

Ultrafine jagged platinum nanowires enable ultrahigh reduction reaction

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| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 7 | Toward sustainable fuel cells. <i>Science</i> , 2016, 354, 1378-1379. | 6.0 | 384 |
| 8 | The role of OH [•] in the formation of highly selective gold nanowires at extreme pH: multi-fold enhancement in the rate of the catalytic reduction reaction by gold nanowires. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 5077-5090. | 1.3 | 28 |
| 9 | Three-Dimensional Assembly of PtNi Alloy Nanosticks with Enhanced Electrocatalytic Activity and Ultrahigh Stability for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2017, 4, 1436-1442. | 1.7 | 8 |
| 10 | A hierarchically structured PtCo nanoflakes@nanotube as an electrocatalyst for methanol oxidation. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 845-849. | 3.0 | 6 |
| 11 | Current Status and Future Development of Catalyst Materials and Catalyst Layers for Proton Exchange Membrane Fuel Cells: An Industrial Perspective. <i>ACS Energy Letters</i> , 2017, 2, 629-638. | 8.8 | 443 |
| 12 | One-Pot Synthesis of Dealloyed AuNi Nanodendrite as a Bifunctional Electrocatalyst for Oxygen Reduction and Borohydride Oxidation Reaction. <i>Advanced Functional Materials</i> , 2017, 27, 1700260. | 7.8 | 46 |
| 13 | Pt-doped γ -Fe ₂ O ₃ photoanodes prepared by a magnetron sputtering method for photoelectrochemical water splitting. <i>Materials Research Bulletin</i> , 2017, 91, 214-219. | 2.7 | 22 |
| 14 | Isolated Single Iron Atoms Anchored on N-Doped Porous Carbon as an Efficient Electrocatalyst for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6937-6941. | 7.2 | 1,542 |
| 15 | Isolated Single Iron Atoms Anchored on N-Doped Porous Carbon as an Efficient Electrocatalyst for the Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2017, 129, 7041-7045. | 1.6 | 306 |
| 16 | Doubling up the activity of fuel cell catalysts. <i>National Science Review</i> , 2017, 4, 513-514. | 4.6 | 3 |
| 17 | Tuning the branches and composition of PtCu nanodendrites through underpotential deposition of Cu towards advanced electrocatalytic activity. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9014-9021. | 5.2 | 55 |
| 18 | Atomic layer deposited tantalum oxide to anchor Pt/C for a highly stable catalyst in PEMFCs. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9760-9767. | 5.2 | 48 |
| 19 | The effect of Pt/C agglomerates in electrode on PEMFC performance using 3D micro-structure lattice models. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 12559-12566. | 3.8 | 8 |
| 20 | A review of Pt-based electrocatalysts for oxygen reduction reaction. <i>Frontiers in Energy</i> , 2017, 11, 268-285. | 1.2 | 155 |
| 21 | Trimetallic PtCoFe Alloy Monolayer Superlattices as Bifunctional Oxygen-Reduction and Ethanol-Oxidation Electrocatalysts. <i>Small</i> , 2017, 13, 1700250. | 5.2 | 42 |
| 22 | Engineering Pt/Pd Interfacial Electronic Structures for Highly Efficient Hydrogen Evolution and Alcohol Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18008-18014. | 4.0 | 111 |
| 23 | Serrated Au/Pd Core/Shell Nanowires with Jagged Edges for Boosting Liquid Fuel Electrooxidation. <i>ChemSusChem</i> , 2017, 10, 2375-2379. | 3.6 | 18 |
| 24 | Crystallinity-Modulated Electrocatalytic Activity of a Nickel(II) Borate Thin Layer on Ni ₃ B for Efficient Water Oxidation. <i>Angewandte Chemie</i> , 2017, 129, 6672-6677. | 1.6 | 34 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 25 | Crystallinity-Modulated Electrocatalytic Activity of a Nickel(II) Borate Thin Layer on Ni ₃ B for Efficient Water Oxidation. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6572-6577. | 7.2 | 271 |
| 26 | Fast Prediction of CO Binding Energy via the Local Structure Effect on PtCu Alloy Surfaces. <i>Langmuir</i> , 2017, 33, 8700-8706. | 1.6 | 24 |
| 27 | Raisin bread-like iron sulfides/nitrogen and sulfur dual-doped mesoporous graphitic carbon spheres: a promising electrocatalyst for the oxygen reduction reaction in alkaline and acidic media. <i>Journal of Materials Chemistry A</i> , 2017, 5, 11114-11123. | 5.2 | 55 |
| 28 | A comprehensive review of Pt electrocatalysts for the oxygen reduction reaction: Nanostructure, activity, mechanism and carbon support in PEM fuel cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 1808-1825. | 5.2 | 732 |
| 29 | Spiny Rhombic Dodecahedral CuPt Nanoframes with Enhanced Catalytic Performance Synthesized from Cu Nanocube Templates. <i>Chemistry of Materials</i> , 2017, 29, 5681-5692. | 3.2 | 77 |
| 30 | Remarkable catalytic activity of electrochemically dealloyed platinum-tellurium nanoparticles towards formic acid electro-oxidation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 16489-16494. | 3.8 | 8 |
| 31 | A bottom-up, template-free route to mesoporous N-doped carbons for efficient oxygen electroreduction. <i>Journal of Materials Science</i> , 2017, 52, 9794-9805. | 1.7 | 7 |
| 32 | Atomic scale deposition of Pt around Au nanoparticles to achieve much enhanced electrocatalysis of Pt. <i>Nanoscale</i> , 2017, 9, 7745-7749. | 2.8 | 24 |
| 33 | A Ligand-Exchange Route to Nobel Metal Nanocrystals with a Clean Surface for Enhanced Optical and Catalytic Properties. <i>Particle and Particle Systems Characterization</i> , 2017, 34, 1700075. | 1.2 | 38 |
| 34 | Graphene-derived Fe/Co-N-C catalyst in direct methanol fuel cells: Effects of the methanol concentration and ionomer content on cell performance. <i>Journal of Power Sources</i> , 2017, 358, 76-84. | 4.0 | 38 |
| 35 | High Specific and Mass Activity for the Oxygen Reduction Reaction for Thin Film Catalysts of Sputtered Pt ₃ Y. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700311. | 1.9 | 39 |
| 36 | Einzelatom-Elektrokatalysatoren. <i>Angewandte Chemie</i> , 2017, 129, 14132-14148. | 1.6 | 99 |
| 37 | Single-Atom Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 13944-13960. | 7.2 | 1,040 |
| 38 | Reliable computational design of biological-inorganic materials to the large nanometer scale using Interface-FF. <i>Molecular Simulation</i> , 2017, 43, 1394-1405. | 0.9 | 34 |
| 39 | Constructing an Atomic Layer Pt Electrocatalyst with a Concave Curved Surface for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2017, 4, 2469-2473. | 1.7 | 7 |
| 40 | Facile fabrication of PtPd alloyed worm-like nanoparticles for electrocatalytic reduction of oxygen. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 17112-17121. | 3.8 | 25 |
| 41 | Nitrogen and Iron-Codoped Carbon Hollow Nanotubes as High-Performance Catalysts toward Oxygen Reduction Reaction: A Combined Experimental and Theoretical Study. <i>Chemistry of Materials</i> , 2017, 29, 5617-5628. | 3.2 | 92 |
| 42 | Simultaneous Improvements in Performance and Durability of an Octahedral PtNi ₃ C Electrocatalyst for Next-Generation Fuel Cells by Continuous, Compressive, and Concave Pt Skin Layers. <i>ACS Catalysis</i> , 2017, 7, 4642-4654. | 5.5 | 64 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 43 | Oxide-derived nanostructured metallic-glass electrodes for efficient electrochemical hydrogen generation. <i>RSC Advances</i> , 2017, 7, 27058-27064. | 1.7 | 17 |
| 44 | High activity of a Pt decorated Ni/C nanocatalyst for hydrogen oxidation. <i>Chinese Journal of Catalysis</i> , 2017, 38, 396-403. | 6.9 | 11 |
| 45 | Lattice Contracted Ordered Intermetallic Core-Shell PtCo@Pt Nanoparticles: Synthesis, Structure and Origin for Enhanced Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2017, 164, H331-H337. | 1.3 | 27 |
| 46 | Peptide-FlgA3-Based Gold Palladium Bimetallic Nanoparticles That Catalyze the Oxygen Reduction Reaction in Alkaline Solution. <i>ChemCatChem</i> , 2017, 9, 2980-2987. | 1.8 | 19 |
| 47 | Synthesis of Low Pt-Based Quaternary PtPdRuTe Nanotubes with Optimized Incorporation of Pd for Enhanced Electrocatalytic Activity. <i>Journal of the American Chemical Society</i> , 2017, 139, 5890-5895. | 6.6 | 212 |
| 48 | Bridged-multi-octahedral cobalt oxide nanocrystals with a Co-terminated surface as an oxygen evolution and reduction electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7416-7422. | 5.2 | 23 |
| 49 | Shape controlled synthesis of porous tetrametallic PtAgBiCo nanoplates as highly active and methanol-tolerant electrocatalyst for oxygen reduction reaction. <i>Chemical Science</i> , 2017, 8, 4292-4298. | 3.7 | 52 |
| 50 | Intermetallic Pd ₃ Pb nanowire networks boost ethanol oxidation and oxygen reduction reactions with significantly improved methanol tolerance. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23952-23959. | 5.2 | 78 |
| 51 | A review of electrocatalyst characterization by transmission electron microscopy. <i>Journal of Energy Chemistry</i> , 2017, 26, 1117-1135. | 7.1 | 32 |
| 52 | Building upon the Koutecky-Levich Equation for Evaluation of Next-Generation Oxygen Reduction Reaction Catalysts. <i>Electrochimica Acta</i> , 2017, 255, 99-108. | 2.6 | 63 |
| 53 | Synthesis of hollow Pt-Ag nanoparticles by oxygen-assisted acid etching as electrocatalysts for the oxygen reduction reaction. <i>RSC Advances</i> , 2017, 7, 46916-46924. | 1.7 | 13 |
| 54 | A general synthesis of abundant metal nanoparticles functionalized mesoporous graphitized carbon. <i>RSC Advances</i> , 2017, 7, 50966-50972. | 1.7 | 6 |
| 55 | Ultrahigh Mass Activity for Carbon Dioxide Reduction Enabled by Gold-Iron Core-Shell Nanoparticles. <i>Journal of the American Chemical Society</i> , 2017, 139, 15608-15611. | 6.6 | 191 |
| 56 | 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. <i>Journal of the American Chemical Society</i> , 2017, 139, 16536-16547. | 6.6 | 144 |
| 57 | Strain-controlled electrocatalysis on multimetallic nanomaterials. <i>Nature Reviews Materials</i> , 2017, 2, . | 23.3 | 727 |
| 58 | Ammonia Mediated One-Step Synthesis of Three-Dimensional Porous Pt ₃ Cu ₁₀₀ Nanochain Networks with Enhanced Electrocatalytic Activity toward Polyhydric Alcohol Oxidation. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 11086-11095. | 3.2 | 28 |
| 59 | Platinum-Based Nanowires as Active Catalysts toward Oxygen Reduction Reaction: In Situ Observation of Surface-Diffusion-Assisted, Solid-State Oriented Attachment. <i>Advanced Materials</i> , 2017, 29, 1703460. | 11.1 | 102 |
| 60 | Atomically Dispersed Copper-Platinum Dual Sites Alloyed with Palladium Nanorings Catalyze the Hydrogen Evolution Reaction. <i>Angewandte Chemie</i> , 2017, 129, 16263-16267. | 1.6 | 53 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 61 | Atomically Dispersed Copper-Platinum Dual Sites Alloyed with Palladium Nanorings Catalyze the Hydrogen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 16047-16051. | 7.2 | 231 |
| 62 | Eutectic-directed self-templating synthesis of PtNi nanoporous nanowires with superior electrocatalytic performance towards the oxygen reduction reaction: experiment and DFT calculation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23651-23661. | 5.2 | 37 |
| 63 | Ternary PtNi _x Pb/Pt core/multishell nanowires as efficient and stable electrocatalysts for fuel cell reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18977-18983. | 5.2 | 36 |
| 64 | Nanoporous PtFe Nanoparticles Supported on N-Doped Porous Carbon Sheets Derived from Metal-Organic Frameworks as Highly Efficient and Durable Oxygen Reduction Reaction Catalysts. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 32106-32113. | 4.0 | 48 |
| 65 | 3D carbon nanoframe scaffold-immobilized Ni ₃ FeN nanoparticle electrocatalysts for rechargeable zinc-air batteries TM cathodes. <i>Nano Energy</i> , 2017, 40, 382-389. | 8.2 | 153 |
| 66 | From <i>Chlorella</i> to Nestlike Framework Constructed with Doped Carbon Nanotubes: A Biomass-Derived, High-Performance, Bifunctional Oxygen Reduction/Evolution Catalyst. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 32168-32178. | 4.0 | 63 |
| 67 | In Situ Integration of Ultrathin PtCu Nanowires with Reduced Graphene Oxide Nanosheets for Efficient Electrocatalytic Oxygen Reduction. <i>Chemistry - A European Journal</i> , 2017, 23, 16871-16876. | 1.7 | 36 |
| 68 | Electrocatalysis of the Oxygen Reduction Reaction and the Formic Acid Oxidation Reaction on BN/Pd Composites Prepared Sonochemically. <i>Journal of the Electrochemical Society</i> , 2017, 164, H805-H811. | 1.3 | 7 |
| 69 | Recent development of efficient electrocatalysts derived from porous organic polymers for oxygen reduction reaction. <i>Science China Chemistry</i> , 2017, 60, 999-1006. | 4.2 | 37 |
| 70 | A bifunctional electrocatalyst of PtNi nanoparticles immobilized on three-dimensional carbon nanofiber mats for efficient and stable water splitting in both acid and basic media. <i>Journal of Materials Science</i> , 2017, 52, 13064-13077. | 1.7 | 40 |
| 71 | One-pot synthesis of dendritic Pt ₃ Ni nanoalloys as nonenzymatic electrochemical biosensors with high sensitivity and selectivity for dopamine detection. <i>Nanoscale</i> , 2017, 9, 10998-11003. | 2.8 | 30 |
| 72 | Design of Efficient Bifunctional Oxygen Reduction/Evolution Electrocatalyst: Recent Advances and Perspectives. <i>Advanced Energy Materials</i> , 2017, 7, 1700544. | 10.2 | 593 |
| 73 | Excavated octahedral Pt-Co alloy nanocrystals built with ultrathin nanosheets as superior multifunctional electrocatalysts for energy conversion applications. <i>Nano Energy</i> , 2017, 39, 582-589. | 8.2 | 130 |
| 74 | Nanostructured materials on 3D nickel foam as electrocatalysts for water splitting. <i>Nanoscale</i> , 2017, 9, 12231-12247. | 2.8 | 403 |
| 75 | Finely Composition-Tunable Synthesis of Ultrafine Wavy PtRu Nanowires as Effective Electrochemical Sensors for Dopamine Detection. <i>Langmuir</i> , 2017, 33, 8070-8075. | 1.6 | 25 |
| 76 | Synthesis of single-crystal hyperbranched rhodium nanoplates with remarkable catalytic properties. <i>Science China Materials</i> , 2017, 60, 685-696. | 3.5 | 18 |
| 77 | Graphene Aerogel Supported Pt Electrocatalysts for Oxygen Reduction Reaction by Supercritical Deposition. <i>Electrochimica Acta</i> , 2017, 250, 174-184. | 2.6 | 50 |
| 78 | Unsupported Platinum-Based Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Energy Letters</i> , 2017, 2, 2035-2043. | 8.8 | 174 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 79 | Noble metal-free catalysts for oxygen reduction reaction. <i>Science China Chemistry</i> , 2017, 60, 1494-1507. | 4.2 | 60 |
| 80 | Activating cobalt(II) oxide nanorods for efficient electrocatalysis by strain engineering. <i>Nature Communications</i> , 2017, 8, 1509. | 5.8 | 361 |
| 81 | General Oriented Synthesis of Precise Carbon-Confined Nanostructures by Low-Pressure Vapor Superassembly and Controlled Pyrolysis. <i>Nano Letters</i> , 2017, 17, 7773-7781. | 4.5 | 53 |
| 82 | Iced photochemical reduction to synthesize atomically dispersed metals by suppressing nanocrystal growth. <i>Nature Communications</i> , 2017, 8, 1490. | 5.8 | 322 |
| 83 | Design of N-Coordinated Dual-Metal Sites: A Stable and Active Pt-Free Catalyst for Acidic Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2017, 139, 17281-17284. | 6.6 | 1,220 |
| 84 | Towards understanding ORR activity and electron-transfer pathway of M-N /C electro-catalyst in acidic media. <i>Journal of Catalysis</i> , 2017, 356, 229-236. | 3.1 | 30 |
| 85 | Hollow N-Doped Carbon Spheres with Isolated Cobalt Single Atomic Sites: Superior Electrocatalysts for Oxygen Reduction. <i>Journal of the American Chemical Society</i> , 2017, 139, 17269-17272. | 6.6 | 556 |
| 86 | Design of Ultrathin Pt-Based Multimetallic Nanostructures for Efficient Oxygen Reduction Electrocatalysis. <i>Small</i> , 2017, 13, 1702156. | 5.2 | 77 |
| 87 | High-Quality and Deeply Excavated Pt ₃ Co Nanocubes as Efficient Catalysts for Liquid Fuel Electrooxidation. <i>Chemistry of Materials</i> , 2017, 29, 9613-9617. | 3.2 | 67 |
| 88 | Extrapolating Energetics on Clusters and Single-Crystal Surfaces to Nanoparticles by Machine-Learning Scheme. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26397-26405. | 1.5 | 41 |
| 89 | Benchmarking Pt and Pt-lanthanide sputtered thin films for oxygen electroreduction: fabrication and rotating disk electrode measurements. <i>Electrochimica Acta</i> , 2017, 247, 708-721. | 2.6 | 39 |
| 90 | Biomass-derived heteroatoms-doped mesoporous carbon for efficient oxygen reduction in microbial fuel cells. <i>Biosensors and Bioelectronics</i> , 2017, 98, 350-356. | 5.3 | 92 |
| 91 | Two-step pyrolysis of ZIF-8 functionalized with ammonium ferric citrate for efficient oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , 2017, 26, 1174-1180. | 7.1 | 30 |
| 92 | Revealing the Active Species for Aerobic Alcohol Oxidation by Using Uniform Supported Palladium Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 4642-4646. | 7.2 | 93 |
| 93 | Understanding the Effects of Au Morphology on CO ₂ Electrocatalysis. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4274-4280. | 1.5 | 36 |
| 94 | Recent Advances of Structurally Ordered Intermetallic Nanoparticles for Electrocatalysis. <i>ACS Catalysis</i> , 2018, 8, 3237-3256. | 5.5 | 245 |
| 95 | Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles. <i>Nature Communications</i> , 2018, 9, 1011. | 5.8 | 87 |
| 96 | Benchmarking high surface area electrocatalysts in a gas diffusion electrode: measurement of oxygen reduction activities under realistic conditions. <i>Energy and Environmental Science</i> , 2018, 11, 988-994. | 15.6 | 147 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 97 | Revealing the Active Species for Aerobic Alcohol Oxidation by Using Uniform Supported Palladium Catalysts. <i>Angewandte Chemie</i> , 2018, 130, 4732-4736. | 1.6 | 29 |
| 98 | Polydopamine-Derived, In Situ Doped 3D Mesoporous Carbons for Highly Efficient Oxygen Reduction. <i>ChemNanoMat</i> , 2018, 4, 417-422. | 1.5 | 19 |
| 99 | Conversion of confined metal@ZIF-8 structures to intermetallic nanoparticles supported on nitrogen-doped carbon for electrocatalysis. <i>Nano Research</i> , 2018, 11, 3469-3479. | 5.8 | 46 |
| 100 | Holey Co, N-codoped graphene aerogel with in-plane pores and multiple active sites for efficient oxygen reduction. <i>Electrochimica Acta</i> , 2018, 269, 544-552. | 2.6 | 29 |
| 101 | Epitaxial and atomically thin graphene-metal hybrid catalyst films: the dual role of graphene as the support and the chemically-transparent protective cap. <i>Energy and Environmental Science</i> , 2018, 11, 1610-1616. | 15.6 | 34 |
| 102 | Spontaneous weaving: 3D porous PtCu networks with ultrathin jagged nanowires for highly efficient oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2018, 236, 359-367. | 10.8 | 71 |
| 103 | Roles of Ultrasound on Hydroxyl Radical Generation and Bauxite Desulfurization from Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2018, 165, E177-E183. | 1.3 | 10 |
| 104 | On-Chip in Situ Monitoring of Competitive Interfacial Anionic Chemisorption as a Descriptor for Oxygen Reduction Kinetics. <i>ACS Central Science</i> , 2018, 4, 590-599. | 5.3 | 29 |
| 105 | High porosity nitrogen and phosphorous Co-doped carbon nanosheets as an efficient catalyst for oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 9749-9756. | 3.8 | 12 |
| 106 | Metal Catalysts for Heterogeneous Catalysis: From Single Atoms to Nanoclusters and Nanoparticles. <i>Chemical Reviews</i> , 2018, 118, 4981-5079. | 23.0 | 3,103 |
| 107 | One-step solid state synthesis of PtCo nanocubes/graphene nanocomposites as advanced oxygen reduction reaction electrocatalysts. <i>Journal of Catalysis</i> , 2018, 362, 85-93. | 3.1 | 29 |
| 108 | Active learning with non- <i>ab initio</i> input features toward efficient CO ₂ reduction catalysts. <i>Chemical Science</i> , 2018, 9, 5152-5159. | 3.7 | 82 |
| 109 | Tuning defects in oxides at room temperature by lithium reduction. <i>Nature Communications</i> , 2018, 9, 1302. | 5.8 | 428 |
| 110 | A Review on Recent Developments and Prospects for the Oxygen Reduction Reaction on Hollow Pt-alloy Nanoparticles. <i>ChemPhysChem</i> , 2018, 19, 1552-1567. | 1.0 | 64 |
| 111 | "Painting" nanostructured metals"playing with liquid metal. <i>Nanoscale Horizons</i> , 2018, 3, 408-416. | 4.1 | 32 |
| 112 | Control of the Interfacial Wettability to Synthesize Highly Dispersed PtPd Nanocrystals for Efficient Oxygen Reduction Reaction. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1119-1123. | 1.7 | 14 |
| 113 | Rh-Based Nanocatalysts for Heterogeneous Reactions. <i>ChemNanoMat</i> , 2018, 4, 451-466. | 1.5 | 25 |
| 114 | Dendrite-Embedded Platinum-Nickel Multiframes as Highly Active and Durable Electrocatalyst toward the Oxygen Reduction Reaction. <i>Nano Letters</i> , 2018, 18, 2930-2936. | 4.5 | 121 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 115 | Simultaneous formation of trimetallic Pt-Ni-Cu excavated rhombic dodecahedrons with enhanced catalytic performance for the methanol oxidation reaction. <i>Nano Research</i> , 2018, 11, 4786-4795. | 5.8 | 58 |
| 116 | Electrochemical Observation of High Oxophilicity and its Effect on Oxygen Reduction Reaction Activity of Au Clusters Mass-Selectively Deposited on Glassy Carbon. <i>Electrocatalysis</i> , 2018, 9, 471-479. | 1.5 | 5 |
| 117 | Insight into induced charges at metal surfaces and biointerfaces using a polarizable Lennard-Jones potential. <i>Nature Communications</i> , 2018, 9, 716. | 5.8 | 121 |
| 118 | Electrocatalytic performance of cubic NiS ₂ and hexagonal NiS for oxygen reduction reaction. <i>Journal of Catalysis</i> , 2018, 359, 223-232. | 3.1 | 43 |
| 119 | Composition-driven shape evolution to Cu-rich PtCu octahedral alloy nanocrystals as superior bifunctional catalysts for methanol oxidation and oxygen reduction reaction. <i>Nanoscale</i> , 2018, 10, 4670-4674. | 2.8 | 82 |
| 120 | Synergistically Enhanced Oxygen Reduction Electrocatalysis by Subsurface Atoms in Ternary PdCuNi Alloy Catalysts. <i>Advanced Functional Materials</i> , 2018, 28, 1707219. | 7.8 | 58 |
| 121 | Nitrogen-doped carbon nanoflower with superior ORR performance in both alkaline and acidic electrolyte and enhanced durability. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 4311-4320. | 3.8 | 33 |
| 122 | General Synthesis of 3D Ordered Macro-/Mesoporous Materials by Templating Mesoporous Silica Confined in Opals. <i>Chemistry of Materials</i> , 2018, 30, 1617-1624. | 3.2 | 44 |
| 123 | Size-controllable synthesis of dendritic Pd nanocrystals as improved electrocatalysts for formic acid fuel cells™ application. <i>Journal of Saudi Chemical Society</i> , 2018, 22, 846-854. | 2.4 | 13 |
| 124 | Dilute Au-Containing Ag Nanosponges as a Highly Active and Durable Electrocatalyst for Oxygen Reduction and Alcohol Oxidation Reactions. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 6276-6287. | 4.0 | 33 |
| 125 | Well-Coupled Nanohybrids Obtained by Component-Controlled Synthesis and in Situ Integration of Mn _x Pd _y Nanocrystals on Vulcan Carbon for Electrocatalytic Oxygen Reduction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 8155-8164. | 4.0 | 20 |
| 126 | Refined Structural Analysis of Connected Platinum-Iron Nanoparticle Catalysts with Enhanced Oxygen Reduction Activity. <i>ACS Applied Energy Materials</i> , 2018, 1, 324-330. | 2.5 | 15 |
| 127 | Fe Stabilization by Intermetallic L ₁ O-FePt and Pt Catalysis Enhancement in L ₁ O-FePt/Pt Nanoparticles for Efficient Oxygen Reduction Reaction in Fuel Cells. <i>Journal of the American Chemical Society</i> , 2018, 140, 2926-2932. | 6.6 | 312 |
| 128 | Strain Engineering to Enhance the Electrooxidation Performance of Atomic-Layer Pt on Intermetallic Pt ₃ Ga. <i>Journal of the American Chemical Society</i> , 2018, 140, 2773-2776. | 6.6 | 193 |
| 129 | Self-Humidified Pt Electrocatalyst Fabricated from Hydrophilic Molecules Coating with Enhanced Fuel Cell Performance. <i>Energy Technology</i> , 2018, 6, 1813-1819. | 1.8 | 1 |
| 130 | Highly Durable and Active Pt-Based Nanoscale Design for Fuel Cell Oxygen Reduction Electrocatalysts. <i>Advanced Materials</i> , 2018, 30, e1704123. | 11.1 | 208 |
| 131 | Shape-Control of Pt-Ru Nanocrystals: Tuning Surface Structure for Enhanced Electrocatalytic Methanol Oxidation. <i>Journal of the American Chemical Society</i> , 2018, 140, 1142-1147. | 6.6 | 466 |
| 132 | Graphene-Directed Formation of a Nitrogen-Doped Porous Carbon Sheet with High Catalytic Performance for the Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 13508-13514. | 1.5 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 133 | Hydroxide-Membrane-Coated Pt ₃ Ni Nanowires as Highly Efficient Catalysts for Selective Hydrogenation Reaction. <i>Advanced Functional Materials</i> , 2018, 28, 1705918. | 7.8 | 43 |
| 134 | Three-Dimensional Macroporous Co-Embedded N-Doped Carbon Interweaving with Carbon Nanotubes as Excellent Bifunctional Catalysts for Zn-Air Batteries. <i>Langmuir</i> , 2018, 34, 1992-1998. | 1.6 | 21 |
| 135 | Ultra-low loading Pt-sputtered gas diffusion electrodes for oxygen reduction reaction. <i>Journal of Applied Electrochemistry</i> , 2018, 48, 221-232. | 1.5 | 21 |
| 136 | Stable High-Index Faceted Pt Skin on Zigzag-Like PtFe Nanowires Enhances Oxygen Reduction Catalysis. <i>Advanced Materials</i> , 2018, 30, 1705515. | 11.1 | 305 |
| 137 | Freeze the Moment: High Speed Capturing of Weakly Bonded Dynamic Nanoparticle Assemblies in Solution by Ag Ion Soldering. <i>Small</i> , 2018, 14, 1703303. | 5.2 | 7 |
| 138 | Tomographic Analysis and Modeling of Polymer Electrolyte Fuel Cell Unsupported Catalyst Layers. <i>Journal of the Electrochemical Society</i> , 2018, 165, F7-F16. | 1.3 | 15 |
| 139 | In-situ reaction-growth of PtNiX nanocrystals on supports for enhanced electrochemical catalytic oxidation of ethanol via continuous flow microfluidic process. <i>Electrochimica Acta</i> , 2018, 278, 149-155. | 2.6 | 10 |
| 140 | Fe Isolated Single Atoms on S, N Codoped Carbon by Copolymer Pyrolysis Strategy for Highly Efficient Oxygen Reduction Reaction. <i>Advanced Materials</i> , 2018, 30, e1800588. | 11.1 | 511 |
| 141 | Enabling Generalized Coordination Numbers to Describe Strain Effects. <i>ChemSusChem</i> , 2018, 11, 1824-1828. | 3.6 | 57 |
| 142 | Porous Pt ₃ Ni with enhanced activity and durability towards oxygen reduction reaction. <i>RSC Advances</i> , 2018, 8, 15344-15351. | 1.7 | 12 |
| 143 | Isolated Fe and Co dual active sites on nitrogen-doped carbon for a highly efficient oxygen reduction reaction. <i>Chemical Communications</i> , 2018, 54, 4274-4277. | 2.2 | 166 |
| 144 | Unraveling the mechanisms of room-temperature catalytic degradation of indoor formaldehyde and its biocompatibility on colloidal TiO ₂ -supported MnO _x -CeO ₂ . <i>Environmental Science: Nano</i> , 2018, 5, 1130-1139. | 2.2 | 21 |
| 145 | Template-Free Preparation of 3D Porous Co-Doped VN Nanosheet-Assembled Microflowers with Enhanced Oxygen Reduction Activity. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11604-11612. | 4.0 | 47 |
| 146 | Platinum supported on multifunctional titanium cobalt oxide nanosheets assembles for efficient oxygen reduction reaction. <i>Electrochimica Acta</i> , 2018, 265, 364-371. | 2.6 | 16 |
| 147 | Enabling real-time detection of electrochemical desorption phenomena with sub-monolayer sensitivity. <i>Electrochimica Acta</i> , 2018, 268, 520-530. | 2.6 | 53 |
| 148 | Rational Design and Synthesis of Low-Temperature Fuel Cell Electrocatalysts. <i>Electrochemical Energy Reviews</i> , 2018, 1, 54-83. | 13.1 | 87 |
| 149 | Stability of High-Performance Pt-Based Catalysts for Oxygen Reduction Reactions. <i>Advanced Materials</i> , 2018, 30, e1705332. | 11.1 | 179 |
| 150 | Novel thin/tunable gas diffusion electrodes with ultra-low catalyst loading for hydrogen evolution reactions in proton exchange membrane electrolyzer cells. <i>Nano Energy</i> , 2018, 47, 434-441. | 8.2 | 118 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 151 | Ultrathin AgPt alloy nanowires as a high-performance electrocatalyst for formic acid oxidation. Nano Research, 2018, 11, 499-510. | 5.8 | 86 |
| 152 | A hybrid catalyst of Pt/CoNiO ₂ on carbon nanotubes and its synergetic effect towards remarkable ethanol electro-oxidation in alkaline media. Sustainable Energy and Fuels, 2018, 2, 229-236. | 2.5 | 15 |
| 153 | Synthesis of ultrathin platinum nanoplates for enhanced oxygen reduction activity. Chemical Science, 2018, 9, 398-404. | 3.7 | 85 |
| 154 | Copper-Palladium Tetrapods with Sharp Tips as a Superior Catalyst for the Oxygen Reduction Reaction. ChemCatChem, 2018, 10, 925-930. | 1.8 | 14 |
| 155 | A surfactant free preparation of ultradispersed surface-clean Pt catalyst with highly stable electrocatalytic performance. Journal of Physics and Chemistry of Solids, 2018, 113, 61-66. | 1.9 | 8 |
| 156 | Toward High-Performance Pt-Based Nanocatalysts for Oxygen Reduction Reaction through Organic-Inorganic Hybrid Concepts. Chemistry of Materials, 2018, 30, 2-24. | 3.2 | 65 |
| 157 | Nitrogen, Sulfur Co-doped Carbon Derived from Naphthalene-Based Covalent Organic Framework as an Efficient Catalyst for Oxygen Reduction. ACS Applied Energy Materials, 2018, 1, 161-166. | 2.5 | 36 |
| 158 | Solid Synthesis of Ultrathin Palladium and Its Alloys™ Nanosheets on RGO with High Catalytic Activity for Oxygen Reduction Reaction. ACS Catalysis, 2018, 8, 910-919. | 5.5 | 56 |
| 159 | Metal-organic frameworks derived platinum-cobalt bimetallic nanoparticles in nitrogen-doped hollow porous carbon capsules as a highly active and durable catalyst for oxygen reduction reaction. Applied Catalysis B: Environmental, 2018, 225, 496-503. | 10.8 | 131 |
| 160 | Defects and Interfaces on PtPb Nanoplates Boost Fuel Cell Electrocatalysis. Small, 2018, 14, 1702259. | 5.2 | 84 |
| 161 | Atomic Vacancies Control of Pd-Based Catalysts for Enhanced Electrochemical Performance. Advanced Materials, 2018, 30, 1704171. | 11.1 | 102 |
| 162 | Shape-Controlled Surface-Coating to Pd@Mesoporous Silica Core-Shell Nanocatalysts with High Catalytic Activity and Stability. Chemistry - an Asian Journal, 2018, 13, 31-34. | 1.7 | 15 |
| 164 | Platinum-Based Catalysts on Various Carbon Supports and Conducting Polymers for Direct Methanol Fuel Cell Applications: a Review. Nanoscale Research Letters, 2018, 13, 410. | 3.1 | 189 |
| 165 | Thickness-tunable core-shell Co@Pt nanoparticles encapsulated in sandwich-like carbon sheets as an enhanced electrocatalyst for the oxygen reduction reaction. Journal of Materials Chemistry A, 2018, 6, 21396-21403. | 5.2 | 23 |
| 166 | Controlled synthesis of Pt nanoparticle supported TiO ₂ nanorods as efficient and stable electrocatalysts for the oxygen reduction reaction. Journal of Materials Chemistry A, 2018, 6, 23435-23444. | 5.2 | 55 |
| 167 | Reduced graphene oxide intercalated ZnS nanoparticles as an efficient and durable electrocatalyst for the oxygen reduction reaction. New Journal of Chemistry, 2018, 42, 19285-19293. | 1.4 | 12 |
| 168 | Ultralow-loading platinum-cobalt fuel cell catalysts derived from imidazolate frameworks. Science, 2018, 362, 1276-1281. | 6.0 | 735 |
| 169 | Favorable Core/Shell Interface within Co ₂ P/Pt Nanorods for Oxygen Reduction Electrocatalysis. Nano Letters, 2018, 18, 7870-7875. | 4.5 | 68 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 170 | Nitrogen-doped graphene aerogel with an open structure assisted by in-situ hydrothermal restructuring of ZIF-8 as excellent Pt catalyst support for methanol electro-oxidation. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 21899-21907. | 3.8 | 22 |
| 171 | Updating Pt-Based Electrocatalysts for Practical Fuel Cells. <i>Joule</i> , 2018, 2, 2514-2516. | 11.7 | 31 |
| 172 | Recent Advance on Polyaniline or Polypyrrole-Derived Electrocatalysts for Oxygen Reduction Reaction. <i>Polymers</i> , 2018, 10, 1397. | 2.0 | 32 |
| 173 | Low-Work-Function Silver Activating N-Doped Graphene as Efficient Oxygen Reduction Catalysts in Acidic Medium. <i>ChemCatChem</i> , 2019, 11, 1033-1038. | 1.8 | 9 |
| 174 | Controlled Synthesis of PtNi Hexapods for Enhanced Oxygen Reduction Reaction. <i>Frontiers in Chemistry</i> , 2018, 6, 468. | 1.8 | 17 |
| 175 | Selective Electrochemical H ₂ O ₂ Production through Two-Electron Oxygen Electrochemistry. <i>Advanced Energy Materials</i> , 2018, 8, 1801909. | 10.2 | 498 |
| 176 | Graphdiyne-Supported Single-Atom-Sized Fe Catalysts for the Oxygen Reduction Reaction: DFT Predictions and Experimental Validations. <i>ACS Catalysis</i> , 2018, 8, 10364-10374. | 5.5 | 202 |
| 177 | Turning Carbon Atoms into Highly Active Oxygen Reduction Reaction Electrocatalytic Sites in Nitrogen-Doped Graphene-Coated Co@Ag. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 14033-14041. | 3.2 | 10 |
| 178 | Recent Advances on Electrocatalysts for PEM and AEM Fuel Cells. , 2018, , 51-89. | | 1 |
| 179 | Assembling Highly Coordinated Pt Sites on Nanoporous Gold for Efficient Oxygen Electroreduction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39705-39712. | 4.0 | 23 |
| 180 | Revealing the Role of Phase Structures of Bimetallic Nanocatalysts in the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2018, 8, 11302-11313. | 5.5 | 51 |
| 181 | Ultrathin Pt-Ag Alloy Nanotubes with Regular Nanopores for Enhanced Electrocatalytic Activity. <i>Chemistry of Materials</i> , 2018, 30, 7744-7751. | 3.2 | 35 |
| 182 | Platinum Nanoparticles Dispersed on High-Surface-Area Roelike Nitrogen-Doped Mesoporous Carbon for Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 2018, 1, 6198-6207. | 2.5 | 12 |
| 183 | Carbon Defect-Induced Reversible Carbon-Oxygen Interfaces for Efficient Oxygen Reduction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39735-39744. | 4.0 | 45 |
| 184 | One-Nanometer-Thick PtNiRh Trimetallic Nanowires with Enhanced Oxygen Reduction Electrocatalysis in Acid Media: Integrating Multiple Advantages into One Catalyst. <i>Journal of the American Chemical Society</i> , 2018, 140, 16159-16167. | 6.6 | 160 |
| 185 | Core/shell Cu/FePtCu nanoparticles with face-centered tetragonal texture: An active and stable low-Pt catalyst for enhanced oxygen reduction. <i>Nano Energy</i> , 2018, 54, 280-287. | 8.2 | 22 |
| 186 | Engineering porosity into trimetallic PtPdNi nanospheres for enhanced electrocatalytic oxygen reduction activity. <i>Green Energy and Environment</i> , 2018, 3, 352-359. | 4.7 | 14 |
| 187 | Metal-Organic Framework-Derived Co ₃ O ₄ /Au Heterostructure as a Catalyst for Efficient Oxygen Reduction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 34068-34076. | 4.0 | 35 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 188 | Emerging Materials in Heterogeneous Electrocatalysis Involving Oxygen for Energy Harvesting. ACS Applied Materials & Interfaces, 2018, 10, 33737-33767. | 4.0 | 52 |
| 189 | Dendritic defect-rich palladium-copper-cobalt nanoalloys as robust multifunctional non-platinum electrocatalysts for fuel cells. Nature Communications, 2018, 9, 3702. | 5.8 | 204 |
| 190 | Cobalt nanoparticles incorporated into hollow doped porous carbon capsules as a highly efficient oxygen reduction electrocatalyst. Catalysis Science and Technology, 2018, 8, 5244-5250. | 2.1 | 17 |
| 191 | Construction of Nanoreactors Combining Two-Dimensional Hexagonal Boron Nitride (h-BN) Coating with Pt/Al ₂ O ₃ Catalyst toward Efficient Catalysis for CO Oxidation. Industrial & Engineering Chemistry Research, 2018, 57, 13353-13361. | 1.8 | 13 |
| 192 | Noble Metal-Based Nanocomposites for Fuel Cells. , 2018, , . | | 4 |
| 193 | Surface and Near-Surface Engineering of PtCo Nanowires at Atomic Scale for Enhanced Electrochemical Sensing and Catalysis. Chemistry of Materials, 2018, 30, 6660-6667. | 3.2 | 32 |
| 194 | A facile strategy for ultrasmall Pt NPs being partially-embedded in N-doped carbon nanosheet structure for efficient electrocatalysis. Science China Materials, 2018, 61, 1557-1566. | 3.5 | 12 |
| 195 | Oxygen Reduction Reaction from Water Electrolysis Intensified by Pressure and O ₂ Oxidation Desulfurization. Journal of the Electrochemical Society, 2018, 165, E139-E147. | 1.3 | 7 |
| 196 | Effect of the d-Band Center on the Oxygen Reduction Reaction Activity of Electrochemically Dealloyed Ordered Intermetallic Platinum-Lead (PtPb) Nanoparticles Supported on TiO ₂ -Deposited Cup-Stacked Carbon Nanotubes. ACS Applied Nano Materials, 2018, 1, 2844-2850. | 2.4 | 29 |
| 197 | Role of Nanomorphology and Interfacial Structure of Platinum Nanoparticles in Catalyzing the Hydrogen Oxidation Reaction. ACS Catalysis, 2018, 8, 6192-6202. | 5.5 | 21 |
| 198 | Actualizing In Situ X-ray Absorption Spectroscopy Characterization of PEMFC-Cycled Pt-Electrodes. Journal of the Electrochemical Society, 2018, 165, F597-F603. | 1.3 | 12 |
| 199 | Engineering the Interfaces of Superadsorbing Graphene-Based Electrodes with Gas and Electrolyte to Boost Gas Evolution and Activation Reactions. ChemSusChem, 2018, 11, 2306-2309. | 3.6 | 24 |
| 200 | Understanding Chemical Bonding in Alloys and the Representation in Atomistic Simulations. Journal of Physical Chemistry C, 2018, 122, 14996-15009. | 1.5 | 30 |
| 201 | Anchoring ultrafine Pt electrocatalysts on TiO ₂ -C via photochemical strategy to enhance the stability and efficiency for oxygen reduction reaction. Applied Catalysis B: Environmental, 2018, 237, 228-236. | 10.8 | 85 |
| 202 | A Spatially Confined gC ₃ N ₄ -Pt Electrocatalyst with Robust Stability. ACS Applied Materials & Interfaces, 2018, 10, 21306-21312. | 4.0 | 13 |
| 203 | Molecular structure and assembly of peptide-derived nanomaterials. Current Opinion in Green and Sustainable Chemistry, 2018, 12, 38-46. | 3.2 | 6 |
| 204 | High performance layer-by-layer Pt ₃ Ni(Pt-skin)-modified Pd/C for the oxygen reduction reaction. Chemical Science, 2018, 9, 6134-6142. | 3.7 | 25 |
| 205 | Synthesis of defect-rich palladium-tin alloy nanochain networks for formic acid oxidation. Journal of Colloid and Interface Science, 2018, 530, 189-195. | 5.0 | 92 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 206 | Facile Surfactant-Free Synthesis of Composition-Tunable Bimetallic PtCu Alloy Nanosponges for Direct Methanol Fuel Cell Applications. <i>Australian Journal of Chemistry</i> , 2018, 71, 504. | 0.5 | 3 |
| 207 | Active Phase Formation and Stability of Gd/Pt(111) Electrocatalysts for Oxygen Reduction: An In Situ Grazing Incidence X-Ray Diffraction Study. <i>Chemistry - A European Journal</i> , 2018, 24, 12280-12290. | 1.7 | 17 |
| 208 | Metal Surface and Interface Energy Electrocatalysis: Fundamentals, Performance Engineering, and Opportunities. <i>CheM</i> , 2018, 4, 2054-2083. | 5.8 | 225 |
| 209 | Tracking Metal Electrodeposition Dynamics from Nucleation and Growth of a Single Atom to a Crystalline Nanoparticle. <i>ACS Nano</i> , 2018, 12, 7388-7396. | 7.3 | 74 |
| 210 | Studies on an Ultrasonic Synthesis, Characterization, and Thermodynamic Analysis of New Metal Nanocatalysts Applied Directly to Alcohol Fuel Cells. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 6203-6209. | 1.7 | 1 |
| 211 | Two-Dimensional Metal Nanomaterials: Synthesis, Properties, and Applications. <i>Chemical Reviews</i> , 2018, 118, 6409-6455. | 23.0 | 711 |
| 212 | Extending the limits of Pt/C catalysts with passivation-gas-incorporated atomic layer deposition. <i>Nature Catalysis</i> , 2018, 1, 624-630. | 16.1 | 63 |
| 213 | Computational exploration of borophane-supported single transition metal atoms as potential oxygen reduction and evolution electrocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21095-21104. | 1.3 | 54 |
| 214 | Neighboring Pt Atom Sites in an Ultrathin FePt Nanosheet for the Efficient and Highly CO-Tolerant Oxygen Reduction Reaction. <i>Nano Letters</i> , 2018, 18, 5905-5912. | 4.5 | 84 |
| 215 | Amorphous ultra-dispersed Pt clusters supported on nitrogen functionalized carbon: A superior electrocatalyst for glycerol electrooxidation. <i>Journal of Power Sources</i> , 2018, 399, 357-362. | 4.0 | 38 |
| 216 | Coordination of Atomic Co-Pt Coupling Species at Carbon Defects as Active Sites for Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2018, 140, 10757-10763. | 6.6 | 464 |
| 217 | Palladium-Cobalt Nanowires Decorated with Jagged Appearance for Efficient Methanol Electro-oxidation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 29965-29971. | 4.0 | 40 |
| 218 | PdAg@Pd core-shell nanotubes: Superior catalytic performance towards electrochemical oxidation of formic acid and methanol. <i>Journal of Power Sources</i> , 2018, 398, 201-208. | 4.0 | 54 |
| 219 | Structural and Electronic Stabilization of PtNi Concave Octahedral Nanoparticles by P Doping for Oxygen Reduction Reaction in Alkaline Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 27009-27018. | 4.0 | 57 |
| 220 | The Sub-Nanometer Scale as a New Focus in Nanoscience. <i>Advanced Materials</i> , 2018, 30, e1802031. | 11.1 | 99 |
| 221 | Aqueous Synthesis of Ultrathin Platinum/Non-Noble Metal Alloy Nanowires for Enhanced Hydrogen Evolution Activity. <i>Angewandte Chemie</i> , 2018, 130, 11852-11856. | 1.6 | 42 |
| 222 | Aqueous Synthesis of Ultrathin Platinum/Non-Noble Metal Alloy Nanowires for Enhanced Hydrogen Evolution Activity. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 11678-11682. | 7.2 | 133 |
| 223 | Surface distortion as a unifying concept and descriptor in oxygen reduction reaction electrocatalysis. <i>Nature Materials</i> , 2018, 17, 827-833. | 13.3 | 344 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 224 | Hollow nanoparticles as emerging electrocatalysts for renewable energy conversion reactions. <i>Chemical Society Reviews</i> , 2018, 47, 8173-8202. | 18.7 | 222 |
| 225 | Highly crumpled nanocarbons as efficient metal-free electrocatalysts for zinc-air batteries. <i>Nanoscale</i> , 2018, 10, 15706-15713. | 2.8 | 21 |
| 226 | Multilayered Platinum Nanotube for Oxygen Reduction in a Fuel Cell Cathode: Origin of Activity and Product Selectivity. <i>ACS Applied Energy Materials</i> , 2018, 1, 3890-3899. | 2.5 | 10 |
| 227 | Cobalt/Iron(Oxides) Heterostructures for Efficient Oxygen Evolution and Benzyl Alcohol Oxidation Reactions. <i>ACS Energy Letters</i> , 2018, 3, 1854-1860. | 8.8 | 86 |
| 228 | Cycling potential engineering surface configuration of sandwich Au@Ni@PtNiAu for superior catalytic durability. <i>Nano Energy</i> , 2018, 52, 22-28. | 8.2 | 18 |
| 229 | Emerging Pt-based electrocatalysts with highly open nanoarchitectures for boosting oxygen reduction reaction. <i>Nano Today</i> , 2018, 21, 91-105. | 6.2 | 285 |
| 230 | Oxygen Reduction Reaction: Rapid Prediction of Mass Activity of Nanostructured Platinum Electrocatalysts. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4463-4468. | 2.1 | 43 |
| 231 | Effects of Catalyst Processing on the Activity and Stability of Pt-Ni Nanoframe Electrocatalysts. <i>ACS Nano</i> , 2018, 12, 8697-8705. | 7.3 | 80 |
| 232 | Intermetallic hcp-PtBi/fcc-Pt Core/Shell Nanoplates Enable Efficient Bifunctional Oxygen Reduction and Methanol Oxidation Electrocatalysis. <i>ACS Catalysis</i> , 2018, 8, 5581-5590. | 5.5 | 153 |
| 233 | Electron density modulation of NiCo ₂ S ₄ nanowires by nitrogen incorporation for highly efficient hydrogen evolution catalysis. <i>Nature Communications</i> , 2018, 9, 1425. | 5.8 | 356 |
| 234 | NiCo-doped C-N nano-composites for cathodic catalysts of Zn-air batteries in neutral media. <i>Electrochimica Acta</i> , 2018, 279, 1-9. | 2.6 | 78 |
| 236 | Formation of a Tubular Assembly by Ultrathin Ti _{0.8} Co _{0.2} N Nanosheets as Efficient Oxygen Reduction Electrocatalysts for Hydrogen/Metal-Air Fuel Cells. <i>ACS Catalysis</i> , 2018, 8, 8970-8975. | 5.5 | 147 |
| 237 | Formation of Enriched Vacancies for Enhanced CO ₂ Electrochemical Reduction over AuCu Alloys. <i>ACS Energy Letters</i> , 2018, 3, 2144-2149. | 8.8 | 88 |
| 238 | Cobalt-Nitrogen-Doped Helical Carbonaceous Nanotubes as a Class of Efficient Electrocatalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2018, 130, 13371-13375. | 1.6 | 19 |
| 239 | Hollow Metal Nanocrystals with Ultrathin, Porous Walls and Well-Controlled Surface Structures. <i>Advanced Materials</i> , 2018, 30, e1801956. | 11.1 | 83 |
| 240 | A rationally designed Fe-tetrapyrrophenazine complex: a promising precursor to a single-atom Fe catalyst for an efficient oxygen reduction reaction in high-power Zn-air cells. <i>Nanoscale</i> , 2018, 10, 16145-16152. | 2.8 | 37 |
| 241 | Interfacial proton enrichment enhances proton-coupled electrocatalytic reactions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 17771-17777. | 5.2 | 29 |
| 242 | Activating Transition Metal Dichalcogenides by Substitutional Nitrogen-Doping for Potential ORR Electrocatalysts. <i>ChemElectroChem</i> , 2018, 5, 4029-4035. | 1.7 | 27 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 243 | Boosting electrocatalysis of oxygen reduction reaction through photovoltaic-driven potential manipulation strategy. <i>Materials Today Energy</i> , 2018, 10, 34-39. | 2.5 | 1 |
| 244 | Pt ₉ Ni Wavelike Nanowires with High Activity for Oxygen Reduction Reactions. <i>Chemistry - A European Journal</i> , 2018, 24, 14636-14638. | 1.7 | 9 |
| 245 | A self-supported nanoporous PtGa film as an efficient multifunctional electrocatalyst for energy conversion. <i>Nanoscale</i> , 2018, 10, 17070-17079. | 2.8 | 25 |
| 246 | Hyperbranched PdRu nanospine assemblies: an efficient electrocatalyst for formic acid oxidation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 17514-17518. | 5.2 | 33 |
| 247 | Nanodendrites of platinum-group metals for electrocatalytic applications. <i>Nano Research</i> , 2018, 11, 6111-6140. | 5.8 | 54 |
| 248 | Programming ORR Activity of Ni/NiO _x @Pd Electrocatalysts via Controlling Depth of Surface-Decorated Atomic Pt Clusters. <i>ACS Omega</i> , 2018, 3, 8733-8744. | 1.6 | 27 |
| 249 | Vertically Aligned N-Doped Diamond/Graphite Hybrid Nanosheets Epitaxially Grown on B-Doped Diamond Films as Electrocatalysts for Oxygen Reduction Reaction in an Alkaline Medium. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 29866-29875. | 4.0 | 10 |
| 250 | Facile Synthesis of PtCu Alloy/Graphene Oxide Hybrids as Improved Electrocatalysts for Alkaline Fuel Cells. <i>ACS Omega</i> , 2018, 3, 8724-8732. | 1.6 | 21 |
| 251 | Influence of surface strain on activity and selectivity of Pd-based catalysts for the hydrogenation of acetylene: A DFT study. <i>Chinese Journal of Catalysis</i> , 2018, 39, 1493-1499. | 6.9 | 19 |
| 252 | Cobalt-Nitrogen-Doped Helical Carbonaceous Nanotubes as a Class of Efficient Electrocatalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 13187-13191. | 7.2 | 112 |
| 253 | Robust synthesis of ultrathin Au-Ag nanowires as a high-surface-area, synergistic substrate for constructing efficient Pt-based catalysts. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22161-22169. | 5.2 | 14 |
| 254 | In situ synthesis of chemically ordered primitive cubic Pt ₃ Co nanoparticles by a spray paint drying method for hydrogen evolution reaction. <i>Journal of Materials Science</i> , 2018, 53, 12399-12406. | 1.7 | 11 |
| 255 | Scalable Preparation of the Chemically Ordered Pt-Fe-Au Nanocatalysts with High Catalytic Reactivity and Stability for Oxygen Reduction Reactions. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 22156-22166. | 4.0 | 54 |
| 256 | A general and scalable approach to produce nanoporous alloy nanowires with rugged ligaments for enhanced electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 12541-12550. | 5.2 | 23 |
| 257 | Selective Etching Induced Synthesis of Hollow Rh Nanospheres Electrocatalyst for Alcohol Oxidation Reactions. <i>Small</i> , 2018, 14, e1801239. | 5.2 | 82 |
| 258 | Recent developments in electrocatalyst design thriving noble metals in fuel cells. <i>Current Opinion in Electrochemistry</i> , 2018, 9, 271-277. | 2.5 | 29 |
| 259 | Layered Metal-Organic Framework-Derived Metal Oxide/Carbon Nanosheet Arrays for Catalyzing the Oxygen Evolution Reaction. <i>ACS Energy Letters</i> , 2018, 3, 1655-1661. | 8.8 | 176 |
| 260 | Recent advances in bimetallic electrocatalysts for oxygen reduction: design principles, structure-function relations and active phase elucidation. <i>Current Opinion in Electrochemistry</i> , 2018, 8, 135-146. | 2.5 | 60 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 261 | Efficient Oxygen Reduction Reaction (ORR) Catalysts Based on Single Iron Atoms Dispersed on a Hierarchically Structured Porous Carbon Framework. <i>Angewandte Chemie</i> , 2018, 130, 9176-9181. | 1.6 | 105 |
| 262 | Efficient Oxygen Reduction Reaction (ORR) Catalysts Based on Single Iron Atoms Dispersed on a Hierarchically Structured Porous Carbon Framework. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 9038-9043. | 7.2 | 467 |
| 263 | Synthesis of Colloidal Metal Nanocrystals: A Comprehensive Review on the Reductants. <i>Chemistry - A European Journal</i> , 2018, 24, 16944-16963. | 1.7 | 143 |
| 264 | Ultrathin two-dimensional metallic nanocrystals for renewable energy electrocatalysis. <i>Materials Today</i> , 2019, 23, 45-56. | 8.3 | 64 |
| 265 | Synthesis of Cu-decorated PtTe nanotubes with high electrocatalytic activity for oxygen reduction. <i>Journal of Alloys and Compounds</i> , 2019, 770, 76-81. | 2.8 | 4 |
| 266 | Tunable synthesis of multiply twinned intermetallic Pd ₃ Pb nanowire networks toward efficient N ₂ to NH ₃ conversion. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20247-20253. | 5.2 | 39 |
| 267 | Low Dimensional Platinum-Based Bimetallic Nanostructures for Advanced Catalysis. <i>Accounts of Chemical Research</i> , 2019, 52, 3384-3396. | 7.6 | 84 |
| 268 | High-performance corrosion-resistant fluorine-doped tin oxide as an alternative to carbon support in electrodes for PEM fuel cells. <i>Nano Energy</i> , 2019, 65, 104008. | 8.2 | 31 |
| 269 | Polyhedron-Assembled Ternary PtCuCo Nanochains: Integrated Functions Enhance the Electrocatalytic Performance of Methanol Oxidation at Elevated Temperature. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 32282-32290. | 4.0 | 36 |
| 270 | Tailor-Made Pt Catalysts with Improved Oxygen Reduction Reaction Stability/Durability. <i>ACS Catalysis</i> , 2019, 9, 8622-8645. | 5.5 | 82 |
| 271 | Electronic reconfiguration of Co ₂ P induced by Cu doping enhancing oxygen reduction reaction activity in zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 21232-21243. | 5.2 | 46 |
| 272 | Trimetallic palladium-copper-cobalt alloy wavy nanowires improve ethanol electrooxidation in alkaline medium. <i>Nanoscale</i> , 2019, 11, 19448-19454. | 2.8 | 29 |
| 273 | Local Structural Disorder Enhances the Oxygen Reduction Reaction Activity of Carbon-Supported Low Pt Loading CoPt Nanocatalysts. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19013-19021. | 1.5 | 18 |
| 274 | Platinum nanoparticles confined in imidazolium-based ionic polymer for assembling a microfluidic reactor with enhanced catalytic activity. <i>Applied Catalysis A: General</i> , 2019, 585, 117186. | 2.2 | 10 |
| 275 | Ultrathin PdFePb nanowires: One-pot aqueous synthesis and efficient electrocatalysis for polyhydric alcohol oxidation reaction. <i>Journal of Colloid and Interface Science</i> , 2019, 555, 276-283. | 5.0 | 26 |
| 276 | Monodisperse nanoparticles for catalysis and nanomedicine. <i>Nanoscale</i> , 2019, 11, 18946-18967. | 2.8 | 61 |
| 277 | Metal-Nonmetal One-Dimensional Electrocatalyst: AuPdP Nanowires for Ambient Nitrogen Reduction to Ammonia. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 15772-15777. | 3.2 | 37 |
| 278 | Recent advances in multi-scale design and construction of materials for direct methanol fuel cells. <i>Nano Energy</i> , 2019, 65, 104048. | 8.2 | 187 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 279 | Conformational Effects of Pt-Shells on Nanostructures and Corresponding Oxygen Reduction Reaction Activity of Au-Cluster-Decorated NiOx@Pt Nanocatalysts. <i>Nanomaterials</i> , 2019, 9, 1003. | 1.9 | 14 |
| 280 | N-doped carbon shell encapsulated PtZn intermetallic nanoparticles as highly efficient catalysts for fuel cells. <i>Nano Research</i> , 2019, 12, 2490-2497. | 5.8 | 54 |
| 281 | Promoting water dissociation performance by borinic acid for the strong-acid/base-free hydrogen evolution reaction. <i>Chemical Communications</i> , 2019, 55, 9821-9824. | 2.2 | 4 |
| 282 | Achievements, challenges and perspectives on cathode catalysts in proton exchange membrane fuel cells for transportation. <i>Nature Catalysis</i> , 2019, 2, 578-589. | 16.1 | 760 |
| 283 | Monodispersed Pt ₃ Ni Nanoparticles as a Highly Efficient Electrocatalyst for PEMFCs. <i>Catalysts</i> , 2019, 9, 588. | 1.6 | 13 |
| 284 | Quasi metal organic framework with highly concentrated Cr ₂ O ₃ molecular clusters as the efficient catalyst for dehydrofluorination of 1,1,1,3,3-pentafluoropropane. <i>Applied Catalysis B: Environmental</i> , 2019, 257, 117939. | 10.8 | 28 |
| 285 | Atomically dispersed metal catalysts for the oxygen reduction reaction: synthesis, characterization, reaction mechanisms and electrochemical energy applications. <i>Energy and Environmental Science</i> , 2019, 12, 2890-2923. | 15.6 | 317 |
| 286 | Rapid precipitation-reduction synthesis of carbon-supported silver for efficient oxygen reduction reaction in alkaline solution. <i>Journal of Solid State Electrochemistry</i> , 2019, 23, 2601-2607. | 1.2 | 5 |
| 287 | Ternary core-shell PdM@Pt (M = Mn and Fe) nanoparticle electrocatalysts with enhanced ORR catalytic properties. <i>Ultrasonics Sonochemistry</i> , 2019, 58, 104673. | 3.8 | 19 |
| 288 | PtCuNi Tetrahedra Catalysts with Tailored Surfaces for Efficient Alcohol Oxidation. <i>Nano Letters</i> , 2019, 19, 5431-5436. | 4.5 | 93 |
| 289 | Metal-Free Photochemical Degradation of Lignin-Derived Aryl Ethers and Lignin by Autologous Radicals through Ionic Liquid Induction. <i>ChemSusChem</i> , 2019, 12, 4005-4013. | 3.6 | 37 |
| 290 | Pt-Co/C Cathode Catalyst Degradation in a Polymer Electrolyte Fuel Cell Investigated by an Infographic Approach Combining Three-Dimensional Spectroimaging and Unsupervised Learning. <i>Journal of Physical Chemistry C</i> , 2019, 123, 18844-18853. | 1.5 | 32 |
| 291 | Etching-Assisted Route to Heterophase Au Nanowires with Multiple Types of Active Surface Sites for Silane Oxidation. <i>Nano Letters</i> , 2019, 19, 6363-6369. | 4.5 | 19 |
| 292 | Recent advancements in Pt-nanostructure-based electrocatalysts for the oxygen reduction reaction. <i>Catalysis Science and Technology</i> , 2019, 9, 4835-4863. | 2.1 | 73 |
| 293 | One-step solid-phase boronation to fabricate self-supported porous FeNiB/FeNi foam for efficient electrocatalytic oxygen evolution and overall water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 19554-19564. | 5.2 | 68 |
| 294 | Multi-Element Topochemical-Molten Salt Synthesis of One-Dimensional Piezoelectric Perovskite. <i>IScience</i> , 2019, 17, 1-9. | 1.9 | 4 |
| 295 | Recent progress of Pt-based catalysts for oxygen reduction reaction in preparation strategies and catalytic mechanism. <i>Journal of Electroanalytical Chemistry</i> , 2019, 848, 113279. | 1.9 | 56 |
| 296 | Ag ₂ S-CoS hetero-nanowires terminated with stepped surfaces for improved oxygen evolution reaction. <i>Catalysis Communications</i> , 2019, 129, 105749. | 1.6 | 12 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 297 | In Situ Formed Pt ₃ Ti Nanoparticles on a Two-Dimensional Transition Metal Carbide (MXene) Used as Efficient Catalysts for Hydrogen Evolution Reactions. Nano Letters, 2019, 19, 5102-5108. | 4.5 | 133 |
| 298 | Platinum Porous Nanosheets with High Surface Distortion and Pt Utilization for Enhanced Oxygen Reduction Catalysis. Advanced Functional Materials, 2019, 29, 1904429. | 7.8 | 96 |
| 299 | Programmable Exposure of Pt Active Facets for Efficient Oxygen Reduction. Angewandte Chemie, 2019, 131, 15995-16001. | 1.6 | 14 |
| 300 | Tungsten-Doped L1 ₀ -PtCo Ultrasmall Nanoparticles as a High-Performance Fuel Cell Cathode. Angewandte Chemie, 2019, 131, 15617-15623. | 1.6 | 30 |
| 301 | Differential Surface Elemental Distribution Leads to Significantly Enhanced Stability of PtNi-Based ORR Catalysts. Matter, 2019, 1, 1567-1580. | 5.0 | 82 |
| 302 | Nanowire Genome: A Magic Toolbox for 1D Nanostructures. Advanced Materials, 2019, 31, e1902807. | 11.1 | 44 |
| 303 | Direct synthesis of L1 ₀ -FePt nanoparticles from single-source bimetallic complex and their electrocatalytic applications in oxygen reduction and hydrogen evolution reactions. Nano Research, 2019, 12, 2954-2959. | 5.8 | 54 |
| 304 | Fe-, N-Embedded Hierarchically Porous Carbon Architectures Derived from FeTe-Trapped Zeolitic Imidazolate Frameworks as Efficient Oxygen Reduction Electrocatalysts. ACS Sustainable Chemistry and Engineering, 2019, 7, 19268-19276. | 3.2 | 21 |
| 305 | Perforated Pd Nanosheets with Crystalline/Amorphous Heterostructures as a Highly Active Robust Catalyst toward Formic Acid Oxidation. Small, 2019, 15, e1904245. | 5.2 | 81 |
| 306 | Engineering bunched Pt-Ni alloy nanocages for efficient oxygen reduction in practical fuel cells. Science, 2019, 366, 850-856. | 6.0 | 1,005 |
| 307 | Porous carbon framework derived from N-rich hypercrosslinked polymer as the efficient metal-free electrocatalyst for oxygen reduction reaction. Journal of Colloid and Interface Science, 2019, 557, 664-672. | 5.0 | 31 |
| 308 | Programmable Exposure of Pt Active Facets for Efficient Oxygen Reduction. Angewandte Chemie - International Edition, 2019, 58, 15848-15854. | 7.2 | 81 |
| 309 | Tungsten-Doped L1 ₀ -PtCo Ultrasmall Nanoparticles as a High-Performance Fuel Cell Cathode. Angewandte Chemie - International Edition, 2019, 58, 15471-15477. | 7.2 | 150 |
| 310 | Atomically Dispersed Pt on Screw-Like Pd/Au Core-Shell Nanowires for Enhanced Electrocatalysis. Chemistry - A European Journal, 2020, 26, 4019-4024. | 1.7 | 19 |
| 311 | Ultrafine PtRu Dilute Alloy Nanodendrites for Enhanced Electrocatalytic Methanol Oxidation. Chemistry - A European Journal, 2020, 26, 4025-4031. | 1.7 | 19 |
| 312 | A metal-organic framework-derived Fe-N-C electrocatalyst with highly dispersed Fe-Nx towards oxygen reduction reaction. International Journal of Hydrogen Energy, 2019, 44, 27379-27389. | 3.8 | 41 |
| 313 | Nitrogen-doped graphene layers for electrochemical oxygen reduction reaction boosted by lattice strain. Journal of Catalysis, 2019, 378, 113-120. | 3.1 | 19 |
| 314 | Activity Origin and Multifunctionality of Pt-Based Intermetallic Nanostructures for Efficient Electrocatalysis. ACS Catalysis, 2019, 9, 11242-11254. | 5.5 | 96 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 315 | Feeding difficulties in children with autism spectrum disorder: Aetiology, health impacts and psychotherapeutic interventions. <i>Journal of Paediatrics and Child Health</i> , 2019, 55, 1304-1308. | 0.4 | 12 |
| 316 | Improvement of Catalytic Activity of Platinum Nanoparticles Decorated Carbon Graphene Composite on Oxygen Electroreduction for Fuel Cells. <i>Processes</i> , 2019, 7, 586. | 1.3 | 16 |
| 317 | Recent Progress in Precious Metal-Free Carbon-Based Materials towards the Oxygen Reduction Reaction: Activity, Stability, and Anti-Poisoning. <i>Chemistry - A European Journal</i> , 2020, 26, 3973-3990. | 1.7 | 36 |
| 318 | 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. <i>Current Opinion in Electrochemistry</i> , 2019, 18, 61-71. | 2.5 | 111 |
| 319 | Subnano Amorphous Fe-Based Clusters with High Mass Activity for Efficient Electrocatalytic Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41432-41439. | 4.0 | 18 |
| 320 | Numerical Simulations of Seasonal Variations of Rainfall over the Island of Hawaii. <i>Journal of Applied Meteorology and Climatology</i> , 2019, 58, 1219-1232. | 0.6 | 3 |
| 321 | Two-grid methods for semi-linear elliptic interface problems by immersed finite element methods. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2019, 40, 1657-1676. | 1.9 | 14 |
| 322 | Tuning Surface Structure of Pd ₃ Pb/Pt _n Pb Nanocrystals for Boosting the Methanol Oxidation Reaction. <i>Advanced Science</i> , 2019, 6, 1902249. | 5.6 | 48 |
| 323 | Unconventional d Hybridization Interaction in PtGa Ultrathin Nanowires Boosts Oxygen Reduction Electrocatalysis. <i>Journal of the American Chemical Society</i> , 2019, 141, 18083-18090. | 6.6 | 216 |
| 324 | A density functional theory study of the oxygen reduction reaction on the (111) and (100) surfaces of cobalt(II) oxide. <i>Progress in Reaction Kinetics and Mechanism</i> , 2019, 44, 122-131. | 1.1 | 6 |
| 325 | Pt/Pd Single-Atom Alloys as Highly Active Electrochemical Catalysts and the Origin of Enhanced Activity. <i>ACS Catalysis</i> , 2019, 9, 9350-9358. | 5.5 | 106 |
| 326 | Electrochemical analysis of the porphyrazine-induced enhancement of ORR activity of Pt catalysts for the development of porphyrazine-adsorbed Pt catalysts. <i>Journal of Electroanalytical Chemistry</i> , 2019, 848, 113321. | 1.9 | 11 |
| 327 | Trifunctional Fishbone-like PtCo/Ir Enables High-Performance Zinc-Air Batteries to Drive the Water-Splitting Catalysis. <i>Chemistry of Materials</i> , 2019, 31, 8136-8144. | 3.2 | 55 |
| 328 | Wavy PtCu alloy nanowire networks with abundant surface defects enhanced oxygen reduction reaction. <i>Nano Research</i> , 2019, 12, 2766-2773. | 5.8 | 48 |
| 329 | Phosphorization Treatment Improves the Catalytic Activity and Durability of Platinum Catalysts toward Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2019, 31, 8205-8211. | 3.2 | 24 |
| 330 | Highly stable one-dimensional Pt nanowires with modulated structural disorder towards the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 24830-24836. | 5.2 | 26 |
| 331 | PdMo bimetallic for oxygen reduction catalysis. <i>Nature</i> , 2019, 574, 81-85. | 13.7 | 935 |
| 332 | Recent Insights into the Oxygen-Reduction Electrocatalysis of Fe/N/C Materials. <i>ACS Catalysis</i> , 2019, 9, 10126-10141. | 5.5 | 295 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 333 | Precisely Tuning the Number of Fe Atoms in Clusters on N-Doped Carbon toward Acidic Oxygen Reduction Reaction. <i>CheM</i> , 2019, 5, 2865-2878. | 5.8 | 346 |
| 334 | Direct Growth of Highly Strained Pt Islands on Branched Ni Nanoparticles for Improved Hydrogen Evolution Reaction Activity. <i>Journal of the American Chemical Society</i> , 2019, 141, 16202-16207. | 6.6 | 113 |
| 335 | Atomically ordered non-precious Co ₃ Ta intermetallic nanoparticles as high-performance catalysts for hydrazine electrooxidation. <i>Nature Communications</i> , 2019, 10, 4514. | 5.8 | 80 |
| 336 | Cobalt single-atoms anchored on porphyrinic triazine-based frameworks as bifunctional electrocatalysts for oxygen reduction and hydrogen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2019, 7, 1252-1259. | 5.2 | 152 |
| 337 | Pt-Based electrocatalysts with high atom utilization efficiency: from nanostructures to single atoms. <i>Energy and Environmental Science</i> , 2019, 12, 492-517. | 15.6 | 400 |
| 338 | 3D PtAu nanoframe superstructure as a high-performance carbon-free electrocatalyst. <i>Nanoscale</i> , 2019, 11, 2840-2847. | 2.8 | 27 |
| 339 | N, F-Codoped Microporous Carbon Nanofibers as Efficient Metal-Free Electrocatalysts for ORR. <i>Nano-Micro Letters</i> , 2019, 11, 9. | 14.4 | 69 |
| 340 | Boosting Oxygen Reduction Catalysis with Fe ^{N₄} Sites Decorated Porous Carbons toward Fuel Cells. <i>ACS Catalysis</i> , 2019, 9, 2158-2163. | 5.5 | 297 |
| 341 | Unifying the Hydrogen Evolution and Oxidation Reactions Kinetics in Base by Identifying the Catalytic Roles of Hydroxyl-Water-Cation Adducts. <i>Journal of the American Chemical Society</i> , 2019, 141, 3232-3239. | 6.6 | 220 |
| 342 | Multishelled Hollow Structures of Yttrium Oxide for the Highly Selective and Ultrasensitive Detection of Methanol. <i>Small</i> , 2019, 15, e1804688. | 5.2 | 22 |
| 343 | Synthesis and electrochemical performance of nickel-cobalt oxide/carbon nanocomposites for use in efficient oxygen evolution reaction. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 4144-4151. | 1.1 | 11 |
| 344 | The OH ⁻ -driven synthesis of Pt-Ni nanocatalysts with atomic segregation for alkaline hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5475-5481. | 5.2 | 46 |
| 345 | Casting Nanoporous Platinum in Metal-Organic Frameworks. <i>Advanced Materials</i> , 2019, 31, e1807553. | 11.1 | 13 |
| 346 | Boosting oxygen reduction activity with low-temperature derived high-loading atomic cobalt on nitrogen-doped graphene for efficient Zn-air batteries. <i>Chemical Communications</i> , 2019, 55, 334-337. | 2.2 | 35 |
| 347 | Intrinsic effects of strain on low-index surfaces of platinum: roles of the five 5d orbitals. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 3242-3249. | 1.3 | 23 |
| 348 | Nanostructured Cobalt-Containing Carbon Supports for New Platinum Catalysts. <i>Russian Journal of Electrochemistry</i> , 2019, 55, 438-448. | 0.3 | 1 |
| 349 | Pt-Cu based nanocrystals as promising catalysts for various electrocatalytic reactions. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17183-17203. | 5.2 | 48 |
| 350 | Identifying Active Sites for CO ₂ Reduction on Dealloyed Gold Surfaces by Combining Machine Learning with Multiscale Simulations. <i>Journal of the American Chemical Society</i> , 2019, 141, 11651-11657. | 6.6 | 107 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 351 | Biomass derivative-based fibrous perovskite electrocatalysts with a hierarchical porous structure for oxygen reduction in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 18019-18027. | 3.8 | 8 |
| 352 | Facile Synthesis of Nanoporous Pt-Encapsulated Ir Black as a Bifunctional Oxygen Catalyst via Modified Polyol Process at Room Temperature. <i>ChemElectroChem</i> , 2019, 6, 3633-3643. | 1.7 | 19 |
| 353 | Promotion of hydrogen peroxide production on graphene-supported atomically dispersed platinum: Effects of size on oxygen reduction reaction pathway. <i>Journal of Power Sources</i> , 2019, 435, 226771. | 4.0 | 40 |
| 354 | An efficient ultrathin PtFeNi Nanowire/Ionic liquid conjugate electrocatalyst. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117828. | 10.8 | 40 |
| 355 | New Horizons of Nonclassical Crystallization. <i>Journal of the American Chemical Society</i> , 2019, 141, 10120-10136. | 6.6 | 168 |
| 356 | Fe ₃ C/C nanoparticles encapsulated in N-doped graphene aerogel: an advanced oxygen reduction reaction catalyst for fiber-shaped fuel cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 18393-18402. | 3.8 | 15 |
| 357 | Pt-Based Nanocrystal for Electrocatalytic Oxygen Reduction. <i>Advanced Materials</i> , 2019, 31, e1808115. | 11.1 | 260 |
| 358 | Transformation of Metal-Organic Frameworks into Huge-Diameter Carbon Nanotubes with High Performance in Proton Exchange Membrane Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 22290-22296. | 4.0 | 45 |
| 359 | Dual-Site Cascade Oxygen Reduction Mechanism on SnO _x /Pt-Cu-Ni for Promoting Reaction Kinetics. <i>Journal of the American Chemical Society</i> , 2019, 141, 9463-9467. | 6.6 | 70 |
| 360 | Ordered Nanostructure Enhances Electrocatalytic Performance by Directional Micro-Electric Field. <i>Journal of the American Chemical Society</i> , 2019, 141, 10729-10735. | 6.6 | 38 |
| 361 | Active and stable Pt-Ceria nanowires@silica shell catalyst: Design, formation mechanism and total oxidation of CO and toluene. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117807. | 10.8 | 57 |
| 362 | Surface-modified Pt ₁ Ni ₁ -Ni(OH) ₂ nanoparticles with abundant Pt-Ni(OH) ₂ interfaces enhance electrocatalytic properties. <i>Dalton Transactions</i> , 2019, 48, 10313-10319. | 1.6 | 14 |
| 363 | Insight into the design of defect electrocatalysts: From electronic structure to adsorption energy. <i>Materials Today</i> , 2019, 31, 47-68. | 8.3 | 311 |
| 364 | Insulin amyloid fibrils-templated rational self-assembly of vine-tree-like PtRh nanocatalysts for efficient methanol electrooxidation. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2019, 573, 6-13. | 2.3 | 20 |
| 365 | Point-Defect-Rich Carbon Sheets as the High-Activity Catalyst Toward Oxygen Reduction and Hydrogen Evolution. <i>Catalysts</i> , 2019, 9, 386. | 1.6 | 7 |
| 366 | Electrospun Carbon Nanofiber Sprinkled with Co ₃ O ₄ as an Efficient Electrocatalyst for Oxygen Reduction Reaction in Alkaline Medium. <i>ChemistrySelect</i> , 2019, 4, 5160-5167. | 0.7 | 7 |
| 367 | Facile synthesis strategy of Ni-core Pt-shell electrocatalyst for oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , 2019, 37, 192-196. | 7.1 | 9 |
| 368 | Highly Efficient Fe-N-C Electrocatalyst for Oxygen Reduction Derived from Core-Shell-Structured Fe(OH) ₃ @Zeolitic Imidazolate Framework. <i>ACS Applied Energy Materials</i> , 2019, 2, 3194-3203. | 2.5 | 32 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 369 | Optimal coordination-site exposure engineering in porous platinum for outstanding oxygen reduction performance. <i>Chemical Science</i> , 2019, 10, 5589-5595. | 3.7 | 20 |
| 370 | Facile synthesis of flexible Pt/NiO 1D nanohybrids with high electrical properties using electrospinning. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 10589-10596. | 1.1 | 1 |
| 371 | One-nanometer-thick platinum-based nanowires with controllable surface structures. <i>Nano Research</i> , 2019, 12, 1721-1726. | 5.8 | 18 |
| 372 | Single-atom tailoring of platinum nanocatalysts for high-performance multifunctional electrocatalysis. <i>Nature Catalysis</i> , 2019, 2, 495-503. | 16.1 | 464 |
| 373 | Composition- and shape-controlled synthesis of the PtNi alloy nanotubes with enhanced activity and durability toward oxygen reduction reaction. <i>Journal of Power Sources</i> , 2019, 429, 1-8. | 4.0 | 19 |
| 374 | Facile Synthesis of Cobalt and Nitrogen Coordinated Carbon Nanotube as a High-Performance Electrocatalyst for Oxygen Reduction Reaction in Both Acidic and Alkaline Media. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 10951-10961. | 3.2 | 21 |
| 375 | Pd@Pt Core-Shell Nanodots Arrays for Efficient Electrocatalytic Oxygen Reduction. <i>ACS Applied Nano Materials</i> , 2019, 2, 3695-3700. | 2.4 | 9 |
| 376 | Anion exchange of a cationic Cd(ii)-based metal-organic framework with potassium ferricyanide towards highly active Fe ₃ C-containing Fe/N/C catalysts for oxygen reduction. <i>Chemical Communications</i> , 2019, 55, 6930-6933. | 2.2 | 20 |
| 377 | When ternary PdCuP alloys meet ultrathin nanowires: Synergic boosting of catalytic performance in ethanol electrooxidation. <i>Applied Catalysis B: Environmental</i> , 2019, 253, 271-277. | 10.8 | 70 |
| 378 | Comparison of Pt-Cu/C with Benchmark Pt-Co/C: Metal Dissolution and Their Surface Interactions. <i>ACS Applied Energy Materials</i> , 2019, 2, 3131-3141. | 2.5 | 54 |
| 379 | Improved Accelerated Stress Tests for ORR Catalysts Using a Rotating Disk Electrode. <i>Journal of the Electrochemical Society</i> , 2019, 166, F3111-F3115. | 1.3 | 18 |
| 380 | Single Fe Atom on Hierarchically Porous S, N-Codoped Nanocarbon Derived from Porphyrin Enable Boosted Oxygen Catalysis for Rechargeable Zn-Air Batteries. <i>Small</i> , 2019, 15, e1900307. | 5.2 | 273 |
| 381 | Engineering one-dimensional and hierarchical PtFe alloy assemblies towards durable methanol electrooxidation. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13090-13095. | 5.2 | 56 |
| 382 | On the origin of mesopore collapse in functionalized porous carbons. <i>Carbon</i> , 2019, 149, 743-749. | 5.4 | 14 |
| 383 | An Integrated Single-Electrode Method Reveals the Template Roles of Atomic Steps: Disturb Interfacial Water Networks and Thus Affect the Reactivity of Electrocatalysts. <i>Journal of the American Chemical Society</i> , 2019, 141, 8516-8526. | 6.6 | 20 |
| 384 | Atomic Arrangement Engineering of Metallic Nanocrystals for Energy-Conversion Electrocatalysis. <i>Joule</i> , 2019, 3, 956-991. | 11.7 | 197 |
| 385 | Peptide-Assisted 2-D Assembly toward Free-Floating Ultrathin Platinum Nanoplates as Effective Electrocatalysts. <i>Nano Letters</i> , 2019, 19, 3730-3736. | 4.5 | 44 |
| 386 | Catalytic Ru containing Pt ₃ Mn nanocrystals enclosed with high-indexed facets: Surface alloyed Ru makes Pt more active than Ru particles for ethylene glycol oxidation. <i>Applied Catalysis B: Environmental</i> , 2019, 253, 11-20. | 10.8 | 60 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 387 | PtM (M = Co, Ni) Mesoporous Nanotubes as Bifunctional Electrocatalysts for Oxygen Reduction and Methanol Oxidation. ACS Sustainable Chemistry and Engineering, 2019, 7, 7960-7968. | 3.2 | 58 |
| 388 | Synthesis and Characterization of High-Purity Ultrafine Platinum Particles by Chemical Refining Method. Journal of Nanomaterials, 2019, 2019, 1-8. | 1.5 | 0 |
| 389 | Oxygen Reduction Reactions of Fe-N-C Catalysts: Current Status and the Way Forward. Electrochemical Energy Reviews, 2019, 2, 252-276. | 13.1 | 119 |
| 390 | Modulating the Electronic Structure of Single-Atom Catalysts on 2D Nanomaterials for Enhanced Electrocatalytic Performance. Small Methods, 2019, 3, 1800438. | 4.6 | 88 |
| 391 | Sub-6 nm Fully Ordered Pt-Ni-Co Nanoparticles Enhance Oxygen Reduction via Co Doping Induced Ferromagnetism Enhancement and Optimized Surface Strain. Advanced Energy Materials, 2019, 9, 1803771. | 10.2 | 127 |
| 392 | Highly Dispersed and Crystalline Ta ₂ O ₅ Anchored Pt Electrocatalyst with Improved Activity and Durability Toward Oxygen Reduction: Promotion by Atomic-Scale Pt-Ta ₂ O ₅ Interactions. ACS Catalysis, 2019, 9, 3278-3288. | 5.5 | 63 |
| 393 | Importance of Electrocatalyst Morphology for the Oxygen Reduction Reaction. ChemElectroChem, 2019, 6, 2600-2614. | 1.7 | 45 |
| 394 | Accelerating electrochemistry with metal nanowires. Current Opinion in Electrochemistry, 2019, 16, 19-27. | 2.5 | 28 |
| 395 | Structure regulation of noble-metal-based nanomaterials at an atomic level. Nano Today, 2019, 26, 164-175. | 6.2 | 33 |
| 396 | Nickel-Ion-Oriented Fabrication of Spiny PtCu Alloy Octahedral Nanoframes with Enhanced Electrocatalytic Performance. ACS Applied Energy Materials, 2019, 2, 2862-2869. | 2.5 | 19 |
| 397 | Electrochemical Dealloying-Assisted Surface-Engineered Pd-Based Bifunctional Electrocatalyst for Formic Acid Oxidation and Oxygen Reduction. ACS Applied Materials & Interfaces, 2019, 11, 14110-14119. | 4.0 | 50 |
| 398 | One-Pot Synthesis of Pt-Pd Bimetallic Nanodendrites with Enhanced Electrocatalytic Activity for Oxygen Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 8419-8428. | 3.2 | 37 |
| 399 | Multidimensional nanostructured membrane electrode assemblies for proton exchange membrane fuel cell applications. Journal of Materials Chemistry A, 2019, 7, 9447-9477. | 5.2 | 56 |
| 400 | High-Indexed PtNi Alloy Skin Spiraled on Pd Nanowires for Highly Efficient Oxygen Reduction Reaction Catalysis. Small, 2019, 15, e1900288. | 5.2 | 73 |
| 401 | Mechanistic Understanding of Size-Dependent Oxygen Reduction Activity and Selectivity over Pt/CNT Nanocatalysts. European Journal of Inorganic Chemistry, 2019, 2019, 3210-3217. | 1.0 | 18 |
| 402 | One-Dimensional Metal Nanostructures: From Colloidal Syntheses to Applications. Chemical Reviews, 2019, 119, 8972-9073. | 23.0 | 240 |
| 403 | The rational design of sandwich-like MnO ₂ -Pd-CeO ₂ hollow spheres with enhanced activity and stability for CO oxidation. Nanoscale, 2019, 11, 6776-6783. | 2.8 | 15 |
| 404 | Fabrication of hollow pompon-like Co ₃ O ₄ nanostructures with rich defects and high-index facet exposure for enhanced oxygen evolution catalysis. Journal of Materials Chemistry A, 2019, 7, 9059-9067. | 5.2 | 48 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 405 | Rational design of porous structures via molecular layer deposition as an effective stabilizer for enhancing Pt ORR performance. <i>Nano Energy</i> , 2019, 60, 111-118. | 8.2 | 62 |
| 406 | Asymmetric Multimetallic Mesoporous Nanospheres. <i>Nano Letters</i> , 2019, 19, 3379-3385. | 4.5 | 76 |
| 407 | Facile synthesis of polyacrylonitrile-based N/S-codoped porous carbon as an efficient oxygen reduction electrocatalyst for zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11223-11233. | 5.2 | 39 |
| 408 | Strain Engineering Electrocatalysts for Selective CO ₂ Reduction. <i>ACS Energy Letters</i> , 2019, 4, 980-986. | 8.8 | 115 |
| 409 | Phase Modulating of Cu-Ni Nanowires Enables Active and Stable Electrocatalysts for the Methanol Oxidation Reaction. <i>Chemistry - A European Journal</i> , 2019, 25, 7218-7224. | 1.7 | 21 |
| 410 | One-Nanometer-Thick Pt ₃ Ni Bimetallic Alloy Nanowires Advanced Oxygen Reduction Reaction: Integrating Multiple Advantages into One Catalyst. <i>ACS Catalysis</i> , 2019, 9, 4488-4494. | 5.5 | 126 |
| 411 | Review of Metal Catalysts for Oxygen Reduction Reaction: From Nanoscale Engineering to Atomic Design. <i>CheM</i> , 2019, 5, 1486-1511. | 5.8 | 544 |
| 412 | Highly active zigzag-like Pt-Zn alloy nanowires with high-index facets for alcohol electrooxidation. <i>Nano Research</i> , 2019, 12, 1173-1179. | 5.8 | 65 |
| 413 | Effects of Pt metal loading on the atomic restructure and oxygen reduction reaction performance of Pt-cluster decorated Cu@Pd electrocatalysts. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1668-1681. | 2.5 | 19 |
| 414 | Advanced Catalysts Derived from Composition-Segregated Platinum-Nickel Nanostructures: New Opportunities and Challenges. <i>Advanced Functional Materials</i> , 2019, 29, 1808161. | 7.8 | 38 |
| 415 | Superwettability-Based Interfacial Chemical Reactions. <i>Advanced Materials</i> , 2019, 31, e1800718. | 11.1 | 128 |
| 416 | Recommended Practices and Benchmark Activity for Hydrogen and Oxygen Electrocatalysis in Water Splitting and Fuel Cells. <i>Advanced Materials</i> , 2019, 31, e1806296. | 11.1 | 841 |
| 417 | Enhancing Electrocatalytic Water Splitting by Strain Engineering. <i>Advanced Materials</i> , 2019, 31, e1807001. | 11.1 | 470 |
| 418 | Hollow PtNi Nanochains as Highly Efficient and Stable Oxygen Reduction Reaction Catalysts. <i>ChemistrySelect</i> , 2019, 4, 963-971. | 0.7 | 6 |
| 419 | Platinum Group Nanowires for Efficient Electrocatalysis. <i>Small Methods</i> , 2019, 3, 1800545. | 4.6 | 53 |
| 420 | Key Factors for Simultaneous Improvements of Performance and Durability of Core-Shell Pt ₃ Ni/Carbon Electrocatalysts Toward Superior Polymer Electrolyte Fuel Cell. <i>Chemical Record</i> , 2019, 19, 1337-1353. | 2.9 | 5 |
| 421 | Recent Advances on Controlled Synthesis and Engineering of Hollow Alloyed Nanotubes for Electrocatalysis. <i>Advanced Materials</i> , 2019, 31, e1803503. | 11.1 | 81 |
| 422 | Polyacrylonitrile-derived nanostructured carbon materials. <i>Progress in Polymer Science</i> , 2019, 92, 89-134. | 11.8 | 92 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 423 | Phase and structure modulating of bimetallic CuSn nanowires boosts electrocatalytic conversion of CO ₂ . <i>Nano Energy</i> , 2019, 59, 138-145. | 8.2 | 81 |
| 424 | In situ nanoarchitecturing and active-site engineering toward highly efficient carbonaceous electrocatalysts. <i>Nano Energy</i> , 2019, 59, 207-215. | 8.2 | 54 |
| 425 | Boosting Water Dissociation Kinetics on Pt@Ni Nanowires by N-Induced Orbital Tuning. <i>Advanced Materials</i> , 2019, 31, e1807780. | 11.1 | 167 |
| 426 | Fabrication of Superior Single-Atom Catalysts toward Diverse Electrochemical Reactions. <i>Small Methods</i> , 2019, 3, 1800497. | 4.6 | 99 |
| 427 | Trimetallic PtPdCo mesoporous nanopolyhedra with hollow cavities. <i>Nanoscale</i> , 2019, 11, 4781-4787. | 2.8 | 31 |
| 428 | Atomistic Origin of the Complex Morphological Evolution of Aluminum Nanoparticles during Oxidation: A Chain-like Oxide Nucleation and Growth Mechanism. <i>ACS Nano</i> , 2019, 13, 3005-3014. | 7.3 | 69 |
| 429 | Unusual strain effect of a Pt-based L1 ₀ face-centered tetragonal core in core/shell nanoparticles for the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 6477-6484. | 1.3 | 22 |
| 430 | Tunable intrinsic strain in two-dimensional transition metal electrocatalysts. <i>Science</i> , 2019, 363, 870-874. | 6.0 | 384 |
| 431 | PtFe Alloy Nanoparticles Confined on Carbon Nanotube Networks as Air Cathodes for Flexible and Wearable Energy Devices. <i>ACS Applied Nano Materials</i> , 2019, 2, 7870-7879. | 2.4 | 22 |
| 432 | N-Doped holey carbon materials derived from a metal-free macrocycle cucurbit[6]uril assembly as an efficient electrocatalyst for the oxygen reduction reaction. <i>Chemical Communications</i> , 2019, 55, 13832-13835. | 2.2 | 12 |
| 433 | Highly stable Pt ₃ Ni nanowires tailored with trace Au for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26402-26409. | 5.2 | 55 |
| 434 | Pd-coated Ru nanocrystals supported on N-doped graphene as HER and ORR electrocatalysts. <i>Chemical Communications</i> , 2019, 55, 13928-13931. | 2.2 | 51 |
| 435 | Galvanic replacement mediated 3D porous PtCu nano-frames for enhanced ethylene glycol oxidation. <i>Chemical Communications</i> , 2019, 55, 14526-14529. | 2.2 | 12 |
| 436 | Reactive nanotemplates for synthesis of highly efficient electrocatalysts: beyond simple morphology transfer. <i>Nanoscale</i> , 2019, 11, 20392-20410. | 2.8 | 11 |
| 437 | Hydroxyl group modification improves the electrocatalytic ORR and OER activity of graphene supported single and bi-metal atomic catalysts (Ni, Co, and Fe). <i>Journal of Materials Chemistry A</i> , 2019, 7, 24583-24593. | 5.2 | 126 |
| 438 | Interfacial Engineering in PtNiCo/NiCoS Nanowires for Enhanced Electrocatalysis and Electroanalysis. <i>Chemistry - A European Journal</i> , 2020, 26, 4032-4038. | 1.7 | 16 |
| 439 | Transparent Conductive Layer Based on Oriented Platinum Networks. <i>ChemistrySelect</i> , 2019, 4, 13564-13568. | 0.7 | 4 |
| 440 | A general synthesis approach for amorphous noble metal nanosheets. <i>Nature Communications</i> , 2019, 10, 4855. | 5.8 | 321 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 441 | Nitrogen-Doped Ketjenblack Carbon Supported Co ₃ O ₄ Nanoparticles as a Synergistic Electrocatalyst for Oxygen Reduction Reaction. <i>Frontiers in Chemistry</i> , 2019, 7, 766. | 1.8 | 20 |
| 442 | From Half-Cells to Membrane-Electrode Assemblies: a Comparison of Oxygen Reduction Reaction Catalyst Performance Characteristics. <i>Fuel Cells</i> , 2019, 19, 695-707. | 1.5 | 8 |
| 443 | Facile synthesis of jagged Au/Ir nanochains with superior electrocatalytic activity for oxygen evolution reaction. <i>Applied Surface Science</i> , 2019, 463, 58-65. | 3.1 | 10 |
| 444 | Nanoscale Structure Design for High-Performance Pt-Based ORR Catalysts. <i>Advanced Materials</i> , 2019, 31, e1802234. | 11.1 | 478 |
| 445 | Bimodal nanoporous platinum on sacrificial nanoporous copper for catalysis of the oxygen-reduction reaction. <i>MRS Communications</i> , 2019, 9, 292-297. | 0.8 | 5 |
| 446 | 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 |
| 447 | Intermetallic PtBi core/ultrathin Pt shell nanoplates for efficient and stable methanol and ethanol electro-oxidation. <i>Nano Research</i> , 2019, 12, 429-436. | 5.8 | 76 |
| 448 | Twisted palladium-copper nanochains toward efficient electrocatalytic oxidation of formic acid. <i>Journal of Colloid and Interface Science</i> , 2019, 537, 366-374. | 5.0 | 68 |
| 449 | Two-dimensional circular platinum nanodendrites toward efficient oxygen reduction reaction and methanol oxidation reaction. <i>Electrochemistry Communications</i> , 2019, 98, 53-57. | 2.3 | 17 |
| 450 | Carbon-Based Metal-Free Catalysts for Key Reactions Involved in Energy Conversion and Storage. <i>Advanced Materials</i> , 2019, 31, e1801526. | 11.1 | 273 |
| 451 | Multimetallic Electrocatalyst Stabilized by Atomic Ordering. <i>Joule</i> , 2019, 3, 9-10. | 11.7 | 10 |
| 452 | Cobalt/Molybdenum Phosphide and Oxide Heterostructures Encapsulated in N-Doped Carbon Nanocomposite for Overall Water Splitting in Alkaline Media. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 6890-6899. | 4.0 | 91 |
| 453 | Trimetallic PtPdNi-Truncated Octahedral Nanocages with a Well-Defined Mesoporous Surface for Enhanced Oxygen Reduction Electrocatalysis. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 4252-4257. | 4.0 | 57 |
| 454 | Support-free nanostructured Pt Cu electrocatalyst for the oxygen reduction reaction prepared by alternating magnetron sputtering. <i>Journal of Power Sources</i> , 2019, 413, 432-440. | 4.0 | 12 |
| 455 | Transforming Bulk Metals into Metallic Nanostructures: A Liquid-Metal-Assisted Top-Down Dealloying Strategy with Sustainability. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 3274-3281. | 3.2 | 12 |
| 456 | Atomic Cobalt on Defective Bimodal Mesoporous Carbon toward Efficient Oxygen Reduction for Zinc-Air Batteries. <i>Small Methods</i> , 2019, 3, 1800450. | 4.6 | 45 |
| 457 | Ultrathin yet transferrable Pt- or PtRu-decorated graphene films as efficient electrocatalyst for methanol oxidation reaction. <i>Science China Materials</i> , 2019, 62, 273-282. | 3.5 | 15 |
| 458 | Anti-poisoned oxygen reduction by the interface modulated Pd@NiO core@shell. <i>Nano Energy</i> , 2019, 58, 234-243. | 8.2 | 38 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 459 | Surfactant templated oriented 1-D nanoscale platinum and palladium systems on a modified silicon surface. <i>Nano Structures Nano Objects</i> , 2019, 17, 1-6. | 1.9 | 4 |
| 460 | Fully Tensile Strained Pd ₃ Pb/Pd Tetragonal Nanosheets Enhance Oxygen Reduction Catalysis. <i>Nano Letters</i> , 2019, 19, 1336-1342. | 4.5 | 109 |
| 461 | H ₂ Reduction Annealing Induced Phase Transition and Improvements on Redox Durability of Pt Cluster-Decorated Cu@Pd Electrocatalysts in Oxygen Reduction Reaction. <i>ACS Omega</i> , 2019, 4, 971-982. | 1.6 | 15 |
| 462 | Lattice-strained metal-organic-framework arrays for bifunctional oxygen electrocatalysis. <i>Nature Energy</i> , 2019, 4, 115-122. | 19.8 | 680 |
| 463 | Effect of Surface Ni on Oxygen Reduction Reaction in Dealloyed Nanoporous Pt-Ni. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 7438-7447. | 1.8 | 9 |
| 464 | Heteroatoms co-Doping (N, F) to the Porous Carbon Derived from Spent Coffee Grounds as an Effective Catalyst for Oxygen Reduction Reaction in Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2019, 166, F93-F101. | 1.3 | 33 |
| 465 | Hard-Magnet L10-CoPt Nanoparticles Advance Fuel Cell Catalysis. <i>Joule</i> , 2019, 3, 124-135. | 11.7 | 326 |
| 466 | Unique hierarchical flower-like PtNi alloy nanocrystals with enhanced oxygen reduction properties. <i>Electrochimica Acta</i> , 2019, 294, 406-412. | 2.6 | 14 |
| 467 | Design of Noble Metal Electrocatalysts on an Atomic Level. <i>ChemElectroChem</i> , 2019, 6, 289-303. | 1.7 | 46 |
| 468 | Rh-doped PdAg nanoparticles as efficient methanol tolerance electrocatalytic materials for oxygen reduction. <i>Science Bulletin</i> , 2019, 64, 54-62. | 4.3 | 33 |
| 469 | In-Situ Grown, Passivator-Modulated Anodization Derived Synergistically Well-Mixed Ni-Fe Oxides from Ni Foam as High-Performance Oxygen Evolution Reaction Electrocatalyst. <i>ACS Applied Energy Materials</i> , 2019, 2, 743-753. | 2.5 | 34 |
| 470 | Solid-Diffusion Synthesis of Single-Atom Catalysts Directly from Bulk Metal for Efficient CO ₂ Reduction. <i>Joule</i> , 2019, 3, 584-594. | 11.7 | 277 |
| 471 | Implanting Mo Atoms into Surface Lattice of Pt ₃ Mn Alloys Enclosed by High-Indexed Facets: Promoting Highly Active Sites for Ethylene Glycol Oxidation. <i>ACS Catalysis</i> , 2019, 9, 442-455. | 5.5 | 79 |
| 472 | Disentangling the Degradation Pathways of Highly Defective PtNi/C Nanostructures – An Operando Wide and Small Angle X-ray Scattering Study. <i>ACS Catalysis</i> , 2019, 9, 160-167. | 5.5 | 22 |
| 473 | Modulierung der elektronischen Strukturen anorganischer Nanomaterialien für eine effiziente elektrokatalytische Wasserspaltung. <i>Angewandte Chemie</i> , 2019, 131, 4532-4551. | 1.6 | 34 |
| 474 | Modulating Electronic Structures of Inorganic Nanomaterials for Efficient Electrocatalytic Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4484-4502. | 7.2 | 340 |
| 475 | Ultrathin wavy Rh nanowires as highly effective electrocatalysts for methanol oxidation reaction with ultrahigh ECSA. <i>Nano Research</i> , 2019, 12, 211-215. | 5.8 | 66 |
| 476 | Surface and Interface Control in Nanoparticle Catalysis. <i>Chemical Reviews</i> , 2020, 120, 1184-1249. | 23.0 | 492 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 477 | Lignin derived multi-doped (N, S, Cl) carbon materials as excellent electrocatalyst for oxygen reduction reaction in proton exchange membrane fuel cells. <i>Journal of Energy Chemistry</i> , 2020, 44, 106-114. | 7.1 | 62 |
| 478 | Active sites engineering of Pt/CNT oxygen reduction catalysts by atomic layer deposition. <i>Journal of Energy Chemistry</i> , 2020, 45, 59-66. | 7.1 | 54 |
| 479 | Interface modulation of twinned PtFe nanoplates branched 3D architecture for oxygen reduction catalysis. <i>Science Bulletin</i> , 2020, 65, 97-104. | 4.3 | 42 |
| 480 | Oxygen Reduction Reactions on Single- or Few-Atom Discrete Active Sites for Heterogeneous Catalysis. <i>Advanced Energy Materials</i> , 2020, 10, 1902084. | 10.2 | 82 |
| 481 | Intermetallic PtBi Nanoplates Boost Oxygen Reduction Catalysis with Superior Tolerance over Chemical Fuels. <i>Advanced Science</i> , 2020, 7, 1800178. | 5.6 | 55 |
| 482 | Optimal Design of Diode-Bridge Bidirectional Solid-State Switch Using Standard Recovery Diodes for 500-kV High-Voltage DC Breaker. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 1165-1170. | 5.4 | 32 |
| 483 | Thin film electrodes from Pt nanorods supported on aligned N-CNTs for proton exchange membrane fuel cells. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118031. | 10.8 | 73 |
| 484 | N-doped hard carbon nanotubes derived from conjugated microporous polymer for electrocatalytic oxygen reduction reaction. <i>Renewable Energy</i> , 2020, 146, 2270-2280. | 4.3 | 42 |
| 485 | Platinum-group-metal catalysts for proton exchange membrane fuel cells: From catalyst design to electrode structure optimization. <i>EnergyChem</i> , 2020, 2, 100023. | 10.1 | 138 |
| 486 | Composition Modulation of Pt-Based Nanowire Electrocatalysts Enhances Methanol Oxidation Performance. <i>Inorganic Chemistry</i> , 2020, 59, 1376-1382. | 1.9 | 11 |
| 487 | Tuning the surface segregation composition of a PdCo alloy by the atmosphere for increasing electrocatalytic activity. <i>Sustainable Energy and Fuels</i> , 2020, 4, 380-386. | 2.5 | 13 |
| 488 | NbOx nano-nail with a Pt head embedded in carbon as a highly active and durable oxygen reduction catalyst. <i>Nano Energy</i> , 2020, 69, 104455. | 8.2 | 37 |
| 489 | Point-defect-optimized electron distribution for enhanced electrocatalysis: Towards the perfection of the imperfections. <i>Nano Today</i> , 2020, 31, 100833. | 6.2 | 52 |
| 490 | Atomic Platinum Anchored on Fe-N-C Material for High Performance Oxygen Reduction Reaction. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 165-168. | 1.0 | 4 |
| 491 | Tuning Pt-skinned PtAg nanotubes in nanoscales to efficiently modify electronic structure for boosting performance of methanol electrooxidation. <i>Applied Catalysis B: Environmental</i> , 2020, 265, 118606. | 10.8 | 83 |
| 492 | Structural Regulation with Atomic-Level Precision: From Single-Atomic Site to Diatomic and Atomic Interface Catalysis. <i>Matter</i> , 2020, 2, 78-110. | 5.0 | 221 |
| 493 | Au-Decorated CoOOH Nanoplate Hierarchical Hollow Structure for Plasmon-Enhanced Electrocatalytic Water Oxidation. <i>ACS Applied Energy Materials</i> , 2020, 3, 943-950. | 2.5 | 16 |
| 494 | Template-Preparation of Hollow PtNi Nanostrings as a Bifunctional Electrocatalyst for the Hydrogen Evolution and Oxygen Reduction Reactions. <i>Journal of Nanoscience and Nanotechnology</i> , 2020, 20, 1215-1223. | 0.9 | 4 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 495 | Low-loading Pt nanoparticles embedded on Ni, N-doped carbon as superior electrocatalysts for oxygen reduction. <i>Catalysis Science and Technology</i> , 2020, 10, 65-69. | 2.1 | 23 |
| 496 | P-doped 3D graphene network supporting uniformly vertical MoS ₂ nanosheets for enhanced hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 4043-4053. | 3.8 | 22 |
| 497 | Well-Defined Materials for Heterogeneous Catalysis: From Nanoparticles to Isolated Single-Atom Sites. <i>Chemical Reviews</i> , 2020, 120, 623-682. | 23.0 | 794 |
| 498 | Origin of High Activity and Durability of Twisty Nanowire Alloy Catalysts under Oxygen Reduction and Fuel Cell Operating Conditions. <i>Journal of the American Chemical Society</i> , 2020, 142, 1287-1299. | 6.6 | 102 |
| 499 | Boron-Induced Electronic Structure Reformation of CoP Nanoparticles Drives Enhanced pH-Universal Hydrogen Evolution. <i>Angewandte Chemie</i> , 2020, 132, 4183-4189. | 1.6 | 23 |
| 500 | Boron-Induced Electronic Structure Reformation of CoP Nanoparticles Drives Enhanced pH-Universal Hydrogen Evolution. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 4154-4160. | 7.2 | 221 |
| 501 | Confined growth of porous nitrogen-doped cobalt oxide nanoarrays as bifunctional oxygen electrocatalysts for rechargeable zinc-air batteries. <i>Energy Storage Materials</i> , 2020, 26, 157-164. | 9.5 | 79 |
| 502 | Disclosing Pt-Bimetallic Alloy Nanoparticle Surface Lattice Distortion with Electrochemical Probes. <i>ACS Energy Letters</i> , 2020, 5, 162-169. | 8.8 | 35 |
| 503 | Interfacial Engineering of W ₂ N/WC Heterostructures Derived from Solid-State Synthesis: A Highly Efficient Trifunctional Electrocatalyst for ORR, OER, and HER. <i>Advanced Materials</i> , 2020, 32, e1905679. | 11.1 | 380 |
| 504 | Antiperovskite Intermetallic Nanoparticles for Enhanced Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 1871-1877. | 7.2 | 31 |
| 505 | Inactive step-edge Pt atoms boost oxygen reduction reaction by activating adsorbed hydrogen atoms. <i>Applied Surface Science</i> , 2020, 504, 144434. | 3.1 | 6 |
| 506 | A centimeter scale self-standing two-dimensional ultra-thin mesoporous platinum nanosheet. <i>Materials Horizons</i> , 2020, 7, 489-494. | 6.4 | 19 |
| 507 | Evidence for interfacial geometric interactions at metal-support interfaces and their influence on the electroactivity and stability of Pt nanoparticles. <i>Journal of Materials Chemistry A</i> , 2020, 8, 1368-1377. | 5.2 | 25 |
| 508 | Zirconium nitride catalysts surpass platinum for oxygen reduction. <i>Nature Materials</i> , 2020, 19, 282-286. | 13.3 | 293 |
| 509 | Hollow PtCu octahedral nanoalloys: Efficient bifunctional electrocatalysts towards oxygen reduction reaction and methanol oxidation reaction by regulating near-surface composition. <i>Journal of Colloid and Interface Science</i> , 2020, 562, 244-251. | 5.0 | 49 |
| 510 | Facet-controlled Pt-Ir nanocrystals with substantially enhanced activity and durability towards oxygen reduction. <i>Materials Today</i> , 2020, 35, 69-77. | 8.3 | 45 |
| 511 | Visualization Analysis of Pt and Co Species in Degraded Pt ₃ Co/C Electrocatalyst Layers of a Polymer Electrolyte Fuel Cell Using a Same-View Nano-XAFS/STEM-EDS Combination Technique. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 2299-2312. | 4.0 | 8 |
| 512 | Rapid synthesis of highly active Pt/C catalysts with various metal loadings from single batch platinum colloid. <i>Journal of Energy Chemistry</i> , 2020, 47, 138-145. | 7.1 | 20 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 513 | Porous Strained Pt Nanostructured Thin-Film Electrocatalysts via Dealloying for PEM Fuel Cells. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901326. | 1.9 | 19 |
| 514 | Layered Metal Hydroxides and Their Derivatives: Controllable Synthesis, Chemical Exfoliation, and Electrocatalytic Applications. <i>Advanced Energy Materials</i> , 2020, 10, 1902535. | 10.2 | 90 |
| 515 | Strain Effect in Palladium Nanostructures as Nanozymes. <i>Nano Letters</i> , 2020, 20, 272-277. | 4.5 | 85 |
| 516 | Toward Promising Cathode Catalysts for Nonlithium Metal-Air Oxygen Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 1901997. | 10.2 | 102 |
| 517 | Mono-disperse PdO nanoparticles prepared via microwave-assisted thermo-hydrolyzation with unexpectedly high activity for formic acid oxidation. <i>Electrochimica Acta</i> , 2020, 329, 135166. | 2.6 | 11 |
| 518 | CoO nanorods/C as a high performance cathode catalyst in direct borohydride fuel cell. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153065. | 2.8 | 15 |
| 519 | Fishbone-like platinum-nickel nanowires as an efficient electrocatalyst for methanol oxidation. <i>Nano Research</i> , 2020, 13, 67-71. | 5.8 | 17 |
| 520 | Antiperovskite Intermetallic Nanoparticles for Enhanced Oxygen Reduction. <i>Angewandte Chemie</i> , 2020, 132, 1887-1893. | 1.6 | 4 |
| 521 | 3D Carbon Materials for Efficient Oxygen and Hydrogen Electrocatalysis. <i>Advanced Energy Materials</i> , 2020, 10, 1902494. | 10.2 | 97 |
| 522 | Shape Control of Monodispersed Sub-5 nm Pd Tetrahedrons and Lacinate Pd Nanourchins by Maneuvering the Dispersed State of Additives for Boosting ORR Performance. <i>Small</i> , 2020, 16, e1906026. | 5.2 | 36 |
| 523 | Perfluoro-Functionalized Conducting Polymers Enhance Electrocatalytic Oxygen Reduction. <i>ACS Applied Energy Materials</i> , 2020, 3, 1171-1180. | 2.5 | 2 |
| 524 | Local structure engineering for active sites in fuel cell electrocatalysts. <i>Science China Chemistry</i> , 2020, 63, 1543-1556. | 4.2 | 11 |
| 525 | Light-switchable catalytic activity of Cu for oxygen reduction reaction. <i>Frontiers of Materials Science</i> , 2020, 14, 481-487. | 1.1 | 1 |
| 526 | Synergetic Structural Transformation of Pt Electrocatalyst into Advanced 3D Architectures for Hydrogen Fuel Cells. <i>Advanced Materials</i> , 2020, 32, e2002210. | 11.1 | 33 |
| 527 | Beyond Extended Surfaces: Understanding the Oxygen Reduction Reaction on Nanocatalysts. <i>Journal of the American Chemical Society</i> , 2020, 142, 17812-17827. | 6.6 | 134 |
| 528 | Synthesis of S-doped AuPbPt alloy nanowire-networks as superior catalysts towards the ORR and HER. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23906-23918. | 5.2 | 32 |
| 529 | X-ray Absorption Spectroscopy Investigation of Platinum-Gadolinium Thin Films with Different Stoichiometry for the Oxygen Reduction Reaction. <i>Catalysts</i> , 2020, 10, 978. | 1.6 | 2 |
| 530 | Integrating nanostructured Pt-based electrocatalysts in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2020, 478, 228516. | 4.0 | 44 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 531 | PtMn/PtCo alloy nanofascicles: robust electrocatalysts for electrocatalytic hydrogen evolution reaction under both acidic and alkaline conditions. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 4377-4386. | 3.0 | 25 |
| 532 | New Quantum Mechanics Based Methods for Multiscale Simulations with Applications to Reaction Mechanisms for Electrocatalysis. <i>Topics in Catalysis</i> , 2020, 63, 1658-1666. | 1.3 | 1 |
| 533 | Ordering Nanostructures Enhances Electrocatalytic Reactions. <i>Trends in Chemistry</i> , 2020, 2, 888-897. | 4.4 | 10 |
| 534 | Eliminating dissolution of platinum-based electrocatalysts at the atomic scale. <i>Nature Materials</i> , 2020, 19, 1207-1214. | 13.3 | 127 |
| 535 | Size dependent oxygen reduction and methanol oxidation reactions: catalytic activities of PtCu octahedral nanocrystals. <i>Catalysis Science and Technology</i> , 2020, 10, 5501-5512. | 2.1 | 18 |
| 536 | Highly durable fuel cell catalysts using crosslinkable block copolymer-based carbon supports with ultralow Pt loadings. <i>Energy and Environmental Science</i> , 2020, 13, 4921-4929. | 15.6 | 61 |
| 537 | One-pot synthesis of three-dimensional Pt nanodendrites with enhanced methanol oxidation reaction and oxygen reduction reaction activities. <i>Nanotechnology</i> , 2020, 31, 435403. | 1.3 | 6 |
| 538 | Building Practical Descriptors for Defect Engineering of Electrocatalytic Materials. <i>ACS Catalysis</i> , 2020, 10, 9046-9056. | 5.5 | 30 |
| 539 | Single-Atom Vacancy Defect to Trigger High-Efficiency Hydrogen Evolution of MoS ₂ . <i>Journal of the American Chemical Society</i> , 2020, 142, 4298-4308. | 6.6 | 585 |
| 540 | Pyrolysis of Iron(III) porphyrin coated Pt/C toward oxygen reduction reaction in acidic medium. <i>Progress in Natural Science: Materials International</i> , 2020, 30, 832-838. | 1.8 | 5 |
| 541 | Identification of the Electronic and Structural Dynamics of Catalytic Centers in Single-Fe-Atom Material. <i>CheM</i> , 2020, 6, 3440-3454. | 5.8 | 231 |
| 542 | Creation of a Highly Active Pt/Pd/C Core-Shell-Structured Catalyst by Synergistic Combination of Intrinsically High Activity and Surface Decoration with Melamine or Tetra-(<i>tert</i> -butyl)-tetraazaporphyrin. <i>ACS Catalysis</i> , 2020, 10, 14567-14580. | 5.5 | 22 |
| 543 | Dynamic Core-Shell and Alloy Structures of Multimetallic Nanomaterials and Their Catalytic Synergies. <i>Accounts of Chemical Research</i> , 2020, 53, 2913-2924. | 7.6 | 79 |
| 544 | Enhanced Oxygen Reduction Catalysis of Carbon Nanohybrids from Nitrogen-Rich Edges. <i>Langmuir</i> , 2020, 36, 13752-13758. | 1.6 | 5 |
| 545 | Continuous Surface Strain Tuning for NiFe-Layered Double Hydroxides Using a Multi-inlet Vortex Mixer. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 19897-19906. | 1.8 | 0 |
| 546 | Electricity Generation from Ammonia in Landfill Leachate by an Alkaline Membrane Fuel Cell Based on Precious-Metal-Free Electrodes. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12817-12824. | 3.2 | 20 |
| 547 | Autogenous growth of the hierarchical V-doped NiFe layer double metal hydroxide electrodes for an enhanced overall water splitting. <i>Dalton Transactions</i> , 2020, 49, 11217-11225. | 1.6 | 26 |
| 548 | Addressing the sensitivity of signals from solid/liquid ambient pressure XPS (APXPS) measurement. <i>Journal of Chemical Physics</i> , 2020, 153, 044709. | 1.2 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 549 | Space-confined catalyst design toward ultrafine Pt nanoparticles with enhanced oxygen reduction activity and durability. <i>Journal of Power Sources</i> , 2020, 473, 228607. | 4.0 | 23 |
| 550 | A computational evaluation of MoS ₂ -based materials for the electrocatalytic oxygen reduction reaction. <i>New Journal of Chemistry</i> , 2020, 44, 14189-14197. | 1.4 | 14 |
| 551 | Enhancement of oxygen reduction reaction activity by grain boundaries in platinum nanostructures. <i>Nano Research</i> , 2020, 13, 3310-3314. | 5.8 | 17 |
| 552 | Reconsidering the Benchmarking Evaluation of Catalytic Activity in Oxygen Reduction Reaction. <i>IScience</i> , 2020, 23, 101532. | 1.9 | 42 |
| 553 | Weak Bonds Joint Effects Catalyze the Cleavage of Strong C-C Bond of Lignin-Inspired Compounds and Lignin in Air by Ionic Liquids. <i>ChemSusChem</i> , 2020, 13, 5945-5953. | 3.6 | 7 |
| 554 | Anisotropic Strain Tuning of L ₁ Ternary Nanoparticles for Oxygen Reduction. <i>Journal of the American Chemical Society</i> , 2020, 142, 19209-19216. | 6.6 | 76 |
| 555 | Nanoporous materials for proton exchange membrane fuel cell applications. , 2020, , 441-476. | | 1 |
| 556 | 2D hydrogenated boride as a reductant and stabilizer for <i>in situ</i> synthesis of ultrafine and surfactant-free carbon supported noble metal electrocatalysts with enhanced activity and stability. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18856-18862. | 5.2 | 11 |
| 557 | A Review of Carbon-Supported Nonprecious Metals as Energy-Related Electrocatalysts. <i>Small Methods</i> , 2020, 4, 2000621. | 4.6 | 76 |
| 558 | Comparative Study of PtNi Nanowire Array Electrodes toward Oxygen Reduction Reaction by Half-Cell Measurement and PEMFC Test. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 42832-42841. | 4.0 | 35 |
| 559 | Microenvironment modulation of single-atom catalysts and their roles in electrochemical energy conversion. <i>Science Advances</i> , 2020, 6, . | 4.7 | 214 |
| 560 | Phase transformation of PiMoCo and their electrocatalytic activity for oxygen evolution reaction. <i>CrystEngComm</i> , 2020, 22, 6003-6009. | 1.3 | 1 |
| 561 | A fundamental look at electrocatalytic sulfur reduction reaction. <i>Nature Catalysis</i> , 2020, 3, 762-770. | 16.1 | 455 |
| 562 | Intermetallic PtCu Nanoframes as Efficient Oxygen Reduction Electrocatalysts. <i>Nano Letters</i> , 2020, 20, 7413-7421. | 4.5 | 109 |
| 563 | Nitrogen-doped vertical graphene nanosheets by high-flux plasma enhanced chemical vapor deposition as efficient oxygen reduction catalysts for Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23248-23256. | 5.2 | 30 |
| 564 | Selective Surface Reconstruction of a Defective Iridium-Based Catalyst for High-Efficiency Water Splitting. <i>Advanced Functional Materials</i> , 2020, 30, 2004375. | 7.8 | 85 |
| 565 | Pt ₂ nanoparticles on N,P doped carbon through a self-conversion process to core-shell Pt/Pt ₂ as an efficient and robust ORR catalyst. <i>Journal of Materials Chemistry A</i> , 2020, 8, 20463-20473. | 5.2 | 36 |
| 566 | Facile Room-Temperature Synthesis of a Highly Active and Robust Single-Crystal Pt Multipod Catalyst for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 49510-49518. | 4.0 | 17 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 567 | Single-Atom In-Doped Subnanometer Pt Nanowires for Simultaneous Hydrogen Generation and Biomass Upgrading. <i>Advanced Functional Materials</i> , 2020, 30, 2004310. | 7.8 | 77 |
| 568 | Ultrathin gold nanowires to enhance radiation therapy. <i>Journal of Nanobiotechnology</i> , 2020, 18, 131. | 4.2 | 15 |
| 569 | Carbon-Free Platinum-Iron Nanonetworks with Chemically Ordered Structures as Durable Oxygen Reduction Electrocatalysts for Polymer Electrolyte Fuel Cells. <i>ACS Applied Nano Materials</i> , 2020, 3, 9912-9923. | 2.4 | 11 |
| 570 | Heteroatom-doped carbon interpenetrating networks: a signpost to achieve the best performance of non-PGM catalysts for fuel cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18767-18777. | 5.2 | 14 |
| 571 | Atomic-scaled surface engineering Ni-Pt nanoalloys towards enhanced catalytic efficiency for methanol oxidation reaction. <i>Nano Research</i> , 2020, 13, 3088-3097. | 5.8 | 50 |
| 572 | Biomass-derived nonprecious metal catalysts for oxygen reduction reaction: The demand-oriented engineering of active sites and structures. , 2020, 2, 561-581. | | 83 |
| 573 | Electrocatalytic behaviour of conducting poly o-toluidine at O ₂ and N ₂ atmospheric condition. <i>Materials Today: Proceedings</i> , 2020, , . | 0.9 | 0 |
| 574 | Nanomanufacturing of Non-Noble Amorphous Alloys for Electrocatalysis. <i>ACS Applied Energy Materials</i> , 2020, 3, 12099-12107. | 2.5 | 14 |
| 575 | Phase Segregated Pt-SnO ₂ /C Nanohybrids for Highly Efficient Oxygen Reduction Electrocatalysis. <i>Small</i> , 2020, 16, e2005048. | 5.2 | 32 |
| 576 | High-Index-Facet- and High-Surface-Energy Nanocrystals of Metals and Metal Oxides as Highly Efficient Catalysts. <i>Joule</i> , 2020, 4, 2562-2598. | 11.7 | 136 |
| 577 | Atomic-Level Manipulations in Oxides and Alloys for Electrocatalysis of Oxygen Evolution and Reduction. <i>ACS Nano</i> , 2020, 14, 14323-14354. | 7.3 | 37 |
| 578 | Engineering the surface active sites of actinia-like hierarchical Fe ₃ O ₄ /Co ₃ O ₄ nanoheterojunction for efficient oxygen reduction reaction. <i>Dyes and Pigments</i> , 2020, 180, 108439. | 2.0 | 7 |
| 579 | Ultrathin PtCo nanorod assemblies with self-optimized surface for oxygen reduction reaction. <i>Journal of Electroanalytical Chemistry</i> , 2020, 870, 114194. | 1.9 | 19 |
| 580 | Particle Size Effect on Platinum Dissolution: Considerations for Accelerated Stability Testing of Fuel Cell Catalysts. <i>ACS Catalysis</i> , 2020, 10, 6281-6290. | 5.5 | 65 |
| 581 | Controllable synthesis of Fe-N ₄ species for acidic oxygen reduction. , 2020, 2, 452-460. | | 50 |
| 582 | Mesoporous N-doped carbon nanofibers with surface nanocavities for enhanced catalytic activity toward oxygen reduction reaction. <i>Journal of Materials Science</i> , 2020, 55, 11177-11187. | 1.7 | 6 |
| 583 | Recent advances in Co-based electrocatalysts for the oxygen reduction reaction. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3848-3870. | 2.5 | 38 |
| 584 | Visualization and understanding of the degradation behaviors of a PEFC Pt/C cathode electrocatalyst using a multi-analysis system combining time-resolved quick XAFS, three-dimensional XAFS-CT, and same-view nano-XAFS/STEM-EDS techniques. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18919-18931. | 1.3 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 585 | A solar and thermal multi-sensing microfiber supercapacitor with intelligent self-conditioned capacitance and body temperature monitoring. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11695-11711. | 5.2 | 23 |
| 586 | PdPb bimetallic nanowires as electrocatalysts for enhanced ethanol electrooxidation. <i>Science China Materials</i> , 2020, 63, 2040-2049. | 3.5 | 34 |
| 587 | Ionic Liquid Additives for the Mitigation of Nafion Specific Adsorption on Platinum. <i>ACS Catalysis</i> , 2020, 10, 7691-7698. | 5.5 | 48 |
| 588 | Metal-Nitrogen-Doped Carbon Materials as Highly Efficient Catalysts: Progress and Rational Design. <i>Advanced Science</i> , 2020, 7, 2001069. | 5.6 | 228 |
| 589 | Temperature Effects in Polymer Electrolyte Membrane Fuel Cells. <i>ChemElectroChem</i> , 2020, 7, 3545-3568. | 1.7 | 34 |
| 590 | Promoting methanol-oxidation-reaction by loading PtNi nano-catalysts on natural graphitic-nano-carbon. <i>Electrochimica Acta</i> , 2020, 353, 136542. | 2.6 | 37 |
| 591 | Electrocatalytic Oxygen Reduction at Multinuclear Metal Active Sites Inspired by Metalloenzymes. <i>E-Journal of Surface Science and Nanotechnology</i> , 2020, 18, 81-93. | 0.1 | 10 |
| 592 | Synergistic heat treatment derived hollow-mesoporous-microporous Fe-N-C-SHT electrocatalyst for oxygen reduction reaction. <i>Microporous and Mesoporous Materials</i> , 2020, 305, 110382. | 2.2 | 17 |
| 593 | Stable, Active, and Methanol-Tolerant PGM-Free Surfaces in an Acidic Medium: Electron Tunneling at Play in Pt/FeNC Hybrid Catalysts for Direct Methanol Fuel Cell Cathodes. <i>ACS Catalysis</i> , 2020, 10, 7475-7485. | 5.5 | 28 |
| 594 | Construction of efficient Mn-N-C oxygen reduction electrocatalyst from a Mn(II)-based MOF with N-rich organic linker. <i>Inorganic Chemistry Communication</i> , 2020, 118, 107982. | 1.8 | 13 |
| 595 | Boosting the oxygen reduction reaction of a nonprecious metal Fe-Nx/C electrocatalyst by integrating tube-terminated edges into the basal plane of Fe- and N-codoped carbon bubbles. <i>Journal of Alloys and Compounds</i> , 2020, 843, 155809. | 2.8 | 7 |
| 596 | Unconventional Oxygen Reduction Reaction Mechanism and Scaling Relation on Single-Atom Catalysts. <i>ACS Catalysis</i> , 2020, 10, 4313-4318. | 5.5 | 119 |
| 597 | Strategies for Engineering High-Performance PGM-Free Catalysts toward Oxygen Reduction and Evolution Reactions. <i>Small Methods</i> , 2020, 4, 2000016. | 4.6 | 70 |
| 598 | PGM-Free Fe/N/C and Ultralow Loading Pt/C Hybrid Cathode Catalysts with Enhanced Stability and Activity in PEM Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 13739-13749. | 4.0 | 36 |
| 599 | A general strategy for bimetallic Pt-based nano-branched structures as highly active and stable oxygen reduction and methanol oxidation bifunctional catalysts. <i>Nano Research</i> , 2020, 13, 638-645. | 5.8 | 70 |
| 600 | Graphene-Supported Single Nickel Atom Catalyst for Highly Selective and Efficient Hydrogen Peroxide Production. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 17519-17527. | 4.0 | 99 |
| 601 | Electricity-powered artificial root nodule. <i>Nature Communications</i> , 2020, 11, 1505. | 5.8 | 19 |
| 602 | Ternary heterogeneous Pt-Ni-Au nanowires with enhanced activity and stability for PEMFCs. <i>Chemical Communications</i> , 2020, 56, 4276-4279. | 2.2 | 18 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 603 | Facile preparation of porous palladium nanocubes <i>via</i> a one-pot process induced by 1-hexadecyl-3-methyl imidazolium bromide for methanol electro-oxidation. <i>New Journal of Chemistry</i> , 2020, 44, 5556-5563. | 1.4 | 1 |
| 604 | A general carbon monoxide-assisted strategy for synthesizing one-nanometer-thick Pt-based nanowires as effective electrocatalysts. <i>Journal of Colloid and Interface Science</i> , 2020, 572, 170-178. | 5.0 | 10 |
| 605 | Practical Deep-Learning Representation for Fast Heterogeneous Catalyst Screening. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3185-3191. | 2.1 | 63 |
| 606 | Degradation of the transition metal@Pt core-shell nanoparticle catalyst: a DFT study. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 9467-9476. | 1.3 | 7 |
| 607 | Defect Engineering for Fuel Cell Electrocatalysts. <i>Advanced Materials</i> , 2020, 32, e1907879. | 11.1 | 338 |
| 608 | Gradient-Concentration Design of Stable Core-Shell Nanostructure for Acidic Oxygen Reduction Electrocatalysis. <i>Advanced Materials</i> , 2020, 32, e2003493. | 11.1 | 79 |
| 609 | N-doped porous carbon nanofibers fabricated by bacterial cellulose-directed templating growth of MOF crystals for efficient oxygen reduction reaction and sodium-ion storage. <i>Carbon</i> , 2020, 168, 12-21. | 5.4 | 63 |
| 610 | Cu dopant triggering remarkable enhancement in activity and durability of Fe-N-C electrocatalysts toward oxygen reduction. <i>Journal of Electroanalytical Chemistry</i> , 2020, 873, 114389. | 1.9 | 13 |
| 611 | Heterophase fcc-2H-fcc gold nanorods. <i>Nature Communications</i> , 2020, 11, 3293. | 5.8 | 92 |
| 612 | Universal Approach to Fabricating Graphene-Supported Single-Atom Catalysts from Doped ZnO Solid Solutions. <i>ACS Central Science</i> , 2020, 6, 1431-1440. | 5.3 | 69 |
| 613 | Direct Synthesis of Ultrathin Pt Nanowire Arrays as Catalysts for Methanol Oxidation. <i>Small</i> , 2020, 16, e2001135. | 5.2 | 28 |
| 614 | The Trans Axial Ligand Effect on Oxygen Reduction. Immobilization Method May Weaken Catalyst Design for Electrocatalytic Performance. <i>Journal of Physical Chemistry C</i> , 2020, 124, 16324-16331. | 1.5 | 29 |
| 615 | A post-synthesis surface reconstructed carbon aerogel as an enhanced oxygen reduction reaction catalyst for zinc-air batteries. <i>Catalysis Science and Technology</i> , 2020, 10, 5288-5297. | 2.1 | 8 |
| 616 | The Importance of Temperature and Potential Window in Stability Evaluation of Supported Pt-Based Oxygen Reduction Reaction Electrocatalysts in Thin Film Rotating Disc Electrode Setup. <i>Journal of the Electrochemical Society</i> , 2020, 167, 114506. | 1.3 | 22 |
| 617 | Trimetallic Au@PdPb nanowires for oxygen reduction reaction. <i>Nano Research</i> , 2020, 13, 2691-2696. | 5.8 | 39 |
| 618 | The electric-dipole effect of Pt-Ni for enhanced catalytic dehydrogenation of ammonia borane. <i>Journal of Alloys and Compounds</i> , 2020, 844, 156253. | 2.8 | 14 |
| 619 | Nickel-cobalt bimetallic sulfide NiCo ₂ S ₄ nanostructures for a robust hydrogen evolution reaction in acidic media. <i>RSC Advances</i> , 2020, 10, 22196-22203. | 1.7 | 14 |
| 620 | High entropy alloy electrocatalysts: a critical assessment of fabrication and performance. <i>Journal of Materials Chemistry A</i> , 2020, 8, 14844-14862. | 5.2 | 108 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 621 | Catalytic Nanoframes and Beyond. <i>Advanced Materials</i> , 2020, 32, e2001345. | 11.1 | 57 |
| 622 | Strain engineering for Janus palladium-gold bimetallic nanoparticles: Enhanced electrocatalytic performance for oxygen reduction reaction and zinc-air battery. <i>Chemical Engineering Journal</i> , 2020, 389, 124240. | 6.6 | 40 |
| 623 | Unveiling the size effect of Pt-on-Au nanostructures on CO and methanol electrooxidation by <i>in situ</i> electrochemical SERS. <i>Nanoscale</i> , 2020, 12, 5341-5346. | 2.8 | 18 |
| 624 | Structurally Modulated Graphitic Carbon Nanofiber and Heteroatom (N,F) Engineering toward Metal-Free ORR Electrocatalysts for Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 11438-11449. | 4.0 | 44 |
| 625 | Molecular Design of Single-Atom Catalysts for Oxygen Reduction Reaction. <i>Advanced Energy Materials</i> , 2020, 10, 1903815. | 10.2 | 295 |
| 626 | The role of Pt loading on reduced graphene oxide support in the polyol synthesis of catalysts for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 20594-20604. | 3.8 | 11 |
| 627 | Quatermetallic Pt-based ultrathin nanowires intensified by Rh enable highly active and robust electrocatalysts for methanol oxidation. <i>Nano Energy</i> , 2020, 71, 104623. | 8.2 | 64 |
| 628 | Morphology controlling of silver by plasma engineering for electrocatalytic carbon dioxide reduction. <i>Journal of Power Sources</i> , 2020, 453, 227846. | 4.0 | 22 |
| 629 | Turning main-group element magnesium into a highly active electrocatalyst for oxygen reduction reaction. <i>Nature Communications</i> , 2020, 11, 938. | 5.8 | 238 |
| 630 | Electrochemical Measurement of Intrinsic Oxygen Reduction Reaction Activity at High Current Densities as a Function of Particle Size for Pt ₄ Co/C (<i>in situ</i>) <i>Journal of Electroanalytical Chemistry</i> , 2020, 874, 46148. | 1.5 | 1 |
| 631 | Structural Screening and Design of Platinum Nanosamples for Oxygen Reduction. <i>ACS Catalysis</i> , 2020, 10, 3911-3920. | 5.5 | 26 |
| 632 | Bimetallic PtAu electrocatalysts for the oxygen reduction reaction: challenges and opportunities. <i>Dalton Transactions</i> , 2020, 49, 4189-4199. | 1.6 | 9 |
| 633 | <i>In situ</i> growth of free-standing perovskite hydroxide electrocatalysts for efficient overall water splitting. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5919-5926. | 5.2 | 21 |
| 634 | H ₂ -induced thermal treatment significantly influences the development of a high performance low-platinum core-shell PtNi/C alloyed oxygen reduction catalyst. <i>International Journal of Energy Research</i> , 2020, 44, 4773-4783. | 2.2 | 11 |
| 635 | Evolution of composition and structure of PtRh/C in the acidic methanol electrooxidation process. <i>Electrochemistry Communications</i> , 2020, 113, 106690. | 2.3 | 7 |
| 636 | Nanoporous high-entropy alloys with low Pt loadings for high-performance electrochemical oxygen reduction. <i>Journal of Catalysis</i> , 2020, 383, 164-171. | 3.1 | 125 |
| 637 | Etching high-Fe-content PtPdFe nanoparticles as efficient catalysts towards glycerol electrooxidation. <i>New Journal of Chemistry</i> , 2020, 44, 4604-4612. | 1.4 | 11 |
| 638 | Efficient synthesis of Pt-Co nanowires as cathode catalysts for proton exchange membrane fuel cells. <i>RSC Advances</i> , 2020, 10, 6287-6296. | 1.7 | 26 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 639 | High-Performance Pt-Co Nanoframes for Fuel-Cell Electrocatalysis. <i>Nano Letters</i> , 2020, 20, 1974-1979. | 4.5 | 150 |
| 640 | Spin Regulation on 2D Pd-Fe-Pt Nanomeshes Promotes Fuel Electrooxidations. <i>Nano Letters</i> , 2020, 20, 1967-1973. | 4.5 | 67 |
| 641 | Interlaced Pd-Ag nanowires rich in grain boundary defects for boosting oxygen reduction electrocatalysis. <i>Nanoscale</i> , 2020, 12, 5368-5373. | 2.8 | 35 |
| 642 | Advanced Electrocatalysts for the Oxygen Reduction Reaction in Energy Conversion Technologies. <i>Joule</i> , 2020, 4, 45-68. | 11.7 | 596 |
| 643 | Gallium Oxide Nanowire with Twinning Structure and Its Photoluminescence Property. <i>Journal of Nanoscience and Nanotechnology</i> , 2020, 20, 2395-2401. | 0.9 | 4 |
| 644 | Tailoring N-Coordination Environment by Ligand Competitive Thermolysis Strategy for Efficient Oxygen Reduction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 7270-7276. | 4.0 | 6 |
| 645 | Atomic-Level Construction of Tensile-Strained PdFe Alloy Surface toward Highly Efficient Oxygen Reduction Electrocatalysis. <i>Nano Letters</i> , 2020, 20, 1403-1409. | 4.5 | 89 |
| 646 | Atom-Ratio-Conducted Tailoring of PdAu Bimetallic Nanocrystals with Distinctive Shapes and Dimensions for Boosting the ORR Performance. <i>Chemistry - A European Journal</i> , 2020, 26, 4480-4488. | 1.7 | 6 |
| 647 | Lavender-Like Ga-Doped Pt ₃ Co Nanowires for Highly Stable and Active Electrocatalysis. <i>ACS Catalysis</i> , 2020, 10, 3018-3026. | 5.5 | 75 |
| 648 | Surface electron state engineering enhanced hydrogen evolution of hierarchical molybdenum disulfide in acidic and alkaline media. <i>Applied Catalysis B: Environmental</i> , 2020, 266, 118649. | 10.8 | 55 |
| 649 | Pt alloy oxygen-reduction electrocatalysts: Synthesis, structure, and property. <i>Chinese Journal of Catalysis</i> , 2020, 41, 739-755. | 6.9 | 84 |
| 650 | Fine-Tuning Intrinsic Strain in Penta-Twinned Pt-Cu-Mn Nanoframes Boosts Oxygen Reduction Catalysis. <i>Advanced Functional Materials</i> , 2020, 30, 1910107. | 7.8 | 108 |
| 651 | Pt-O bond as an active site superior to PtO in hydrogen evolution reaction. <i>Nature Communications</i> , 2020, 11, 490. | 5.8 | 184 |
| 652 | Synthesis of Ultrathin and Composition-Tunable PdPt Porous Nanowires with Enhanced Electrocatalytic Performance. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2901-2909. | 3.2 | 21 |
| 653 | 3D flower-like ZnFe-ZIF derived hierarchical Fe, N-Codoped carbon architecture for enhanced oxygen reduction in both alkaline and acidic media, and zinc-air battery performance. <i>Carbon</i> , 2020, 161, 502-509. | 5.4 | 66 |
| 654 | Applications of metal-organic framework-derived materials in fuel cells and metal-air batteries. <i>Coordination Chemistry Reviews</i> , 2020, 409, 213214. | 9.5 | 182 |
| 655 | Recent Advances on Metal Organic Framework-Derived Catalysts for Electrochemical Oxygen Reduction Reaction. <i>ACS Symposium Series</i> , 2020, , 231-278. | 0.5 | 6 |
| 656 | Porous carbon supported PtPd alloy nanoparticles derived from N-heterocyclic carbene bimetal complex as efficient bifunctional electrocatalysts. <i>Electrochimica Acta</i> , 2020, 337, 135855. | 2.6 | 15 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 657 | Mesoscopic analyses of the impact of morphology and operating conditions on the transport resistances in a proton-exchange-membrane fuel-cell catalyst layer. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3623-3639. | 2.5 | 12 |
| 658 | Facile synthesis of porous hollow Au nanoshells with enhanced catalytic properties towards reduction of p-nitrophenol. <i>Inorganic Chemistry Communication</i> , 2020, 116, 107896. | 1.8 | 8 |
| 659 | Enhancing Oxygen Reduction Activity of Pt-based Electrocatalysts: From Theoretical Mechanisms to Practical Methods. <i>Angewandte Chemie</i> , 2020, 132, 18490-18504. | 1.6 | 24 |
| 660 | Enhancing Oxygen Reduction Activity of Pt-based Electrocatalysts: From Theoretical Mechanisms to Practical Methods. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18334-18348. | 7.2 | 174 |
| 661 | Pt ₃ Ag alloy wavy nanowires as highly effective electrocatalysts for ethanol oxidation reaction. <i>Nano Research</i> , 2020, 13, 1472-1478. | 5.8 | 58 |
| 662 | Platinum-based anode catalyst systems for direct methanol fuel cells. , 2020, , 177-200. | | 1 |
| 663 | Hierarchical zeolite enveloping Pd-CeO ₂ nanowires: An efficient adsorption/catalysis bifunctional catalyst for low temperature propane total degradation. <i>Chemical Engineering Journal</i> , 2020, 393, 124717. | 6.6 | 62 |
| 664 | MXene (Ti ₃ C ₂ T _x) and Carbon Nanotube Hybrid-Supported Platinum Catalysts for the High-Performance Oxygen Reduction Reaction in PEMFC. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19539-19546. | 4.0 | 67 |
| 665 | Steam-Assisted Chemical Vapor Deposition of Zeolitic Imidazolate Framework. , 2020, 2, 485-491. | | 26 |
| 666 | Tailored Crafting of Core-Shell Cobalt-Hydroxides@Polyfluoroaniline Nanostructures with Strongly Coupled Interfaces and Improved Hydrophilicity to Enable Efficient Oxygen Evolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 6127-6133. | 3.2 | 12 |
| 667 | Feed gas exchange (startup/shutdown) effects on Pt/C cathode electrocatalysis and surface Pt-oxide behavior in polymer electrolyte fuel cells as revealed using in situ real-time XAFS and high-resolution STEM measurements. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 9424-9437. | 1.3 | 2 |
| 668 | Recent advances in nanostructured intermetallic electrocatalysts for renewable energy conversion reactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8195-8217. | 5.2 | 64 |
| 669 | Codoped Pt Nanowire Networks with Clean Surfaces for Enhanced Oxygen Reduction Reactions. <i>Chemistry - an Asian Journal</i> , 2020, 15, 1736-1742. | 1.7 | 9 |
| 670 | Insights in the Oxygen Reduction Reaction: From Metallic Electrocatalysts to Diporphyrins. <i>ACS Catalysis</i> , 2020, 10, 5979-5989. | 5.5 | 52 |
| 671 | Ultrafine Pt-Based Nanowires for Advanced Catalysis. <i>Advanced Functional Materials</i> , 2020, 30, 2000793. | 7.8 | 188 |
| 672 | Atomistic Explanation of the Dramatically Improved Oxygen Reduction Reaction of Jagged Platinum Nanowires, 50 Times Better than Pt. <i>Journal of the American Chemical Society</i> , 2020, 142, 8625-8632. | 6.6 | 55 |
| 673 | Fabrication and Applications of 3D Nanoarchitectures for Advanced Electrocatalysts and Sensors. <i>Advanced Materials</i> , 2020, 32, e1907500. | 11.1 | 17 |
| 674 | The Protection of C=O Bond of Pine Lignin in Different Organic Solvent Systems. <i>ChemistrySelect</i> , 2020, 5, 3850-3858. | 0.7 | 4 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 675 | Imprinting isolated single iron atoms onto mesoporous silica by templating with metallosurfactants. <i>Journal of Colloid and Interface Science</i> , 2020, 573, 193-203. | 5.0 | 17 |
| 676 | Promoting electrocatalytic methanol oxidation of platinum nanoparticles by cerium modification. <i>Nano Energy</i> , 2020, 73, 104784. | 8.2 | 54 |
| 677 | New PtMg Alloy with Durable Electrocatalytic Performance for Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cell. <i>ACS Energy Letters</i> , 2020, 5, 1601-1609. | 8.8 | 37 |
| 678 | Bonding-antibonding state transition induces multiple electron modulations toward oxygen reduction reaction electrocatalysis. <i>New Journal of Chemistry</i> , 2020, 44, 8191-8197. | 1.4 | 6 |
| 679 | Bionic Structural Design and Electrochemical Manufacture of WC/N-Doped Carbon Hybrids as Efficient ORR Catalyst. <i>Journal of the Electrochemical Society</i> , 2020, 167, 064502. | 1.3 | 9 |
| 680 | Low- and PGM-free Catalysts for Proton Exchange Membrane Fuel Cells: Stability Challenges and Material Solutions. <i>Advanced Materials</i> , 2021, 33, e1908232. | 11.1 | 201 |
| 681 | Recent advances in defect electrocatalysts: Preparation and characterization. <i>Journal of Energy Chemistry</i> , 2021, 53, 208-225. | 7.1 | 98 |
| 682 | Well-defined Nanostructures for Electrochemical Energy Conversion and Storage. <i>Advanced Energy Materials</i> , 2021, 11, 2001537. | 10.2 | 102 |
| 683 | Advanced Electrocatalysis for Energy and Environmental Sustainability via Water and Nitrogen Reactions. <i>Advanced Materials</i> , 2021, 33, e2000381. | 11.1 | 231 |
| 684 | <i>In Situ</i> / <i>Operando</i> Electrocatalyst Characterization by X-ray Absorption Spectroscopy. <i>Chemical Reviews</i> , 2021, 121, 882-961. | 23.0 | 358 |
| 685 | Strain loading dependent optoelectronic characteristics in CdS micro/nanowires. <i>Journal of Alloys and Compounds</i> , 2021, 857, 157489. | 2.8 | 2 |
| 686 | Artificial Intelligence and QM/MM with a Polarizable Reactive Force Field for Next-Generation Electrocatalysts. <i>Matter</i> , 2021, 4, 195-216. | 5.0 | 29 |
| 687 | High-quality and deeply excavated PtPdNi nanocubes as efficient catalysts toward oxygen reduction reaction. <i>Chinese Journal of Catalysis</i> , 2021, 42, 772-780. | 6.9 | 6 |
| 688 | Non-aqueous solution synthesis of Pt-based nanostructures for fuel cell catalysts. <i>Materials Today Energy</i> , 2021, 19, 100616. | 2.5 | 10 |
| 689 | A Simple Route to the Synthesis of Pt Nanobars and the Mechanistic Understanding of Symmetry Reduction. <i>Chemistry - A European Journal</i> , 2021, 27, 2760-2766. | 1.7 | 5 |
| 690 | Nanocatalyst Design for Long-term Operation of Proton/Anion Exchange Membrane Water Electrolysis. <i>Advanced Energy Materials</i> , 2021, 11, 2003188. | 10.2 | 89 |
| 691 | Coplanar Pt/C Nanomeshes with Ultrastable Oxygen Reduction Performance in Fuel Cells. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 6533-6538. | 7.2 | 73 |
| 692 | Synthesis of hierarchical interconnected graphene oxide for enhanced oxygen reduction. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 610, 125719. | 2.3 | 4 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 693 | Advanced Oxygen Electrocatalysis in Energy Conversion and Storage. <i>Advanced Functional Materials</i> , 2021, 31, 2007602. | 7.8 | 86 |
| 694 | Surface-structure tailoring of ultrafine PtCu nanowires for enhanced electrooxidation of alcohols. <i>Science China Materials</i> , 2021, 64, 601-610. | 3.5 | 17 |
| 695 | Hierarchical defective palladium-silver alloy nanosheets for ethanol electrooxidation. <i>Journal of Colloid and Interface Science</i> , 2021, 586, 200-207. | 5.0 | 41 |
| 696 | Controllable Fabrication of $\text{Co}_3\text{O}_4/\text{Mn}_x\text{O}_4$ with Tunable External $\text{Co}^{3+}/\text{Co}^{2+}$ Ratio for Promoted Oxygen Reduction Reaction. <i>Catalysis Letters</i> , 2021, 151, 1810-1820. | 1.4 | 8 |
| 697 | Two-Dimensional Transition Metal Oxides and Chalcogenides for Advanced Photocatalysis: Progress, Challenges, and Opportunities. <i>Solar Rrl</i> , 2021, 5, 2000403. | 3.1 | 28 |
| 698 | Noble-Metal Based Random Alloy and Intermetallic Nanocrystals: Syntheses and Applications. <i>Chemical Reviews</i> , 2021, 121, 736-795. | 23.0 | 269 |
| 699 | Applications of Atomically Dispersed Oxygen Reduction Catalysts in Fuel Cells and Zinc-Air Batteries. <i>Energy and Environmental Materials</i> , 2021, 4, 307-335. | 7.3 | 58 |
| 700 | Self-supported Pt-CoO networks combining high specific activity with high surface area for oxygen reduction. <i>Nature Materials</i> , 2021, 20, 208-213. | 13.3 | 139 |
| 701 | Advanced materials and technologies for supercapacitors used in energy conversion and storage: a review. <i>Environmental Chemistry Letters</i> , 2021, 19, 375-439. | 8.3 | 255 |
| 702 | Recent advances in Pt-based electrocatalysts for PEMFCs. <i>RSC Advances</i> , 2021, 11, 13316-13328. | 1.7 | 36 |
| 703 | Rationally constructing nitrogen-fluorine heteroatoms on porous carbon derived from pomegranate fruit peel waste towards an efficient oxygen reduction catalyst for polymer electrolyte membrane fuel cells. <i>Sustainable Energy and Fuels</i> , 2021, 5, 886-899. | 2.5 | 14 |
| 704 | Platinum Catalysts on Niobium Diboride Microparticles for Oxygen Reduction Reaction. <i>Electrocatalysis</i> , 2021, 12, 188-198. | 1.5 | 4 |
| 705 | Novel carbon structures as highly stable supports for electrocatalysts in acid media: regulating the oxygen functionalization behavior of carbon. <i>New Journal of Chemistry</i> , 2021, 45, 10802-10809. | 1.4 | 2 |
| 706 | Recent Advances in Electrode Design Based on One-Dimensional Nanostructure Arrays for Proton Exchange Membrane Fuel Cell Applications. <i>Engineering</i> , 2021, 7, 33-49. | 3.2 | 37 |
| 707 | Nanoporous multimetallic Ir alloys as efficient and stable electrocatalysts for acidic oxygen evolution reactions. <i>Journal of Catalysis</i> , 2021, 393, 303-312. | 3.1 | 17 |
| 708 | Atomically dispersed single iron sites for promoting Pt and Pt ₃ Co fuel cell catalysts: performance and durability improvements. <i>Energy and Environmental Science</i> , 2021, 14, 4948-4960. | 15.6 | 168 |
| 709 | Graphene-quantum-dot-composited platinum nanotube arrays as a dual efficient electrocatalyst for the oxygen reduction reaction and methanol electro-oxidation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9609-9615. | 5.2 | 36 |
| 710 | Magnetron sputtering enabled sustainable synthesis of nanomaterials for energy electrocatalysis. <i>Green Chemistry</i> , 2021, 23, 2834-2867. | 4.6 | 96 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 711 | Self-reconstruction mediates isolated Pt tailored nanoframes for highly efficient catalysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 22501-22508. | 5.2 | 5 |
| 712 | Nanoscale Pt ₅ Ni ₃₆ design and synthesis for efficient oxygen reduction reaction in proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21051-21056. | 5.2 | 12 |
| 713 | Enhanced performance and degradation of wastewater in microbial fuel cells using titanium dioxide nanowire photocathodes. <i>RSC Advances</i> , 2021, 11, 2242-2252. | 1.7 | 16 |
| 714 | Convolutional neural networks for high throughput screening of catalyst layer inks for polymer electrolyte fuel cells. <i>RSC Advances</i> , 2021, 11, 32126-32134. | 1.7 | 7 |
| 715 | Effect of an external electric field, aqueous solution and specific adsorption on segregation of Pt _{ML} /M _{ML} /Pt(111) (M = Cu, Pd, Au): a DFT study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1584-1589. | 1.3 | 5 |
| 716 | Structure-intensified PtCoRh spiral nanowires as highly active and durable electrocatalysts for methanol oxidation. <i>Nanoscale</i> , 2021, 13, 2632-2638. | 2.8 | 12 |
| 717 | Ultrafine Pt-Ni nanoparticles in hollow porous carbon spheres for remarkable oxygen reduction reaction catalysis. <i>Dalton Transactions</i> , 2021, 50, 6811-6822. | 1.6 | 10 |
| 718 | Cu-incorporated PtBi intermetallic nanofiber bundles enhance alcohol oxidation electrocatalysis with high CO tolerance. <i>Journal of Materials Chemistry A</i> , 2021, 9, 20676-20684. | 5.2 | 31 |
| 719 | Surface-tailored PtPdCu ultrathin nanowires as advanced electrocatalysts for ethanol oxidation and oxygen reduction reaction in direct ethanol fuel cell. <i>Journal of Energy Chemistry</i> , 2021, 52, 251-261. | 7.1 | 53 |
| 720 | Advanced Platinum-Based Oxygen Reduction Electrocatalysts for Fuel Cells. <i>Accounts of Chemical Research</i> , 2021, 54, 311-322. | 7.6 | 237 |
| 721 | Challenges in applying highly active Pt-based nanostructured catalysts for oxygen reduction reactions to fuel cell vehicles. <i>Nature Nanotechnology</i> , 2021, 16, 140-147. | 15.6 | 424 |
| 722 | Au integrated AgPt nanorods for the oxygen reduction reaction in proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 5578-5587. | 5.2 | 14 |
| 723 | PdP/WO ₃ multi-functional catalyst with high activity and stability for direct liquid fuel cells (DLFCs). <i>Sustainable Energy and Fuels</i> , 2021, 5, 4758-4770. | 2.5 | 5 |
| 724 | Active site engineering of atomically dispersed transition metal-heteroatom-carbon catalysts for oxygen reduction. <i>Chemical Communications</i> , 2021, 57, 7869-7881. | 2.2 | 37 |
| 725 | Modulating the Multiple Intrinsic Properties of Platinum-Iron Alloy Nanowires towards Enhancing Collaborative Electrocatalysis. <i>Materials Chemistry Frontiers</i> , 0, , . | 3.2 | 6 |
| 726 | Oxygen Reduction Electrocatalysts toward Practical Fuel Cells: Progress and Perspectives. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17832-17852. | 7.2 | 265 |
| 727 | Atomic Zn Sites on N and S Codoped Biomass-Derived Graphene for a High-Efficiency Oxygen Reduction Reaction in both Acidic and Alkaline Electrolytes. <i>ACS Applied Energy Materials</i> , 2021, 4, 2481-2488. | 2.5 | 21 |
| 728 | In Situ Identifying the Dynamic Structure behind Activity of Atomically Dispersed Platinum Catalyst toward Hydrogen Evolution Reaction. <i>Small</i> , 2021, 17, e2005713. | 5.2 | 38 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 729 | Oxygen Reduction Electrocatalysts toward Practical Fuel Cells: Progress and Perspectives. <i>Angewandte Chemie</i> , 2021, 133, 17976-17996. | 1.6 | 60 |
| 730 | Coplanar Pt/C Nanomeshes with Ultrastable Oxygen Reduction Performance in Fuel Cells. <i>Angewandte Chemie</i> , 2021, 133, 6607-6612. | 1.6 | 9 |
| 731 | Subnanoscale Platinum by Repeated UV Irradiation: From One and Few Atoms to Clusters for the Automotive PEMFC. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 8395-8404. | 4.0 | 10 |
| 732 | Resolving the nanoparticles' structure-property relationships at the atomic level: a study of Pt-based electrocatalysts. <i>IScience</i> , 2021, 24, 102102. | 1.9 | 57 |
| 733 | Structural transformations of solid electrocatalysts and photocatalysts. <i>Nature Reviews Chemistry</i> , 2021, 5, 256-276. | 13.8 | 93 |
| 734 | A highly efficient atomically thin curved PdIr bimetallic electrocatalyst. <i>National Science Review</i> , 2021, 8, nwab019. | 4.6 | 59 |
| 735 | Twin-Directed Deposition of Pt on Pd Icosahedral Nanocrystals for Catalysts with Enhanced Activity and Durability toward Oxygen Reduction. <i>Nano Letters</i> , 2021, 21, 2248-2254. | 4.5 | 36 |
| 736 | Alloying-enabled reallocation enabled high durability for Pt-Pd-3d-transition metal nanoparticle fuel cell catalysts. <i>Nature Communications</i> , 2021, 12, 859. | 5.8 | 137 |
| 737 | Melamine-assisted pyrolytic synthesis of bifunctional cobalt-based core-shell electrocatalysts for rechargeable zinc-air batteries. <i>Journal of Energy Chemistry</i> , 2021, 53, 364-371. | 7.1 | 36 |
| 738 | Ultrathin Co ₃ O ₄ -Pt core-shell nanoparticles coupled with three-dimensional graphene for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 10303-10311. | 3.8 | 11 |
| 739 | Autobifunctional Mechanism of Jagged Pt Nanowires for Hydrogen Evolution Kinetics via End-to-End Simulation. <i>Journal of the American Chemical Society</i> , 2021, 143, 5355-5363. | 6.6 | 33 |
| 740 | Straightforward synthesis of chemically ordered Pt ₃ Co/C nanoparticles by a solid phase method for oxygen-reduction reaction. <i>Ionics</i> , 2021, 27, 2553-2560. | 1.2 | 5 |
| 741 | Recent Advances on Nonprecious-Metal-Based Bifunctional Oxygen Electrocatalysts for Zinc-Air Batteries. <i>Energy & Fuels</i> , 2021, 35, 6380-6401. | 2.5 | 48 |
| 742 | Large-scale Synthesis of Porous Pt Nanospheres /Three-dimensional Graphene Hybrid Materials as a Highly Active and Stable Electrocatalyst for Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2021, 6, 2080-2084. | 0.7 | 1 |
| 743 | Three dimensional nitrogen, phosphorus and sulfur doped porous graphene as efficient bifunctional electrocatalysts for direct methanol fuel cell. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 10247-10258. | 3.8 | 23 |
| 744 | A fundamental comprehension and recent progress in advanced Pt-based ORR nanocatalysts. <i>SmartMat</i> , 2021, 2, 56-75. | 6.4 | 141 |
| 745 | A model for mesoporous carbon-supported platinum catalyst/electrolyte interfaces in polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2021, 487, 229414. | 4.0 | 6 |
| 746 | Recent Advances in Electrocatalysts for Proton Exchange Membrane Fuel Cells and Alkaline Membrane Fuel Cells. <i>Advanced Materials</i> , 2021, 33, e2006292. | 11.1 | 300 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 747 | Neodymium-Doped IrO ₂ Electrocatalysts Supported on Titanium Plates for Enhanced Chlorine Evolution Reaction Performance. <i>ChemElectroChem</i> , 2021, 8, 1204-1210. | 1.7 | 15 |
| 748 | Deposition of Atomically Thin Pt Shells on Amorphous Palladium Phosphide Cores for Enhancing the Electrocatalytic Durability. <i>ACS Nano</i> , 2021, 15, 7348-7356. | 7.3 | 53 |
| 749 | Engineering sub-nano structures with highly jagged edges on the Pt surface of Pt/C electrocatalysts to promote oxygen reduction reactions. <i>Electrochimica Acta</i> , 2021, 372, 137868. | 2.6 | 3 |
| 750 | Ultralong PtPd Alloyed Nanowires Anchored on Graphene for Efficient Methanol Oxidation Reaction. <i>Chemistry - an Asian Journal</i> , 2021, 16, 1130-1137. | 1.7 | 21 |
| 751 | A hierarchically ordered porous nitrogen-doped carbon catalyst with densely accessible Co-N active sites for efficient oxygen reduction reaction. <i>Microporous and Mesoporous Materials</i> , 2021, 317, 111002. | 2.2 | 12 |
| 752 | In Situ Small-Angle X-ray Scattering Studies on the Growth Mechanism of Anisotropic Platinum Nanoparticles. <i>ACS Omega</i> , 2021, 6, 10866-10874. | 1.6 | 3 |
| 753 | Cathode Design for Proton Exchange Membrane Fuel Cells in Automotive Applications. <i>Automotive Innovation</i> , 2021, 4, 144-164. | 3.1 | 28 |
| 754 | Pt-based Intermetallic Nanocatalysts for Promoting the Oxygen Reduction Reaction. <i>Bulletin of the Korean Chemical Society</i> , 2021, 42, 724-736. | 1.0 | 17 |
| 755 | Dealloying: An effective method for scalable fabrication of 0D, 1D, 2D, 3D materials and its application in energy storage. <i>Nano Today</i> , 2021, 37, 101094. | 6.2 | 93 |
| 756 | Recent Advances in Pt-Based Ultrathin Nanowires: Synthesis and Electrocatalytic Applications. <i>Chinese Journal of Chemistry</i> , 2021, 39, 1389-1396. | 2.6 | 16 |
| 757 | 2021 Roadmap: electrocatalysts for green catalytic processes. <i>JPhys Materials</i> , 2021, 4, 022004. | 1.8 | 57 |
| 758 | Electron-rich platinum electrocatalysts supported onto tin oxides for efficient oxygen reduction. <i>Composites Communications</i> , 2021, 24, 100603. | 3.3 | 15 |
| 759 | Ultralow platinum loading proton exchange membrane fuel cells: Performance losses and solutions. <i>Journal of Power Sources</i> , 2021, 490, 229515. | 4.0 | 43 |
| 760 | Stabilizing Pt-Based Electrocatalysts for Oxygen Reduction Reaction: Fundamental Understanding and Design Strategies. <i>Advanced Materials</i> , 2021, 33, e2006494. | 11.1 | 182 |
| 761 | Oleylamine Aging of PtNi Nanoparticles Giving Enhanced Functionality for the Oxygen Reduction Reaction. <i>Nano Letters</i> , 2021, 21, 3989-3996. | 4.5 | 37 |
| 762 | Interfacial Electron Engineering of Palladium and Molybdenum Carbide for Highly Efficient Oxygen Reduction. <i>Journal of the American Chemical Society</i> , 2021, 143, 6933-6941. | 6.6 | 62 |
| 763 | Surface active-site engineering in hierarchical PtNi nanocatalysts for efficient triiodide reduction reaction. <i>Nano Research</i> , 2021, 14, 4714-4718. | 5.8 | 11 |
| 764 | Biaxial strained dual-phase palladium-copper bimetal boosts formic acid electrooxidation. <i>Nano Research</i> , 2022, 15, 280-284. | 5.8 | 19 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 765 | Electron-rich isolated Pt active sites in ultrafine PtFe ₃ intermetallic catalyst for efficient alkene hydrosilylation. <i>Journal of Catalysis</i> , 2021, 396, 351-359. | 3.1 | 16 |
| 766 | Bragg Coherent Diffraction Imaging for <i>In Situ</i> Studies in Electrocatalysis. <i>ACS Nano</i> , 2021, 15, 6129-6146. | 7.3 | 24 |
| 768 | Recent Advances in Nanoparticles Confined in Two-Dimensional Materials as High-Performance Electrocatalysts for Energy Conversion Technologies. <i>ChemCatChem</i> , 2021, 13, 2541-2558. | 1.8 | 4 |
| 769 | Pt/Fe ₂ O ₃ with Pt-Fe pair sites as a catalyst for oxygen reduction with ultralow Pt loading. <i>Nature Energy</i> , 2021, 6, 614-623. | 19.8 | 274 |
| 770 | High-Index Faceted PdPtCu Ultrathin Nanorings Enable Highly Active and Stable Oxygen Reduction Electrocatalysis. <i>Small Methods</i> , 2021, 5, e2100154. | 4.6 | 34 |
| 771 | The Critical Impacts of Ligands on Heterogeneous Nanocatalysis: A Review. <i>ACS Catalysis</i> , 2021, 11, 6020-6058. | 5.5 | 169 |
| 772 | Bridging the gap between highly active oxygen reduction reaction catalysts and effective catalyst layers for proton exchange membrane fuel cells. <i>Nature Energy</i> , 2021, 6, 475-486. | 19.8 | 252 |
| 773 | Single-atom site catalysts supported on two-dimensional materials for energy applications. <i>Chinese Chemical Letters</i> , 2021, 32, 3771-3781. | 4.8 | 38 |
| 774 | Di-defects synergy boost electrocatalysis hydrogen evolution over two-dimensional heterojunctions. <i>Nano Research</i> , 2022, 15, 677-684. | 5.8 | 30 |
| 775 | Supported Pt-Ni bimetallic nanoparticles catalyzed hydrodeoxygenation of dibenzofuran with high selectivity to bicyclohexane. <i>Chinese Chemical Letters</i> , 2022, 33, 234-238. | 4.8 | 5 |
| 776 | Surface/Near-Surface Structure of Highly Active and Durable Pt-Based Catalysts for Oxygen Reduction Reaction: A Review. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2100025. | 2.8 | 4 |
| 777 | Promoting Bifunctional Water Splitting by Modification of the Electronic Structure at the Interface of NiFe Layered Double Hydroxide and Ag. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 26055-26063. | 4.0 | 41 |
| 778 | Co ₃ Mo ₃ N ₄ —An efficient multifunctional electrocatalyst. <i>Innovation(China)</i> , 2021, 2, 100096. | 5.2 | 26 |
| 779 | Towards comprehensive understanding of proton-exchange membrane fuel cells using high energy x-rays. <i>JPhys Energy</i> , 2021, 3, 031003. | 2.3 | 2 |
| 780 | PdCoNi alloy nanoparticles decorated, nitrogen-doped carbon nanotubes for highly active and durable oxygen reduction electrocatalysis. <i>Chemical Engineering Journal</i> , 2021, 411, 128527. | 6.6 | 26 |
| 781 | Compressive Strain Reduces the Hydrogen Evolution and Oxidation Reaction Activity of Platinum in Alkaline Solution. <i>ACS Catalysis</i> , 2021, 11, 8165-8173. | 5.5 | 37 |
| 782 | Highly Surface-Distorted Pt Superstructures for Multifunctional Electrocatalysis. <i>Nano Letters</i> , 2021, 21, 5075-5082. | 4.5 | 31 |
| 783 | Direct correlation of oxygen adsorption on platinum-electrolyte interfaces with the activity in the oxygen reduction reaction. <i>Science Advances</i> , 2021, 7, . | 4.7 | 44 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 784 | Direct Integration of Strained Pt Catalysts into Proton-Exchange Membrane Fuel Cells with Atomic Layer Deposition. <i>Advanced Materials</i> , 2021, 33, e2007885. | 11.1 | 10 |
| 785 | Solvent-free microwave synthesis of ultra-small Ru-Mo ₂ C@CNT with strong metal-support interaction for industrial hydrogen evolution. <i>Nature Communications</i> , 2021, 12, 4018. | 5.8 | 160 |
| 786 | Single Metal Atom Supported on N-Doped 2D Nitride Black Phosphorus: An Efficient Electrocatalyst for the Oxygen Evolution and Oxygen Reduction Reactions. <i>Journal of Physical Chemistry C</i> , 2021, 125, 12541-12550. | 1.5 | 24 |
| 787 | Switchable Binding Energy of Ionic Compounds and Application in Customizable Ligand Exchange for Colloid Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 5271-5278. | 2.1 | 3 |
| 788 | Laser-Assisted Synthesis of Pd Aerogel with Compressive Strain for Boosting Formate and Ethanol Electrooxidation. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 7837-7845. | 3.2 | 14 |
| 789 | Recent advances in nanostructured electrocatalysts for hydrogen evolution reaction. <i>Rare Metals</i> , 2021, 40, 3375-3405. | 3.6 | 112 |
| 790 | Dense Pt Nanowire Electrocatalyst for Improved Fuel Cell Performance Using a Graphitic Carbon Nitride-Decorated Hierarchical Nanocarbon Support. <i>Small</i> , 2021, 17, e2102288. | 5.2 | 59 |
| 791 | Pd-SnO ₂ heterojunction catalysts anchored on graphene sheets for enhanced oxygen reduction. <i>Composites Communications</i> , 2021, 25, 100703. | 3.3 | 19 |
| 792 | Ball-Milling Effect on Biomass-Derived Nanocarbon Catalysts for the Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2021, 6, 6019-6028. | 0.7 | 10 |
| 793 | <i>In Situ</i> X-ray Absorption Spectroscopy of PtNi-Nanowire/Vulcan XC-72R under Oxygen Reduction Reaction in Alkaline Media. <i>ACS Omega</i> , 2021, 6, 17203-17216. | 1.6 | 5 |
| 794 | Advanced Research Progress on High-Efficient Utilization of Pt Electrocatalysts in Fuel Cells. <i>Energy Technology</i> , 2021, 9, 2100227. | 1.8 | 8 |
| 795 | Chitosan-derived N-self-doped Pt/C as stable electrocatalysts for the oxygen reduction. <i>Ionics</i> , 2021, 27, 3975-3985. | 1.2 | 1 |
| 796 | One Nanometer PtIr Nanowires as High-Efficiency Bifunctional Catalysts for Electrosynthesis of Ethanol into High Value-Added Multicarbon Compound Coupled with Hydrogen Production. <i>Journal of the American Chemical Society</i> , 2021, 143, 10822-10827. | 6.6 | 95 |
| 797 | Highly Porous Pt ₂ Ir Alloy Nanocrystals as a Superior Catalyst with High-Efficiency C-C Bond Cleavage for Ethanol Electrooxidation. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 6773-6780. | 2.1 | 17 |
| 798 | Mesoporous Fe-N x C Sub-Microspheres for Highly Efficient Electrocatalytic Oxygen Reduction Reaction. <i>ChemCatChem</i> , 2021, 13, 4047-4054. | 1.8 | 5 |
| 799 | Designing the next generation of proton-exchange membrane fuel cells. <i>Nature</i> , 2021, 595, 361-369. | 13.7 | 1,012 |
| 800 | Hydrogen-Intercalation-Induced Lattice Expansion of Pd@Pt Core-Shell Nanoparticles for Highly Efficient Electrocatalytic Alcohol Oxidation. <i>Journal of the American Chemical Society</i> , 2021, 143, 11262-11270. | 6.6 | 121 |
| 801 | A Large-Scalable, Surfactant-Free, and Ultrastable Ru-Doped Pt ₃ Co Oxygen Reduction Catalyst. <i>Nano Letters</i> , 2021, 21, 6625-6632. | 4.5 | 43 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 802 | Atomic Regulation of PGM Electrocatalysts for the Oxygen Reduction Reaction. <i>Frontiers in Chemistry</i> , 2021, 9, 699861. | 1.8 | 6 |
| 803 | Electrochemically Induced Strain Evolution in Pt–Ni Alloy Nanoparticles Observed by Bragg Coherent Diffraction Imaging. <i>Nano Letters</i> , 2021, 21, 5945-5951. | 4.5 | 14 |
| 804 | New strategy of S,N co-doping of conductive-copolymer-derived carbon nanotubes to effectively improve the dispersion of PtCu nanocrystals for boosting the electrocatalytic oxidation of methanol. <i>Chinese Journal of Catalysis</i> , 2021, 42, 1205-1215. | 6.9 | 29 |
| 805 | Nitrogen-doped carbon quantum dots decorated on platinum catalysts for improved oxygen reduction reaction. <i>Applied Surface Science</i> , 2021, 554, 149594. | 3.1 | 23 |
| 806 | Hierarchically Fractal PtPdCu Sponges and their Directed Mass- and Electron-Transfer Effects. <i>Nano Letters</i> , 2021, 21, 7870-7878. | 4.5 | 47 |
| 807 | Advanced Oxygen Electrocatalyst for Air-Breathing Electrode in Zn-Air Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40172-40199. | 4.0 | 92 |
| 808 | Recent Advances in Electrode Design for Rechargeable Zinc–Air Batteries. <i>Small Science</i> , 2021, 1, 2100044. | 5.8 | 47 |
| 809 | Advanced Atomically Dispersed Metal–Nitrogen–Carbon Catalysts Toward Cathodic Oxygen Reduction in PEM Fuel Cells. <i>Advanced Energy Materials</i> , 2021, 11, 2101222. | 10.2 | 109 |
| 810 | Nitrogen and atomic Fe dual-doped porous carbon nanocubes as superior electrocatalysts for acidic H ₂ -O ₂ PEMFC and alkaline Zn-air battery. <i>Journal of Energy Chemistry</i> , 2021, 59, 388-395. | 7.1 | 27 |
| 811 | Unraveling electrochemical oxygen reduction mechanism on single-atom catalysts by a computational investigation. <i>International Journal of Energy Research</i> , 2022, 46, 1032-1042. | 2.2 | 6 |
| 812 | Superfast Synthesis of Densely Packed and Ultrafine Pt–Lanthanide@KB via Solvent-Free Microwave as Efficient Hydrogen Evolution Electrocatalysts. <i>Small</i> , 2021, 17, e2102879. | 5.2 | 27 |
| 813 | Hollow and porous NiCo ₂ O ₄ nanospheres for enhanced methanol oxidation reaction and oxygen reduction reaction by oxygen vacancies engineering. <i>Applied Catalysis B: Environmental</i> , 2021, 291, 120065. | 10.8 | 114 |
| 814 | Rational Design of Highly Stable and Active MXene-Based Bifunctional ORR/OER Double-Atom Catalysts. <i>Advanced Materials</i> , 2021, 33, e2102595. | 11.1 | 137 |
| 815 | The Direct Cause of Amplified Wettability: Roughness or Surface Chemistry?. <i>Journal of Composites Science</i> , 2021, 5, 213. | 1.4 | 22 |
| 816 | An Examination of the Catalyst Layer Contribution to the Disparity between the Nernst Potential and Open Circuit Potential in Proton Exchange Membrane Fuel Cells. <i>Catalysts</i> , 2021, 11, 965. | 1.6 | 3 |
| 817 | Enhanced oxygen reduction activity with rare earth metal alloy catalysts in proton exchange membrane fuel cells. <i>Electrochimica Acta</i> , 2021, 387, 138454. | 2.6 | 13 |
| 818 | Perfluorocarbon nanoemulsions create a beneficial O ₂ microenvironment in N ₂ -fixing biological inorganic hybrid. <i>Chem Catalysis</i> , 2021, 1, 704-720. | 2.9 | 6 |
| 819 | Atomic level engineering of noble metal nanocrystals for energy conversion catalysis. <i>Journal of Energy Chemistry</i> , 2021, 63, 604-624. | 7.1 | 12 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 820 | Mesoscopic modeling impacts of liquid water saturation, and platinum distribution on gas transport resistances in a PEMFC catalyst layer. <i>Electrochimica Acta</i> , 2021, 388, 138659. | 2.6 | 20 |
| 821 | Recent progress in advanced core-shell metal-based catalysts for electrochemical carbon dioxide reduction. <i>Chinese Chemical Letters</i> , 2022, 33, 2259-2269. | 4.8 | 36 |
| 822 | Main Descriptors To Correlate Structures with the Performances of Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2022, 61, . | 7.2 | 25 |
| 823 | Characterizing the defects and ferromagnetism in metal oxides: The case of magnesium oxide. <i>Materials Characterization</i> , 2021, 179, 111366. | 1.9 | 9 |
| 824 | Prudent Practices in <i>in situ</i> Durability Analysis Using Cyclic Voltammetry for Platinum-based Electrocatalysts. <i>Chemistry - an Asian Journal</i> , 2021, 16, 3311-3325. | 1.7 | 6 |
| 825 | 1D PtCo nanowires as catalysts for PEMFCs with low Pt loading. <i>Science China Materials</i> , 2022, 65, 704-711. | 3.5 | 16 |
| 826 | Controlled Asymmetric Charge Distribution of Active Centers in Conjugated Polymers for Oxygen Reduction. <i>Angewandte Chemie</i> , , . | 1.6 | 7 |
| 827 | Bioinspired N ₄ -metallomacrocycles for electrocatalytic oxygen reduction reaction. <i>Coordination Chemistry Reviews</i> , 2021, 442, 213996. | 9.5 | 57 |
| 829 | One-dimensional iridium-based nanowires for efficient water electrooxidation and beyond. <i>Nano Research</i> , 2022, 15, 1087-1093. | 5.8 | 25 |
| 830 | Theoretical insights for Co _{Nx} C _{4-x} -graphene ($x < b > = < /b > 0 \hat{e} 4$) materials as high performance low-cost electrocatalysts for oxygen reduction reactions. <i>Applied Physics Letters</i> , 2021, 119, . | 1.5 | 2 |
| 831 | Insight into the Role and Strategies of Metal-Organic Frameworks in Direct Methanol Fuel Cells: A Review. <i>Energy & Fuels</i> , 2021, 35, 15265-15284. | 2.5 | 18 |
| 832 | Ag Nanoparticle-Decorated Cu ₂ S Nanosheets for Surface Enhanced Raman Spectroscopy Detection and Photocatalytic Applications. <i>Nanomaterials</i> , 2021, 11, 2508. | 1.9 | 7 |
| 833 | Engineering dual metal single-atom sites with the nitrogen-coordinated nonprecious catalyst for oxygen reduction reaction (ORR) in acidic electrolyte. <i>Applied Surface Science</i> , 2022, 572, 151367. | 3.1 | 35 |
| 834 | Controlled Asymmetric Charge Distribution of Active Centers in Conjugated Polymers for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 26483-26488. | 7.2 | 59 |
| 835 | Atomic-Scale Design of High-Performance Pt-Based Electrocatalysts for Oxygen Reduction Reaction. <i>Frontiers in Chemistry</i> , 2021, 9, 753604. | 1.8 | 11 |
| 836 | Main Descriptors To Correlate Structures with the Performances of Electrocatalysts. <i>Angewandte Chemie</i> , 2022, 134, . | 1.6 | 5 |
| 837 | Recent advances in two-dimensional Pt based electrocatalysts for methanol oxidation reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 31202-31215. | 3.8 | 87 |
| 838 | How to appropriately assess the oxygen reduction reaction activity of platinum group metal catalysts with rotating disk electrode. <i>IScience</i> , 2021, 24, 103024. | 1.9 | 33 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 839 | Ultralow Pt Doped on N-based Carbon as a Promising Electrocatalyst for High-Temperature Proton Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 9881-9890. | 2.5 | 10 |
| 840 | Surface lattice engineering for fine-tuned spatial configuration of nanocrystals. <i>Nature Communications</i> , 2021, 12, 5661. | 5.8 | 17 |
| 841 | Controlled deposition of 2D-confined Pd or Ir nano-islands on Au(1 1 1) following Cu UPD, and their HER activity. <i>Journal of Electroanalytical Chemistry</i> , 2021, 896, 115285. | 1.9 | 5 |
| 842 | Hydrophilicity control of laser-induced amorphous carbon-encapsulated carbon nano-onions and their application to proton exchange membrane fuel cells under low humidity. <i>Carbon</i> , 2021, 184, 910-922. | 5.4 | 7 |
| 843 | Sub-nanometer thin TiO ₂ -coating on carbon support for boosting oxygen reduction activity and durability of Pt nanoparticles. <i>Electrochimica Acta</i> , 2021, 394, 139127. | 2.6 | 8 |
| 844 | Biomass-derived N,S co-doped 3D multichannel carbon supported Au@Pd@Pt catalysts for oxygen reduction. <i>Environmental Research</i> , 2021, 202, 111684. | 3.7 | 15 |
| 845 | Synthesis of a highly efficient bifunctional Co ₂ P@N-doped carbon nanotubes electrocatalyst by GO-Induced assembly strategy for rechargeable Zn-air batteries. <i>Journal of Alloys and Compounds</i> , 2022, 889, 161628. | 2.8 | 7 |
| 846 | Revealing the role of Mo doping in promoting oxygen reduction reaction performance of Pt ₃ Co nanowires. <i>Journal of Energy Chemistry</i> , 2022, 66, 16-23. | 7.1 | 36 |
| 847 | An ultralow-loading platinum alloy efficient ORR electrocatalyst based on the surface-contracted hollow structure. <i>Chemical Engineering Journal</i> , 2022, 428, 131569. | 6.6 | 22 |
| 848 | Au core-PtAu alloy shell nanowires for formic acid electrolysis. <i>Journal of Energy Chemistry</i> , 2022, 65, 94-102. | 7.1 | 117 |
| 849 | Enhanced oxygen reduction and methanol oxidation reaction over self-assembled Pt-M (M=Co, Ni) nanoflowers. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1411-1423. | 5.0 | 26 |
| 850 | Preparation of the Catalysts. , 2021, , 183-214. | | 0 |
| 851 | Simple and high-yield preparation of carbon-black-supported 1/41 nm platinum nanoclusters and their oxygen reduction reactivity. <i>Nanoscale</i> , 2021, 13, 14679-14687. | 2.8 | 12 |
| 852 | Non-carbon-supported single-atom site catalysts for electrocatalysis. <i>Energy and Environmental Science</i> , 2021, 14, 2809-2858. | 15.6 | 198 |
| 853 | PtNiFe nanoalloys with co-existence of energy-optimized active surfaces for synergistic catalysis of oxygen reduction and evolution. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16187-16195. | 5.2 | 9 |
| 854 | Accurate simulation of surfaces and interfaces of ten FCC metals and steel using Lennard-Jones potentials. <i>Npj Computational Materials</i> , 2021, 7, . | 3.5 | 28 |
| 855 | Bottom-Up Fabrication of Oxygen Reduction Electrodes with Atomic Layer Deposition for High-Power-Density PEMFCs. <i>Cell Reports Physical Science</i> , 2021, 2, 100297. | 2.8 | 10 |
| 856 | Turn a Weakness into a Strength: Performance Enhancement of 2,6-Diamino-3,5-dinitropyrazine-1-oxide (LLM-105) via Defect Engineering. <i>Journal of Physical Chemistry C</i> , 2021, 125, 2739-2747. | 1.5 | 6 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 857 | Ultrathin IrO ₂ Nanoneedles for Electrochemical Water Oxidation. <i>Advanced Functional Materials</i> , 2018, 28, 1704796. | 7.8 | 226 |
| 858 | The Advanced Designs of High-Performance Platinum-Based Electrocatalysts: Recent Progresses and Challenges. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800486. | 1.9 | 55 |
| 859 | Boosting Both Electrocatalytic Activity and Durability of Metal Aerogels via Intrinsic Hierarchical Porosity and Continuous Conductive Network Backbone Preservation. <i>Advanced Energy Materials</i> , 2021, 11, 2002276. | 10.2 | 24 |
| 860 | Mn ₃ N ₄ Oxygen Reduction Electrocatalyst: Operando Investigation of Active Sites and High Performance in Zinc-Air Battery. <i>Advanced Energy Materials</i> , 2021, 11, 2002753. | 10.2 | 83 |
| 861 | Reactivity and Catalysis by Nanoalloys. , 2020, , 267-345. | | 2 |
| 862 | Pt nanowire/Ti ₃ C ₂ T _x -CNT hybrids catalysts for the high performance oxygen reduction reaction for high temperature PEMFC. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 28190-28195. | 3.8 | 32 |
| 863 | Evaluation of ionomer coverage on Pt catalysts in polymer electrolyte membrane fuel cells by CO stripping voltammetry and its effect on oxygen reduction reaction activity. <i>Journal of Electroanalytical Chemistry</i> , 2020, 871, 114250. | 1.9 | 40 |
| 864 | Controlling Pt Crystal Defects on the Surface of Ni-Pt Core-Shell Nanoparticles for Active and Stable Electrocatalysts for Oxygen Reduction. <i>ACS Applied Nano Materials</i> , 2020, 3, 5995-6000. | 2.4 | 15 |
| 865 | Compressed Intermetallic PdCu for Enhanced Electrocatalysis. <i>ACS Energy Letters</i> , 2020, 5, 3672-3680. | 8.8 | 50 |
| 866 | Highly efficient oxygen evolution reaction via facile bubble transport realized by three-dimensionally stack-printed catalysts. <i>Nature Communications</i> , 2020, 11, 4921. | 5.8 | 93 |
| 867 | Platinum-nickel nanowire catalysts with composition-tunable alloying and faceting for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12557-12568. | 5.2 | 45 |
| 868 | Dissociative adsorption of O ₂ on strained Pt(111). <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 17927-17933. | 1.3 | 12 |
| 869 | Ordered platinum-bismuth intermetallic clusters with Pt-skin for a highly efficient electrochemical ethanol oxidation reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5214-5220. | 5.2 | 48 |
| 870 | Tri-(Fe/F/N)-doped porous carbons as electrocatalysts for the oxygen reduction reaction in both alkaline and acidic media. <i>Nanoscale</i> , 2020, 12, 18826-18833. | 2.8 | 30 |
| 871 | Hollow and mesoporous lipstick-like nitrogen-doped carbon with incremented catalytic activity for oxygen reduction reaction. <i>Nanotechnology</i> , 2021, 32, 095401. | 1.3 | 3 |
| 872 | Quantum transport in three-dimensional metalattices of platinum featuring an unprecedentedly large surface area to volume ratio. <i>Physical Review Materials</i> , 2020, 4, . | 0.9 | 3 |
| 873 | Local Coordination and Ordering Engineering to Design Efficient Core-Shell Oxygen Reduction Catalysts. <i>Journal of the Electrochemical Society</i> , 2020, 167, 144501. | 1.3 | 5 |
| 874 | Electrodeposition of Two-Dimensional Pt Nanostructures on Highly Oriented Pyrolytic Graphite (HOPG): The Effect of Evolved Hydrogen and Chloride Ions. <i>Nanomaterials</i> , 2018, 8, 668. | 1.9 | 8 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 875 | Fast Cryomediated Dynamic Equilibrium Hydrolysates towards Grain Boundary-Enriched Platinum Scaffolds for Efficient Methanol Oxidation. <i>Research</i> , 2019, 2019, 8174314. | 2.8 | 5 |
| 876 | Customizable Ligand Exchange for Tailored Surface Property of Noble Metal Nanocrystals. <i>Research</i> , 2020, 2020, 2131806. | 2.8 | 13 |
| 877 | Synthesis of Nitrogen Doped Protein Based Carbon as Pt Catalysts Supports for Oxygen Reduction Reaction. <i>Korean Journal of Materials Research</i> , 2018, 28, 182-188. | 0.1 | 8 |
| 878 | Trimetallic PtNiCo branched nanocages as efficient and durable bifunctional electrocatalysts towards oxygen reduction and methanol oxidation reactions. <i>Journal of Materials Chemistry A</i> , 2021, 9, 23444-23450. | 5.2 | 49 |
| 879 | A graphene-like nanoribbon for efficient bifunctional electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26688-26697. | 5.2 | 10 |
| 880 | 3D atomic imaging of low-coordinated active sites in solid-state dealloyed hierarchical nanoporous gold. <i>Journal of Materials Chemistry A</i> , 2021, 9, 25513-25521. | 5.2 | 3 |
| 881 | Advancements in cathode catalyst and cathode layer design for proton exchange membrane fuel cells. <i>Nature Communications</i> , 2021, 12, 5984. | 5.8 | 120 |
| 882 | Advanced Cathode Electrocatalysts for Fuel Cells: Understanding, Construction, and Application of Carbon-Based and Platinum-Based Nanomaterials. , 2021, 3, 1610-1634. | | 26 |
| 883 | Electronic and lattice strain dual tailoring for boosting Pd electrocatalysis in oxygen reduction reaction. <i>IScience</i> , 2021, 24, 103332. | 1.9 | 10 |
| 884 | Catalysts for Oxygen Reduction Reaction in the Polymer Electrolyte Membrane Fuel Cells: A Brief Review. <i>Electrochem</i> , 2021, 2, 590-603. | 1.7 | 3 |
| 885 | Synthesis of Palladium–Tungsten Metallene-Constructed Sandwich-Like Nanosheets as Bifunctional Catalysts for Direct Formic Acid Fuel Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 12336-12344. | 2.5 | 15 |
| 886 | Surface unsaturated WO _x activating PtNi alloy nanowires for oxygen reduction reaction. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1928-1935. | 5.0 | 22 |
| 887 | Supported, 1/41-nm-Sized Platinum Clusters: Controlled Preparation and Enhanced Catalytic Activity. <i>Bulletin of the Chemical Society of Japan</i> , 2021, 94, 2853-2870. | 2.0 | 10 |
| 888 | Torsion strained iridium oxide for efficient acidic water oxidation in proton exchange membrane electrolyzers. <i>Nature Nanotechnology</i> , 2021, 16, 1371-1377. | 15.6 | 197 |
| 889 | Cobalt doping boosted electrocatalytic activity of CaMn ₃ O ₆ for hydrogen evolution reaction. <i>Nano Research</i> , 2022, 15, 2870-2876. | 5.8 | 5 |
| 890 | Synthesis and Design of a Highly Stable Platinum Nickel Electrocatalyst for the Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 52681-52687. | 4.0 | 14 |
| 891 | Crystal-plane-controlled restructuring and enhanced oxygen-involving performances of bifunctional catalyst. <i>Applied Catalysis A: General</i> , 2021, , 118417. | 2.2 | 5 |
| 892 | Highly wrinkled palladium nanosheets as advanced electrocatalysts for the oxygen reduction reaction in acidic medium. <i>Chemical Engineering Journal</i> , 2022, 431, 133237. | 6.6 | 33 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 893 | Anomalous Size Effect of Pt Ultrathin Nanowires on Oxygen Reduction Reaction. <i>Nano Letters</i> , 2021, 21, 9354-9360. | 4.5 | 43 |
| 894 | A universal strategy for fast, scalable, and aqueous synthesis of multicomponent palladium alloy ultrathin nanowires. <i>Science China Chemistry</i> , 2021, 64, 245-252. | 4.2 | 16 |
| 895 | Introduction to Materials for PEMFC Electrodes. , 2022, , 242-255. | | 3 |
| 896 | Recent advances in one-dimensional noble-metal-based catalysts with multiple structures for efficient fuel-cell electrocatalysis. <i>Coordination Chemistry Reviews</i> , 2022, 450, 214244. | 9.5 | 84 |
| 897 | Porous, thick nitrogen-doped carbon encapsulated large PtNi core-shell nanoparticles for oxygen reduction reaction with extreme stability and activity. <i>Carbon</i> , 2022, 186, 36-45. | 5.4 | 15 |
| 898 | Nanosized FeS/ZnS heterojunctions derived using zeolitic imidazolate Framework-8 (ZIF-8) for pH-universal oxygen reduction and High-efficiency Zn-air battery. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 446-458. | 5.0 | 21 |
| 899 | Synthesization, characterization, and highly efficient electrocatalysis of chain-like Pt-Ni nanoparticles. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 076101. | 0.2 | 4 |
| 900 | Achievements in Pt nanoalloy oxygen reduction reaction catalysts: strain engineering, stability and atom utilization efficiency. <i>Chemical Communications</i> , 2021, 57, 12898-12913. | 2.2 | 21 |
| 901 | Silica-facilitated proton transfer for high-temperature proton-exchange membrane fuel cells. <i>Science China Chemistry</i> , 2021, 64, 2203-2211. | 4.2 | 16 |
| 902 | Differences in the Electrochemical Performance of Pt-Based Catalysts Used for Polymer Electrolyte Membrane Fuel Cells in Liquid Half- and Full-Cells. <i>Chemical Reviews</i> , 2021, 121, 15075-15140. | 23.0 | 104 |
| 903 | Nanocatalysts for proton exchange fuel cells: design, preparation, and utilization. , 2022, , 465-545. | | 3 |
| 904 | Mechanistic insight into methanol electro-oxidation catalyzed by PtCu alloy. <i>Chinese Journal of Catalysis</i> , 2022, 43, 167-176. | 6.9 | 19 |
| 905 | Trace doping of early transition metal enabled efficient and durable oxygen reduction catalysis on Pt-based ultrathin nanowires. <i>Applied Catalysis B: Environmental</i> , 2022, 303, 120918. | 10.8 | 30 |
| 906 | Recent progresses and remaining issues on the ultrathin catalyst layer design strategy for high-performance proton exchange membrane fuel cell with further reduced Pt loadings: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 1529-1542. | 3.8 | 25 |
| 907 | Graphene oxide hybrid with amine-terminated poly(amidoamine) dendrimers encapsulating Pt nanoparticles for electrochemical oxygen reduction reaction. <i>Bulletin of the Korean Chemical Society</i> , 2022, 43, 69-72. | 1.0 | 4 |
| 908 | Insights into the pH-dependent Behavior of N-Doped Carbons for the Oxygen Reduction Reaction by First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2021, 125, 26429-26436. | 1.5 | 3 |
| 909 | Assessing the Catalytic Behavior of Platinum Group Metal-Based Ultrathin Nanowires Using X-ray Absorption Spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 58253-58260. | 4.0 | 6 |
| 910 | Mechanistic Understanding of Formation of Ultrathin Single-Crystalline Pt Nanowires. <i>Journal of Physical Chemistry C</i> , 0, , . | 1.5 | 2 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 911 | Electrochemical two-electron O_2 reduction reaction toward H_2O_2 production: using cobalt porphyrin decorated carbon nanotubes as a nanohybrid catalyst. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26019-26027. | 5.2 | 55 |
| 912 | The boosting of electrocatalytic CO_2 -to- CO transformation by using the carbon nanotubes-supported PCN-222(Fe) nanoparticles composite. <i>Journal of Materials Science</i> , 2022, 57, 526-537. | 1.7 | 9 |
| 913 | d Orbital Hybridization Induced by a Monodispersed Ga Site on a Pt_3Mn Nanocatalyst Boosts Ethanol Electrooxidation. <i>Angewandte Chemie - International Edition</i> , 2022, 61, . | 7.2 | 134 |
| 914 | Single atom surface engineering: A new strategy to boost electrochemical activities of Pt catalysts. <i>Nano Energy</i> , 2022, 93, 106813. | 8.2 | 41 |
| 915 | Heterostructure $Ni(OH)_2/ZrO_2$ catalyst can achieve efficient oxygen reduction reaction. <i>Chemical Engineering Science</i> , 2022, 250, 117398. | 1.9 | 4 |
| 916 | Surfactant-assisted implantation strategy for facile construction of Pt-based hybrid electrocatalyst to accelerate oxygen reduction reaction. <i>Materials Today Energy</i> , 2022, 24, 100919. | 2.5 | 6 |
| 917 | Enhanced H_2O_2 electrosynthesis on kneading oxidized carbon nanotubes. <i>Applied Surface Science</i> , 2022, 580, 152293. | 3.1 | 9 |
| 918 | How do H_2 oxidation molecular catalysts assemble onto carbon nanotube electrodes? A crosstalk between electrochemical and multi-physical characterization techniques. <i>Chemical Science</i> , 2021, 12, 15916-15927. | 3.7 | 5 |
| 919 | Challenges of Fuel Cell Technologies for the Needs of the Energy Transition to a Zero-carbon Technology. <i>Journal of Energy and Environment</i> , 2021, 8, . | 0.4 | 1 |
| 920 | Cobalt Doping Stabilized Active and Durable Sub-2 nm Pt Nanoclusters for Low Pt Loading PEMFC Cathode. <i>Advanced Energy Materials</i> , 2022, 12, . | 10.2 | 35 |
| 921 | Edge-segregated ternary Pd-Pt-Ni spiral nanosheets as high-performance bifunctional oxygen redox electrocatalysts for rechargeable zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3808-3817. | 5.2 | 17 |
| 922 | Stable Thiophene-sulfur Covalent Organic Frameworks for Oxygen Reduction Reaction (ORR). <i>Chemical Research in Chinese Universities</i> , 2022, 38, 396-401. | 1.3 | 14 |
| 923 | Surface Engineering of Carbon-Supported Platinum as a Route to Electrocatalysts with Superior Durability and Activity for PEMFC Cathodes. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5287-5297. | 4.0 | 24 |
| 924 | Improving the intrinsic activity of electrocatalysts for sustainable energy conversion: where are we and where can we go?. <i>Chemical Science</i> , 2021, 13, 14-26. | 3.7 | 45 |
| 925 | Noble Metal Based Electrocatalysts for Alcohol Oxidation Reactions in Alkaline Media. <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 70 |
| 926 | Autocatalytic Surface Reduction-Assisted Synthesis of PtW Ultrathin Alloy Nanowires for Highly Efficient Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2022, 12, . | 10.2 | 40 |
| 927 | d Orbital Hybridization Induced by a Monodispersed Ga Site on a Pt_3Mn Nanocatalyst Boosts Ethanol Electrooxidation. <i>Angewandte Chemie</i> , 2022, 134, . | 1.6 | 19 |
| 928 | <i>Operando</i> Imaging of Ce Radical Scavengers in a Practical Polymer Electrolyte Fuel Cell by 3D Fluorescence CT-XAFS and Depth-Profiling Nano-XAFS-SEM/EDS Techniques. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 6762-6776. | 4.0 | 11 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 929 | Rational Design and Synthesis of Adjustable Pt and Pt-Based 3D-Nanoframeworks. ACS Applied Energy Materials, 2022, 5, 942-950. | 2.5 | 8 |
| 930 | Functional group scission-induced lattice strain in chiral macromolecular metal-organic framework arrays for electrocatalytic overall water splitting. Applied Catalysis B: Environmental, 2022, 307, 121151. | 10.8 | 31 |
| 931 | Nonprecious transition metal nitrides as efficient oxygen reduction electrocatalysts for alkaline fuel cells. Science Advances, 2022, 8, eabj1584. | 4.7 | 94 |
| 932 | Enhanced methanol oxidation on PtNi nanoparticles supported on silane-modified reduced graphene oxide. International Journal of Hydrogen Energy, 2022, 47, 6638-6649. | 3.8 | 13 |
| 933 | Effectively Increasing Pt Utilization Efficiency of the Membrane Electrode Assembly in Proton Exchange Membrane Fuel Cells through Multiparameter Optimization Guided by Machine Learning. ACS Applied Materials & Interfaces, 2022, 14, 8010-8024. | 4.0 | 16 |
| 934 | Nanoporous silver nanorods as surface-enhanced Raman scattering substrates. Biosensors and Bioelectronics, 2022, 202, 114004. | 5.3 | 18 |
| 935 | Current Trends in Platinum-Based Ternary Alloys as Promising Electrocatalysts for the Oxygen Reduction Reaction: A Mini Review. Energy & Fuels, 2022, 36, 2306-2322. | 2.5 | 22 |
| 936 | Pt nanorods oriented on Gd-doped ceria polyhedra enable superior oxygen reduction catalysis for fuel cells. Journal of Catalysis, 2022, 407, 300-311. | 3.1 | 17 |
| 937 | The Facile Deposition of Pt Nanoparticles on Reduced Graphite Oxide in Tunable Aryl Alkyl Ionic Liquids for ORR Catalysts. Molecules, 2022, 27, 1018. | 1.7 | 6 |
| 938 | Solvothermal Synthesis of Nanostructured Pt _n Ni Tetrahedrons with Enhanced Platinum Utilization and Activity toward Oxygen Reduction Electrocatalysis. Journal of Physical Chemistry C, 2021, 125, 27199-27206. | 1.5 | 8 |
| 939 | Lignin condensation inhibition and antioxidant activity improvement in a reductive ternary DES fractionation microenvironment by thiourea dioxide self-decomposition. New Journal of Chemistry, 2022, 46, 8892-8900. | 1.4 | 3 |
| 940 | Scalable Synthesis of (Pd,Cu)@Pt Core-Shell Catalyst with High Orr Activity and Durability. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 941 | Construction of highly durable electrocatalysts by pore confinement and anchoring effect for the oxygen reduction reaction. New Journal of Chemistry, 0, , . | 1.4 | 2 |
| 942 | Surface oxygenation induced strong interaction between Pd catalyst and functional support for zinc-air batteries. Energy and Environmental Science, 2022, 15, 1573-1584. | 15.6 | 49 |
| 943 | High-Temperature Confinement Synthesis of Supported Pt-Ni Nanoparticles for Efficiently Catalyzing Oxygen Reduction Reaction. Advanced Functional Materials, 2022, 32, . | 7.8 | 27 |
| 944 | Electrocatalysts for the Oxygen Reduction Reaction: From Bimetallic Platinum Alloys to Complex Solid Solutions. ChemEngineering, 2022, 6, 19. | 1.0 | 5 |
| 945 | MOF-derived three-dimensional ordered porous carbon nanomaterial for efficient alkaline zinc-air batteries. Science China Materials, 2022, 65, 1453-1462. | 3.5 | 24 |
| 946 | Catalyst Electrodes with PtCu Nanowire Arrays In Situ Grown on Gas Diffusion Layers for Direct Formic Acid Fuel Cells. ACS Applied Materials & Interfaces, 2022, 14, 11457-11464. | 4.0 | 18 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 947 | Applications of Machine Learning in Alloy Catalysts: Rational Selection and Future Development of Descriptors. <i>Advanced Science</i> , 2022, 9, e2106043. | 5.6 | 36 |
| 948 | F-doped carbon hollow nanospheres for efficient electrochemical oxygen reduction. <i>Journal of Materials Science</i> , 2022, 57, 5924-5932. | 1.7 | 7 |
| 949 | Engineering nanoporous and solid core-shell architectures of low-platinum alloy catalysts for high power density PEM fuel cells. <i>Nano Research</i> , 2022, 15, 6148-6155. | 5.8 | 20 |
| 950 | TaO _x nanoparticles as radical scavengers to improve the durability of Fe-N-C oxygen reduction catalysts. <i>Nature Energy</i> , 2022, 7, 281-289. | 19.8 | 93 |
| 951 | Identification of Catalytic Active Sites for Durable Proton Exchange Membrane Fuel Cell: Catalytic Degradation and Poisoning Perspectives. <i>Small</i> , 2022, 18, e2106279. | 5.2 | 25 |
| 952 | Amorphizing noble metal chalcogenide catalysts at the single-layer limit towards hydrogen production. <i>Nature Catalysis</i> , 2022, 5, 212-221. | 16.1 | 113 |
| 953 | Variation of Local Structure and Reactivity of Pt/C Catalyst for Accelerated Degradation Test of Polymer Electrolyte Fuel Cell Visualized by Operando 3D CT-XAFS Imaging. <i>ChemNanoMat</i> , 2022, 8, . | 1.5 | 4 |
| 954 | Strain Engineering: A Boosting Strategy for Photocatalysis. <i>Advanced Materials</i> , 2022, 34, e2200868. | 11.1 | 82 |
| 955 | Review—Recent Progress in Highly Efficient Oxygen Reduction Electrocatalysts: From Structural Engineering to Performance Optimization. <i>Journal of the Electrochemical Society</i> , 2022, 169, 034512. | 1.3 | 5 |
| 956 | Corrosion Chemistry of Electrocatalysts. <i>Advanced Materials</i> , 2022, 34, e2200840. | 11.1 | 43 |
| 957 | S-doped carbon materials: Synthesis, properties and applications. <i>Carbon</i> , 2022, 195, 328-340. | 5.4 | 55 |
| 958 | Hydrogen spillover in complex oxide multifunctional sites improves acidic hydrogen evolution electrocatalysis. <i>Nature Communications</i> , 2022, 13, 1189. | 5.8 | 122 |
| 959 | Special emphasis towards decorating platinum nanoparticles on carbon to boost cell performance and durability for portable hydrogen-powered fuel cell stack. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 12684-12697. | 3.8 | 7 |
| 960 | Ni ²⁺ -Directed Anisotropic Growth of PtCu Nested Skeleton Cubes Boosting Electroreduction of Oxygen. <i>Advanced Science</i> , 2022, 9, e2104927. | 5.6 | 14 |
| 961 | Understanding the Grain Boundary Behavior of Bimetallic Platinum-Cobalt Alloy Nanowires toward Oxygen Electro-Reduction. <i>ACS Catalysis</i> , 2022, 12, 3516-3523. | 5.5 | 23 |
| 962 | Elucidating the Correlation between ORR Polarization Curves and Kinetics at Metal-Electrolyte Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13891-13903. | 4.0 | 18 |
| 963 | In situ X-ray Absorption Spectroscopy at Platinum Group Metal (PGM) and Non-PGM Electrocatalysts. <i>Denki Kagaku</i> , 2022, 90, 16-20. | 0.0 | 0 |
| 964 | Effect of Catalyst Ink and Formation Process on the Multiscale Structure of Catalyst Layers in PEM Fuel Cells. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 3776. | 1.3 | 14 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 965 | Gas Diffusion Layer with a Regular Hydrophilic Structure Boosts the Power Density of Proton Exchange Membrane Fuel Cells via the Construction of Water Highways. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 17578-17584. | 4.0 | 6 |
| 966 | Atomic-scale understanding of oxidation mechanisms of materials by computational approaches: A review. <i>Materials and Design</i> , 2022, 217, 110605. | 3.3 | 6 |
| 967 | Au decorated Pd nanowires for methane oxidation to liquid C1 products. <i>Applied Catalysis B: Environmental</i> , 2022, 308, 121223. | 10.8 | 20 |
| 968 | Designing Nanoporous Coral-Like Pt Nanowires Architecture for Methanol and Ammonia Oxidation Reactions. <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 27 |
| 969 | Structural Transformation of Pt-Ni Nanowires as Oxygen Reduction Electrocatalysts to Branched Nanostructures during Potential Cycles. <i>ACS Catalysis</i> , 2022, 12, 259-264. | 5.5 | 7 |
| 970 | Confinement Effects in Individual Carbon Encapsulated Nonprecious Metal-Based Electrocatalysts. <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 35 |
| 972 | Materials Engineering toward Durable Electrocatalysts for Proton Exchange Membrane Fuel Cells. <i>Advanced Energy Materials</i> , 2022, 12, . | 10.2 | 61 |
| 973 | Understanding the Crucial Significance of the Temperature and Potential Window on the Stability of Carbon Supported Pt-Alloy Nanoparticles as Oxygen Reduction Reaction Electrocatalysts. <i>ACS Catalysis</i> , 2022, 12, 101-115. | 5.5 | 38 |
| 974 | Enriched d-Band Holes Enabling Fast Oxygen Evolution Kinetics on Atomic-Layered Defect-Rich Lithium Cobalt Oxide Nanosheets. <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 24 |
| 975 | An Effective Strategy for Template-Free Electrodeposition of Aluminum Nanowires with Highly Controllable Irregular Morphologies. <i>Nanomaterials</i> , 2022, 12, 1390. | 1.9 | 1 |
| 976 | Hollow-Structure Pt-Ni Nanoparticle Electrocatalysts for Oxygen Reduction Reaction. <i>Molecules</i> , 2022, 27, 2524. | 1.7 | 6 |
| 977 | Electrocatalytic generation of reactive species and implications in microbial inactivation. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1399-1416. | 6.9 | 8 |
| 978 | Rational design and synthesis of one-dimensional platinum-based nanostructures for oxygen-reduction electrocatalysis. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1459-1472. | 6.9 | 95 |
| 979 | Oxygen reduction reaction on Pt-based electrocatalysts: Four-electron vs. two-electron pathway. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1433-1443. | 6.9 | 37 |
| 982 | Two-dimensional Transition Metal Dichalcogenides for Electrocatalytic Oxygen Reduction Reaction. <i>Wuji Cailiao Xuebao/Journal of Inorganic Materials</i> , 2022, 37, 697. | 0.6 | 2 |
| 983 | Highly accessible and dense surface single metal FeN ₄ active sites for promoting the oxygen reduction reaction. <i>Energy and Environmental Science</i> , 2022, 15, 2619-2628. | 15.6 | 82 |
| 984 | Scalable Synthesis of (Pd,Cu)@Pt Core-Shell Catalyst with High Orr Activity and Durability. <i>SSRN Electronic Journal</i> , 0, , . | 0.4 | 0 |
| 985 | Catalytic approaches towards highly durable proton exchange membrane fuel cells with minimized Pt use. <i>Chemical Science</i> , 2022, 13, 6782-6795. | 3.7 | 11 |

| # | ARTICLE | IF | CITATIONS |
|------|--|-----|-----------|
| 986 | Finding efficient catalyst designs: A high-precision method to reveal active sites. Chem Catalysis, 2022, 2, 657-659. | 2.9 | 0 |
| 987 | Carbon-Supported Noble-Metal Nanoparticles for Catalytic Applications—A Review. Crystals, 2022, 12, 584. | 1.0 | 18 |
| 988 | Upgrading the State-of-the-Art Electrocatalysts for Proton Exchange Membrane Fuel Cell Applications. Advanced Materials Interfaces, 2022, 9, . | 1.9 | 12 |
| 989 | Conductive Two-Dimensional Magnesium Metal-Organic Frameworks for High-Efficiency O ₂ Electroreduction to H ₂ O ₂ . ACS Catalysis, 2022, 12, 6092-6099. | 5.5 | 78 |
| 990 | A one-pot carbon-coating-ex-solution route to efficient Ru-MnO ₂ @C nanowire electrocatalysts with enhanced interfacial interactions. Chemical Engineering Journal, 2022, 446, 136816. | 6.6 | 2 |
| 991 | Oxygen reduction reaction measurements on platinum electrocatalysts in gas diffusion electrode half-cells: Influence of electrode preparation, measurement protocols and common pitfalls. Journal of Power Sources, 2022, 539, 231530. | 4.0 | 5 |
| 992 | Ultralow Loading Ru-Mo ₂ c on Cnt Boosting High Durability Electrocatalyst for Oxygen Reduction Reaction. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 993 | Activating surface atoms of high entropy oxides for enhancing oxygen evolution reaction. Chinese Chemical Letters, 2023, 34, 107571. | 4.8 | 9 |
| 994 | Ru-Co Pair Sites Catalyst Boosts the Energetics for the Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2022, 61, . | 7.2 | 154 |
| 995 | Scalable synthesis of (Pd,Cu)@Pt core-shell catalyst with high ORR activity and durability. Journal of Electroanalytical Chemistry, 2022, 918, 116451. | 1.9 | 9 |
| 996 | A Supported Palladium on Gallium-based Liquid Metal Catalyst for Enhanced Oxygen Reduction Reaction. Chemical Research in Chinese Universities, 2022, 38, 1219-1225. | 1.3 | 7 |
| 997 | Ru-Co Pair Sites Catalyst Boosts the Energetics for Oxygen Evolution Reaction. Angewandte Chemie, 0, , . | 1.6 | 12 |
| 998 | Pt-Ni alloy nanobead chains catalysts embedded in UiO-67 membrane for enhanced CO ₂ conversion to CO. Materials Today Energy, 2022, 28, 101051. | 2.5 | 1 |
| 999 | Single-atom Fe-N ₅ catalyst for high-performance zinc-air batteries. Nano Research, 2022, 15, 8056-8064. | 5.8 | 36 |
| 1000 | Emerging low-nuclearity supported metal catalysts with atomic level precision for efficient heterogeneous catalysis. Nano Research, 2022, 15, 7806-7839. | 5.8 | 201 |
| 1001 | Oxygen reduction reaction in hydrogen fuel cells. , 2022, , 277-303. | | 0 |
| 1002 | Versatile nanoarchitectonics of Pt with morphology control of oxygen reduction reaction catalysts. Science and Technology of Advanced Materials, 2022, 23, 413-423. | 2.8 | 28 |
| 1003 | Low-coordinated surface sites make truncated Pd tetrahedrons as robust ORR electrocatalysts outperforming Pt for DMFC devices. Nano Research, 2022, 15, 7951-7958. | 5.8 | 15 |

| # | ARTICLE | IF | CITATIONS |
|------|--|------|-----------|
| 1004 | Interfacial synergistic effect in SnO ₂ /PtNi nanocrystals enclosed by high-index facets for high-efficiency ethylene glycol electrooxidation. <i>Nano Research</i> , 2022, 15, 7877-7886. | 5.8 | 8 |
| 1005 | Experimental Sabatier plot for predictive design of active and stable Pt-alloy oxygen reduction reaction catalysts. <i>Nature Catalysis</i> , 2022, 5, 513-523. | 16.1 | 57 |
| 1006 | Stabilization of platinum catalyst surface treated by atomic layer deposition of cobalt for polymer electrolyte membrane fuel cells. <i>International Journal of Energy Research</i> , 0, , . | 2.2 | 0 |
| 1007 | PtCu ₃ nanoalloy@porous PWOx composites with oxygen container function as efficient ORR electrocatalysts advance the power density of room-temperature hydrogen-air fuel cells. <i>Nano Research</i> , 2022, 15, 9010-9018. | 5.8 | 20 |
| 1008 | Gram-Scale Synthesis of Carbon-Supported Sub-5 nm PtNi Nanocrystals for Efficient Oxygen Reduction. <i>Metals</i> , 2022, 12, 1078. | 1.0 | 2 |
| 1009 | Recent advance on structural design of high-performance Pt-based nanocatalysts for oxygen reduction reaction. , 2022, , 100022. | | 4 |
| 1010 | High-entropy alloy nanoparticles as a promising electrocatalyst to enhance activity and durability for oxygen reduction. <i>Nano Research</i> , 2022, 15, 7868-7876. | 5.8 | 29 |
| 1011 | Cotton-derived carbon fiber-supported Ni nanoparticles as nanoislands to anchor single-atom Pt for efficient catalytic reduction of 4-nitrophenol. <i>Applied Catalysis A: General</i> , 2022, 643, 118734. | 2.2 | 11 |
| 1012 | Highly stable and efficient Pt single-atom catalyst for reversible proton-conducting solid oxide cells. <i>Applied Catalysis B: Environmental</i> , 2022, 316, 121627. | 10.8 | 16 |
| 1013 | New challenges in oxygen reduction catalysis: a consortium retrospective to inform future research. <i>Energy and Environmental Science</i> , 2022, 15, 3775-3794. | 15.6 | 19 |
| 1014 | Non-Precious Metal-Doped Carbon Materials Derived From Porphyrin-Based Porous Organic Polymers for Oxygen Reduction Electrocatalysis. <i>ChemPlusChem</i> , 2022, 87, . | 1.3 | 0 |
| 1015 | Atomically Dispersed Pentacoordinated Zirconium Catalyst with Axial Oxygen Ligand for Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, . | 7.2 | 39 |
| 1016 | Atomically Dispersed Pentacoordinated Zirconium Catalyst with Axial Oxygen Ligand for Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2022, 134, . | 1.6 | 3 |
| 1017 | Intermetallic PtFe Electrocatalysts for the Oxygen Reduction Reaction: Ordering Degree-Dependent Performance. <i>Small</i> , 2022, 18, . | 5.2 | 32 |
| 1018 | Alloyed Pt-Zn Oxygen Reduction Catalysts for Proton Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2022, 5, 8282-8291. | 2.5 | 6 |
| 1019 | Low-Pt NiNC-Supported PtNi Nanoalloy Oxygen Reduction Reaction Electrocatalysts In Situ Tracking of the Atomic Alloying Process. <i>Angewandte Chemie - International Edition</i> , 2022, 61, . | 7.2 | 24 |
| 1020 | Low-Pt NiNC-Supported PtNi Nanoalloy Oxygen Reduction Reaction Electrocatalysts In Situ Tracking of the Atomic Alloying Process. <i>Angewandte Chemie</i> , 2022, 134, . | 1.6 | 1 |
| 1021 | A kinetic descriptor for the electrolyte effect on the oxygen reduction kinetics on Pt(111). <i>Nature Catalysis</i> , 2022, 5, 615-623. | 16.1 | 62 |

| # | ARTICLE | IF | CITATIONS |
|------|--|------|-----------|
| 1022 | Low temperature synthesis of NiO/CoO nanostructures to enhance their low temperature oxygen reduction catalysis. <i>Micron</i> , 2022, 161, 103326. | 1.1 | 1 |
| 1023 | <scp>Phosphorusâ€doped</scp> Pt nanowires as efficient catalysts for electrochemical hydrogen evolution and methanol oxidation reaction. <i>Bulletin of the Korean Chemical Society</i> , 2022, 43, 1111-1117. | 1.0 | 8 |
| 1024 | High-performance intermetallic PtCo oxygen reduction catalyst promoted by molybdenum. <i>Applied Catalysis B: Environmental</i> , 2022, 317, 121767. | 10.8 | 7 |
| 1025 | Synergistic effects of PtFeV alloy-decorated functionalized CNTs on performance of polymer fuel cell investigated by specially designed cathodic half-cell. <i>Journal of Alloys and Compounds</i> , 2022, 924, 166485. | 2.8 | 4 |
| 1026 | Highly Durable Fuel Cell Electrocatalyst with Low-Loading Pt-Co Nanoparticles Dispersed Over Single-Atom Pt-Co-N-Graphene Nanofiber. <i>SSRN Electronic Journal</i> , 0, , . | 0.4 | 0 |
| 1027 | Kinetic Diagnostics and Synthetic Design of Platinum Group Metal-Free Electrocatalysts for the Oxygen Reduction Reaction Using Reactivity Maps and Site Utilization Descriptors. <i>Journal of the American Chemical Society</i> , 2022, 144, 13487-13498. | 6.6 | 18 |
| 1028 | Graphene-nanopocket-encaged PtCo nanocatalysts for highly durable fuel cell operation under demanding ultralow-Pt-loading conditions. <i>Nature Nanotechnology</i> , 2022, 17, 968-975. | 15.6 | 114 |
| 1029 | In Situ Surface Restraint-Induced Synthesis of Transition-Metal Nitride Ultrathin Nanocrystals as Ultrasensitive SERS Substrate with Ultrahigh Durability. <i>ACS Nano</i> , 2022, 16, 13123-13133. | 7.3 | 16 |
| 1030 | Coreâ€shell nanocatalysts with reduced platinum content toward more costâ€effective proton exchange membrane fuel cells. <i>Nano Select</i> , 2022, 3, 1459-1483. | 1.9 | 2 |
| 1031 | Carbon-based catalyst supports for oxygen reduction in proton-exchange membrane fuel cells. <i>Trends in Chemistry</i> , 2022, 4, 886-906. | 4.4 | 63 |
| 1032 | Ptâ€Co Electrocatalysts: Syntheses, Morphologies, and Applications. <i>Small</i> , 2022, 18, . | 5.2 | 10 |
| 1033 | Biomass-derived carbon fiber with atomic Mn-N4 sites for efficient electrocatalytic oxygen reduction reaction. <i>Journal of Materials Science</i> , 2022, 57, 15943-15953. | 1.7 | 2 |
| 1034 | A Robust Electrocatalyst for Oxygen Reduction Reaction Assembled with Pt Nanoclusters and A Melemâ€Modified Carbon Support. <i>Energy Technology</i> , 0, , . | 1.8 | 2 |
| 1035 | Butterfly Effect of Electron Donor from Monoatomic Cobalt in Few-Atom Platinum Clusters: Boosting Electrocatalysis. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 37727-37737. | 4.0 | 2 |
| 1036 | Engineering the Electronic Structure of Active Centers in Metalloporphyrins to Boost Oxygen Reduction Reaction Activity. <i>ChemElectroChem</i> , 2022, 9, . | 1.7 | 2 |
| 1037 | Photocatalytic performance for palm-fiber-like SnS2 nanoflakes with full solar spectrum light response. <i>Applied Surface Science</i> , 2022, 605, 154642. | 3.1 | 8 |
| 1038 | Application of morphology and phase design of dealloying method in supercapacitor. <i>Journal of Alloys and Compounds</i> , 2022, 927, 166974. | 2.8 | 9 |
| 1039 | Electrocatalytic activity enhancement of palladium-manganese nanosheet assembled nanobuds by tuning electronic structure. <i>Applied Surface Science</i> , 2022, 605, 154634. | 3.1 | 2 |

| # | ARTICLE | IF | CITATIONS |
|------|--|------|-----------|
| 1040 | Etching-assisted synthesis of single atom Ni-tailored Pt nanocatalyst enclosed by high-index facets for active and stable oxygen reduction catalysis. <i>Nano Energy</i> , 2022, 103, 107800. | 8.2 | 13 |
| 1041 | Improving the Orr Performance by Enhancing the Pt Oxidation Resistance. <i>SSRN Electronic Journal</i> , 0, , . | 0.4 | 0 |
| 1042 | Doped MXene combinations as highly efficient bifunctional and multifunctional catalysts for water splitting and metal-air batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 22500-22511. | 5.2 | 16 |
| 1043 | Three-dimensional porous platinum-tellurium-rhodium surface/interface achieve remarkable practical fuel cell catalysis. <i>Energy and Environmental Science</i> , 2022, 15, 3877-3890. | 15.6 | 32 |
| 1044 | Hydrogen generation via ammonia decomposition on highly efficient and stable Ru-free catalysts: approaching complete conversion at 450 Å°C. <i>Energy and Environmental Science</i> , 2022, 15, 4190-4200. | 15.6 | 29 |
| 1045 | Photocatalytic Performance for Palm-Fiber-Like Sns ₂ Nanoflakes with Full Solar Spectrum Light Response. <i>SSRN Electronic Journal</i> , 0, , . | 0.4 | 0 |
| 1046 | Strain engineering of metal nanostructures for catalysis. , 2022, , . | | 0 |
| 1047 | A combined TEM and SAXS study of the growth and self-assembly of ultrathin Pt nanowires. <i>Nanotechnology</i> , 2022, 33, 475602. | 1.3 | 0 |
| 1048 | Recent Advances in the Development of Nanocatalysts for Direct Methanol Fuel Cells. <i>Energies</i> , 2022, 15, 6335. | 1.6 | 9 |
| 1049 | Rhodium decorated stable platinum nickel nanowires for effective ethanol oxidation reaction. <i>Science China Materials</i> , 2023, 66, 679-685. | 3.5 | 9 |
| 1050 | Ultralow Loading Ru-Mo ₂ C on CNT Boosting High Durability Electrocatalyst for Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2022, 169, 096512. | 1.3 | 0 |
| 1051 | Achieving Synchronization of Electrochemical Production of Ammonia from Nitrate and Ammonia Capture by Constructing a Two-Phase One-Flow Cell Electrolyzer. <i>Advanced Energy Materials</i> , 2022, 12, . | 10.2 | 40 |
| 1052 | Recent Progress in High Entropy Alloys for Electrocatalysts. <i>Electrochemical Energy Reviews</i> , 2022, 5, . | 13.1 | 45 |
| 1053 | Adsorption Energy in Oxygen Electrocatalysis. <i>Chemical Reviews</i> , 2022, 122, 17028-17072. | 23.0 | 45 |
| 1054 | High-Resolution Electron Tomography of Ultrathin Boerdijk-Coxeter-Bernal Nanowire Enabled by Superthin Metal Surface Coating. <i>Small</i> , 2022, 18, . | 5.2 | 4 |
| 1055 | Controlled Synthesis of Carbon-Supported Pt-Based Electrocatalysts for Proton Exchange Membrane Fuel Cells. <i>Electrochemical Energy Reviews</i> , 2022, 5, . | 13.1 | 23 |
| 1056 | Role of heteroatom-doping in enhancing catalytic activities and the stability of single-atom catalysts for oxygen reduction and oxygen evolution reactions. <i>Nanoscale</i> , 2022, 14, 16286-16294. | 2.8 | 13 |
| 1057 | Enhanced Ageing Performance of Sulfonic Acid-Grafted Pt/C Catalysts. <i>Micromachines</i> , 2022, 13, 1825. | 1.4 | 2 |

| # | ARTICLE | IF | CITATIONS |
|------|---|------|-----------|
| 1058 | Defective nanomaterials for electrocatalysis oxygen reduction reaction. <i>Frontiers in Chemistry</i> , 0, 10, . | 1.8 | 4 |
| 1059 | The cathode catalysts of hydrogen fuel cell: From laboratory toward practical application. <i>Nano Research</i> , 2023, 16, 4365-4380. | 5.8 | 10 |
| 1060 | Titanium Carbide/Carbon-Supported Platinum Nanoparticles Boost Oxygen Reduction Reaction for Fuel Cells. <i>Journal of Electronic Materials</i> , 0, , . | 1.0 | 0 |
| 1061 | Enhancing oxygen reduction reaction of Pt-Co/C nanocatalysts via synergetic effect between Pt and Co prepared by one-pot synthesis. <i>Rare Metals</i> , 2023, 42, 146-154. | 3.6 | 13 |
| 1062 | The role of alkali metal cations and platinum-surface hydroxyl in the alkaline hydrogen evolution reaction. <i>Nature Catalysis</i> , 2022, 5, 923-933. | 16.1 | 79 |
| 1063 | Mixed-Dimensional Pt-Ni Alloy Polyhedral Nanochains as Bifunctional Electrocatalysts for Direct Methanol Fuel Cells. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 52 |
| 1064 | Atomistic understanding of Pt-based medium entropy alloys for oxygen reduction electrocatalysis based on first principles. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 160-170. | 3.8 | 4 |
| 1065 | Self-templating synthesis of Pd ₄ S hollow nanospheres as electrocatalysts for oxygen reduction reaction. <i>Nano Research</i> , 0, , . | 5.8 | 2 |
| 1066 | A Review of One-Dimensional Nanomaterials as Electrode Materials for Oxygen Reduction Reaction Electrocatalysis. <i>ChemElectroChem</i> , 2022, 9, . | 1.7 | 7 |
| 1067 | Double-atom dealloying-derived Frank partial dislocations in cobalt nanocatalysts boost metal-air batteries and fuel cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, . | 3.3 | 10 |
| 1068 | PtCu subnanoclusters epitaxial on octahedral PtCu/Pt skin matrix as ultrahigh stable cathode electrocatalysts for room-temperature hydrogen fuel cells. <i>Nano Research</i> , 2023, 16, 2252-2258. | 5.8 | 16 |
| 1069 | Role of Ni in PtNi Alloy for Modulating the Proton-Electron Transfer of Electrocatalytic Hydrogenation Revealed by the <i>In Situ</i> Raman-Rotating Disk Electrode Method. <i>ACS Catalysis</i> , 2022, 12, 14062-14071. | 5.5 | 10 |
| 1070 | Highly stable and active Pt-skinned octahedral PtCu/C for oxygen reduction reaction. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2023, 656, 130341. | 2.3 | 4 |
| 1071 | Improving the ORR performance by enhancing the Pt oxidation resistance. <i>Journal of Catalysis</i> , 2022, 416, 311-321. | 3.1 | 13 |
| 1072 | Au-Doped PtAg Nanorod Array Electrodes for Proton-Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2022, 5, 14979-14989. | 2.5 | 6 |
| 1073 | Coating Porous TiO ₂ Films on Carbon Nanotubes to Enhance the Durability of Ultrafine PtCo/CNT Nanocatalysts for the Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 51975-51982. | 4.0 | 10 |
| 1074 | Tafel Slope Analysis from Inherent Rate Constants for Oxygen Reduction Reaction Over N-doped Carbon and Fe-N-doped Carbon Electrocatalysts. <i>Catalysis Surveys From Asia</i> , 2023, 27, 84-94. | 1.0 | 3 |
| 1075 | Ordered CoPt oxygen reduction catalyst with high performance and durability. <i>Chem Catalysis</i> , 2022, 2, 3559-3572. | 2.9 | 13 |

| # | ARTICLE | IF | CITATIONS |
|------|---|------|-----------|
| 1076 | Regulating the FeN ₄ Moiety by Constructing Fe–Mo Dual-Metal Atom Sites for Efficient Electrochemical Oxygen Reduction. <i>Nano Letters</i> , 2022, 22, 9507-9515. | 4.5 | 65 |
| 1078 | Platinum based high entropy alloy oxygen reduction electrocatalysts for proton exchange membrane fuel cells. <i>Materials Today Nano</i> , 2023, 21, 100282. | 2.3 | 12 |
| 1079 | Co-generation of electricity and formate in glycerol fuel cells with a bifunctional PdPtAg alloy nanowire electrocatalyst. <i>Green Chemistry</i> , 2022, 24, 9721-9733. | 4.6 | 7 |
| 1080 | Stability challenges of carbon-supported Pt-nanoalloys as fuel cell oxygen reduction reaction electrocatalysts. <i>Chemical Communications</i> , 2022, 58, 13832-13854. | 2.2 | 12 |
| 1081 | Strain engineering of electrocatalysts for hydrogen evolution reaction. <i>Materials Horizons</i> , 2023, 10, 340-360. | 6.4 | 19 |
| 1082 | Two-dimensional template-directed synthesis of one-dimensional kink-rich Pd ₃ Pb nanowires for efficient oxygen reduction. <i>Journal of Colloid and Interface Science</i> , 2023, 634, 827-835. | 5.0 | 3 |
| 1083 | Roles of structural defects in polycrystalline platinum nanowires for enhanced oxygen reduction activity. <i>Applied Catalysis B: Environmental</i> , 2023, 324, 122268. | 10.8 | 5 |
| 1084 | FePO ₄ Supported Rh Subnano Clusters with Dual Active Sites for Efficient Hydrogenation of Quinoline under Mild Conditions. <i>Nanoscale</i> , 0, , . | 2.8 | 1 |
| 1085 | Design of Bimetallic PtFe-Based Reduced Graphene Oxide as Efficient Catalyst for Oxidation Reduction Reaction. <i>Catalysts</i> , 2022, 12, 1528. | 1.6 | 3 |
| 1086 | Pt-Based Oxygen Reduction Reaction Catalysts in Proton Exchange Membrane Fuel Cells: Controllable Preparation and Structural Design of Catalytic Layer. <i>Nanomaterials</i> , 2022, 12, 4173. | 1.9 | 12 |
| 1087 | Zinc Intercalated Lattice Expansion of Ultrafine Platinum–Nickel Oxygen Reduction Catalyst for PEMFC. <i>Advanced Functional Materials</i> , 2023, 33, . | 7.8 | 17 |
| 1088 | Template-assisted formation of atomically dispersed iron anchoring on nitrogen-doped porous carbon matrix for efficient oxygen reduction. <i>Nano Research</i> , 2023, 16, 4671-4677. | 5.8 | 2 |
| 1089 | Catalytic Properties of Molybdenum-Modified Platinum Nanoalloys toward Hydrogen Evolution, Oxygen Reduction Reaction, and Methanol Oxidation. <i>ACS Applied Energy Materials</i> , 2022, 5, 15102-15113. | 2.5 | 2 |
| 1090 | Preparation of highly dispersed FeN _x active sites for oxygen reduction reaction electrocatalyst by electrospinning and complexation. <i>Ionics</i> , 0, , . | 1.2 | 0 |
| 1091 | The emerging coupled low-PGM and PGM-free catalysts for oxygen reduction reaction. <i>Chem Catalysis</i> , 2023, 3, 100484. | 2.9 | 5 |
| 1092 | Skeletal Nanostructures Promoting Electrocatalytic Reactions with Three-Dimensional Frameworks. <i>ACS Catalysis</i> , 2023, 13, 355-374. | 5.5 | 10 |
| 1093 | Nitrogen-Doped Carbon Sponge Derived from the Self-Assembly of a Poly(amic acid) for High Performance Oxygen Reduction Reaction. <i>New Journal of Chemistry</i> , 0, , . | 1.4 | 2 |
| 1094 | Platinum nanosheets synthesized via topotactic reduction of single-layer platinum oxide nanosheets for electrocatalysis. <i>Nature Communications</i> , 2023, 14, . | 5.8 | 17 |

| # | ARTICLE | IF | CITATIONS |
|------|---|------|-----------|
| 1095 | Electrocatalytic performance of cobalt/nickel nanoparticles encapsulated by N-doped carbon nanotubes toward the oxygen reduction reaction. <i>Applied Surface Science</i> , 2023, 615, 1563-17. | 3.1 | 1 |
| 1096 | Lattice-Strain Engineering for Heterogeneous Electrocatalytic Oxygen Evolution Reaction. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 34 |
| 1097 | Tunable Aryl Alkyl Ionic Liquid Supported Synthesis of Platinum Nanoparticles and Their Catalytic Activity in the Hydrogen Evolution Reaction and in Hydrosilylation. <i>Molecules</i> , 2023, 28, 405. | 1.7 | 3 |
| 1098 | Cathode Materials for Primary Zinc-Air Battery. , 2023, , 23-66. | | 0 |
| 1099 | Arming Ru with Oxygen-Vacancy-Enriched RuO ₂ Sub-Nanometer Skin Activates Superior Bifunctionality for pH-Universal Overall Water Splitting. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 61 |
| 1100 | Towards ultralow platinum loading proton exchange membrane fuel cells. <i>Energy and Environmental Science</i> , 2023, 16, 1466-1479. | 15.6 | 43 |
| 1101 | 3D Porous Graphene-like Carbons Encaged Single-Atom-Based Pt for Ultralow Loading and High-Performance Fuel Cells. <i>ACS Catalysis</i> , 2023, 13, 1856-1862. | 5.5 | 9 |
| 1102 | Low-Coordination Trimetallic PtFeCo Nanosaws for Practical Fuel Cells. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 18 |
| 1103 | Candied Haws-Like Fe-N-C Catalysts with Broadened Carbon Interlayer Spacing for Efficient Zinc-Air Battery. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 953-962. | 4.0 | 3 |
| 1104 | Nitrogen doping to accelerate the phase transition to ordered intermetallic Pt ₃ Co catalyst for the oxygen reduction reaction in fuel cells. <i>Journal of Materials Chemistry A</i> , 2023, 11, 4078-4087. | 5.2 | 8 |
| 1105 | Model Metallic Glasses for Superior Electrocatalytic Performance in a Hydrogen Oxidation Reaction. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 6697-6707. | 4.0 | 0 |
| 1106 | Oxygen reduction performance measurements: Discrepancies against benchmarks. , 2023, 2, . | | 14 |
| 1107 | Sb ₂ S ₃ -templated synthesis of sulfur-doped Sb-N-C with hierarchical architecture and high metal loading for H ₂ O ₂ electrosynthesis. <i>Nature Communications</i> , 2023, 14, . | 5.8 | 42 |
| 1108 | Proton exchange membrane fuel cells: Recent advances, modeling, and future trends. , 2023, , 431-458. | | 1 |
| 1109 | Bifunctional Ultrathin RhRu _{0.5} -Alloy Nanowire Electrocatalysts for Hydrazine-Assisted Water Splitting. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 27 |
| 1110 | Subnanoscale Dual-Site Pd-Pt Layers Make PdPtCu Nanocrystals CO-Tolerant Bipolar Effective Electrocatalysts for Alcohol Fuel Cell Devices. <i>Nano Letters</i> , 2023, 23, 3467-3475. | 4.5 | 10 |
| 1111 | A Functionalized Heterogeneous Catalyst from Atomically Precise Pd ₁ Au ₈ Clusters Facilitates Carbon-Carbon Bond Construction. <i>Advanced Materials</i> , 2023, 35, . | 11.1 | 7 |
| 1112 | Structurally-supported PtCuCo nanoframes as efficient bifunctional catalysts for oxygen reduction and methanol oxidation reactions. <i>Journal of Colloid and Interface Science</i> , 2023, 640, 801-808. | 5.0 | 10 |

| # | ARTICLE | IF | CITATIONS |
|------|---|------|-----------|
| 1113 | Microwave-assisted sequential Pt/Al attachment on FeOOH for fabrication of highly efficient hematite photoanodes: Synergistic effect of Pt/Al co-doping and Al ₂ O ₃ passivation layer. Applied Surface Science, 2023, 623, 157035. | 3.1 | 9 |
| 1114 | Epitaxial growth of Pt-Pd bimetallic heterostructures for the oxygen reduction reaction. , 2023, 2, 100131. | | 11 |
| 1115 | Main-Group s-Block Element Lithium Atoms within Carbon Frameworks as High-Active Sites for Electrocatalytic Reduction Reactions. Advanced Functional Materials, 2023, 33, . | 7.8 | 4 |
| 1116 | Tailoring activity of iron phthalocyanine by edge-nitrogen sites induced electronic delocalization. Applied Surface Science, 2023, 624, 157154. | 3.1 | 1 |
| 1117 | Merging Platinum Single Atoms to Achieve Ultrahigh Mass Activity and Low Hydrogen Production Cost. ACS Nano, 2023, 17, 2923-2931. | 7.3 | 6 |
| 1118 | Recent advances in the anode catalyst layer for proton exchange membrane fuel cells. Renewable and Sustainable Energy Reviews, 2023, 176, 113182. | 8.2 | 15 |
| 1119 | Single-Molecule Study on the Catalytic Role of Co-O ₂ Binding in ORR by In Situ ECSTM. Journal of Physical Chemistry C, 2023, 127, 2929-2935. | 1.5 | 0 |
| 1120 | Modeling Anion Poisoning during Oxygen Reduction on Pt Near-Surface Alloys. ACS Catalysis, 2023, 13, 2735-2743. | 5.5 | 5 |
| 1122 | Tuning the Coordination Environment of Carbon-Based Single-Atom Catalysts via Doping with Multiple Heteroatoms and Their Applications in Electrocatalysis. Advanced Materials, 2023, 35, . | 11.1 | 27 |
| 1123 | Self-Assembly of Pt ₃ Co Superlattice as a Catalyst for Oxygen Reduction Reaction. Catalysts, 2023, 13, 406. | 1.6 | 1 |
| 1124 | First principles calculation study of single transition metal atom grafted Au ₂₅ as efficient electrocatalysts for OER and ORR. Molecular Catalysis, 2023, 540, 113030. | 1.0 | 0 |
| 1125 | Porous electrodes from self-assembled 3D jointed Pd polyhedra for direct formic acid fuel cells. Chemical Engineering Journal, 2023, 462, 142244. | 6.6 | 12 |
| 1126 | Enhanced Photothermal Steam Generation and Gold Using the Efficiency of Ultralight Gold Foam with Hierarchical Porosity. Langmuir, 2023, 39, 4190-4197. | 1.6 | 0 |
| 1127 | Nanostructured Electrocatalysts for Fuel Cell and Water Electrolysis Applications to Realize Sustainable Hydrogen Society. Journal of the Society of Powder Technology, Japan, 2023, 60, 16-24. | 0.0 | 0 |
| 1128 | Ordered PtCoFe Ternary Alloy Electrocatalyst Derived from Pre-Synthesized CoFe Hydroxide for Oxygen Reduction Reaction. Energy & Fuels, 2023, 37, 5478-5488. | 2.5 | 1 |
| 1129 | Coordination Chemistry of Large-Sized Yttrium Single-Atom Catalysts for Oxygen Reduction Reaction. Advanced Materials, 2023, 35, . | 11.1 | 31 |
| 1130 | Rational design of septenary high-entropy alloy for direct ethanol fuel cells. Joule, 2023, 7, 587-602. | 11.7 | 23 |
| 1131 | Experimental observation of geometric effect on the electron diffraction of quasi-one-dimensional nanostructures. Materials Today Physics, 2023, 33, 101048. | 2.9 | 2 |

| # | ARTICLE | IF | CITATIONS |
|------|---|------|-----------|
| 1132 | In Situ Structure of a Mo-Doped Pt–Ni Catalyst during Electrochemical Oxygen Reduction Resolved from Machine Learning-Based Grand Canonical Global Optimization. <i>Jacs Au</i> , 2023, 3, 1162-1175. | 3.6 | 7 |
| 1133 | Mesoporous Pt@Pt-skin Pt ₃ Ni core-shell framework nanowire electrocatalyst for efficient oxygen reduction. <i>Nature Communications</i> , 2023, 14, . | 5.8 | 38 |
| 1134 | Oxygen Evolution/Reduction Reaction Catalysts: From <i>In Situ</i> Monitoring and Reaction Mechanisms to Rational Design. <i>Chemical Reviews</i> , 2023, 123, 6257-6358. | 23.0 | 81 |
| 1135 | Dissolvable templates to prepare Pt-based porous metallic glass for the oxygen reduction reaction. <i>Nanoscale</i> , 2023, 15, 6802-6811. | 2.8 | 2 |
| 1136 | Highly Stable Pt-Based Oxygen Reduction Electrocatalysts toward Practical Fuel Cells: Progress and Perspectives. <i>Materials</i> , 2023, 16, 2590. | 1.3 | 4 |
| 1137 | Periodic Assembly of Diblock Pt–Au Heteronanowires for the Methanol Oxidation Reaction. <i>Nano Letters</i> , 2023, 23, 2758-2763. | 4.5 | 6 |
| 1138 | Bimetallic Sites for Catalysis: From Binuclear Metal Sites to Bimetallic Nanoclusters and Nanoparticles. <i>Chemical Reviews</i> , 2023, 123, 4855-4933. | 23.0 | 62 |
| 1139 | Enhancement Mechanism of Pt/Pd-Based Catalysts for Oxygen Reduction Reaction. <i>Nanomaterials</i> , 2023, 13, 1275. | 1.9 | 4 |
| 1140 | Interfacial Electron Distribution of Co Nanoparticles Supported on N-Doped Mesoporous Hollow Carbon Spheres Endows Highly Efficient ORR, OER, and HER. <i>Advanced Materials Interfaces</i> , 2023, 10, . | 1.9 | 3 |
| 1141 | Wet-chemistry synthesis of two-dimensional Pt- and Pd-based intermetallic electrocatalysts for fuel cells. <i>Nanoscale</i> , 2023, 15, 8508-8531. | 2.8 | 5 |
| 1142 | Recent advances in zinc–air batteries: self-standing inorganic nanoporous metal films as air cathodes. <i>Chemical Communications</i> , 2023, 59, 5823-5838. | 2.2 | 1 |
| 1143 | RuO ₂ -PdO nanowire networks with rich interfaces and defects supported on carbon toward the efficient alkaline hydrogen oxidation reaction. <i>Journal of Energy Chemistry</i> , 2023, 83, 255-263. | 7.1 | 8 |
| 1144 | Generation of green hydrogen using self-sustained regenerative fuel cells: Opportunities and challenges. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 28289-28314. | 3.8 | 25 |
| 1157 | Mass transport in the cathode. , 2023, , 367-391. | | 0 |
| 1158 | Low platinum-based electrocatalysts for fuel cells: status and prospects. , 2023, , 127-175. | | 0 |
| 1180 | Opportunities and challenges of strain engineering for advanced electrocatalyst design. <i>Nano Research</i> , 2023, 16, 8655-8669. | 5.8 | 6 |
| 1184 | Nanoclusters as Synthons for Unit-Cell-Size Comparable One-Dimensional Nanostructures. <i>Chemical Research in Chinese Universities</i> , 2023, 39, 568-579. | 1.3 | 1 |
| 1200 | Recent Advances on PEM Fuel Cells: From Key Materials to Membrane Electrode Assembly. <i>Electrochemical Energy Reviews</i> , 2023, 6, . | 13.1 | 12 |

| # | ARTICLE | IF | CITATIONS |
|------|---|-----|-----------|
| 1204 | Selective edge etching of Pd metallene for enhanced formic acid electrooxidation. Chemical Communications, 2023, 59, 11588-11591. | 2.2 | 1 |
| 1210 | The reformation of catalyst: From a trial-and-error synthesis to rational design. Nano Research, 0, , . | 5.8 | 16 |
| 1213 | Electrocatalysis for Proton Exchange Membrane Fuel Cells. Green Energy and Technology, 2023, , 21-42. | 0.4 | 0 |
| 1247 | A universal strategy for green and surfactant-free synthesis of noble metal nanoparticles. Chemical Communications, 2024, 60, 722-725. | 2.2 | 1 |
| 1248 | The role of high-resolution transmission electron microscopy and aberration corrected scanning transmission electron microscopy in unraveling the structureâ€“property relationships of Pt-based fuel cells electrocatalysts. Inorganic Chemistry Frontiers, 0, , . | 3.0 | 1 |
| 1255 | The fabrication and application of triphase reaction interface based on superwettability for improved reaction efficiency. Journal of Materials Chemistry A, 0, , . | 5.2 | 0 |
| 1263 | Advanced electrochemical methods for characterization of proton exchange membrane electrocatalysts. , 2024, , 49-90. | | 0 |