell and Nanoporous Particle Architectures and Their Effect on the Activity and Stability of Pt ORR Electrocatalysts. Topics in Catalysis, 2014, 57, 236-244. | 1.3 | 107 |
| 134 | Electrocatalytic hydrogen peroxide formation on mesoporous non-metal nitrogen-doped carbon catalyst. Journal of Energy Chemistry, 2016, 25, 251-257. | 7.1 | 107 |
| 135 | Efficient and Stable Low Iridium Loaded Anodes for PEM Water Electrolysis Made Possible by Nanofiber Interlayers. ACS Applied Energy Materials, 2020, 3, 8276-8284. | 2.5 | 106 |
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