

# Zongping Shao

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

691  
papers

40,551  
citations

95  
h-index

166  
g-index

720  
ext. papers

47,972  
ext. citations

10.5  
avg, IF

8.15  
L-index

| #   | Paper  | IF   | Citations |
|-----|--|------|-----------|
| 691 | A high-performance cathode for the next generation of solid-oxide fuel cells. <i>Nature</i> , <b>2004</b> , 431, 170-3   | 50.4 | 2425      |
| 690 | Investigation of the permeation behavior and stability of a Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> oxygen membrane. <i>Journal of Membrane Science</i> , <b>2000</b> , 172, 177-188  | 9.6  | 862       |
| 689 | Nonstoichiometric Oxides as Low-Cost and Highly-Efficient Oxygen Reduction/Evolution Catalysts for Low-Temperature Electrochemical Devices. <i>Chemical Reviews</i> , <b>2015</b> , 115, 9869-921  | 68.1 | 631       |
| 688 | Research progress of perovskite materials in photocatalysis- and photovoltaics-related energy conversion and environmental treatment. <i>Chemical Society Reviews</i> , <b>2015</b> , 44, 5371-408   | 58.5 | 580       |
| 687 | Enhancement of Pt and Pt-alloy fuel cell catalyst activity and durability via nitrogen-modified carbon supports. <i>Energy and Environmental Science</i> , <b>2010</b> , 3, 1437   | 35.4 | 521       |
| 686 | A thermally self-sustained micro solid-oxide fuel-cell stack with high power density. <i>Nature</i> , <b>2005</b> , 435, 795-8   | 50.4 | 517       |
| 685 | Enhancing Electrocatalytic Activity of Perovskite Oxides by Tuning Cation Deficiency for Oxygen Reduction and Evolution Reactions. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 1691-1697   | 9.6  | 443       |
| 684 | Recent Progress in Metal-Organic Frameworks for Applications in Electrocatalytic and Photocatalytic Water Splitting. <i>Advanced Science</i> , <b>2017</b> , 4, 1600371  | 13.6 | 440       |
| 683 | Recent progress on sodium ion batteries: potential high-performance anodes. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 2310-2340  | 35.4 | 425       |
| 682 | Nonradical reactions in environmental remediation processes: Uncertainty and challenges. <i>Applied Catalysis B: Environmental</i> , <b>2018</b> , 224, 973-982  | 21.8 | 397       |
| 681 | Synthesis, characterization and evaluation of cation-ordered LnBaCo <sub>2</sub> O <sub>5+<math>\delta</math></sub> based materials of oxygen permeation membranes and cathodes of SOFCs. <i>Acta Materialia</i> , <b>2008</b> , 56, 4876-4889   | 8.4  | 391       |
| 680 | A comprehensive review of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> -based electrodes for lithium-ion batteries: The latest advancements and future perspectives. <i>Materials Science and Engineering Reports</i> , <b>2015</b> , 98, 1-71  | 30.9 | 389       |
| 679 | Progress in understanding and development of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> based cathodes for intermediate-temperature solid-oxide fuel cells: A review. <i>Journal of Power Sources</i> , <b>2009</b> , 192, 231-246 | 8.9  | 367       |
| 678 | Flexible Zn and Li air batteries: recent advances, challenges, and future perspectives. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 2056-2080  | 35.4 | 353       |
| 677 | SrNb <sub>0.1</sub> Co <sub>0.7</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> perovskite as a next-generation electrocatalyst for oxygen evolution in alkaline solution. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 3897-901                                | 16.4 | 345       |
| 676 | Progress in solid oxide fuel cells with nickel-based anodes operating on methane and related fuels. <i>Chemical Reviews</i> , <b>2013</b> , 113, 8104-51   | 68.1 | 342       |
| 675 | A Perovskite Electrocatalyst for Efficient Hydrogen Evolution Reaction. <i>Advanced Materials</i> , <b>2016</b> , 28, 6442-8   | 24   | 315       |

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| 674 | Advanced synthesis of materials for intermediate-temperature solid oxide fuel cells. <i>Progress in Materials Science</i> , <b>2012</b> , 57, 804-874   | 42.2 | 306 |
| 673 | Intermediate-temperature electrochemical performance of a polycrystalline PrBaCo <sub>2</sub> O <sub>5+<math>\delta</math></sub> cathode on samarium-doped ceria electrolyte. <i>Journal of Power Sources</i> , <b>2009</b> , 188, 96-105   | 8.9  | 282 |
| 672 | Surface controlled generation of reactive radicals from persulfate by carbocatalysis on nanodiamonds. <i>Applied Catalysis B: Environmental</i> , <b>2016</b> , 194, 7-15   | 21.8 | 277 |
| 671 | Insights into perovskite-catalyzed peroxymonosulfate activation: Maneuverable cobalt sites for promoted evolution of sulfate radicals. <i>Applied Catalysis B: Environmental</i> , <b>2018</b> , 220, 626-634   | 21.8 | 274 |
| 670 | Recent Advances and Prospective in Ruthenium-Based Materials for Electrochemical Water Splitting. <i>ACS Catalysis</i> , <b>2019</b> , 9, 9973-10011  | 13.1 | 269 |
| 669 | A Perovskite Nanorod as Bifunctional Electrocatalyst for Overall Water Splitting. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602122   | 21.8 | 262 |
| 668 | Advances in non-enzymatic glucose sensors based on metal oxides. <i>Journal of Materials Chemistry B</i> , <b>2016</b> , 4, 7333-7349   | 7.3  | 252 |
| 667 | Recent advances in nanostructured metal nitrides for water splitting. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 19912-19933  | 13   | 243 |
| 666 | The use of nitrogen-doped graphene supporting Pt nanoparticles as a catalyst for methanol electrocatalytic oxidation. <i>Carbon</i> , <b>2013</b> , 52, 181-192   | 10.4 | 242 |
| 665 | Molten salt synthesis of nitrogen-doped carbon with hierarchical pore structures for use as high-performance electrodes in supercapacitors. <i>Carbon</i> , <b>2015</b> , 93, 48-58   | 10.4 | 240 |
| 664 | Ba effect in doped Sr(Co <sub>0.8</sub> Fe <sub>0.2</sub> )O <sub>3-<math>\delta</math></sub> on the phase structure and oxygen permeation properties of the dense ceramic membranes. <i>Separation and Purification Technology</i> , <b>2001</b> , 25, 419-429                     | 8.3  | 238 |
| 663 | Enhancing Electrocatalytic Activity for Hydrogen Evolution by Strongly Coupled Molybdenum [email protected] Carbon Porous Nano-Octahedrons. <i>ACS Catalysis</i> , <b>2017</b> , 7, 3540-3547   | 13.1 | 235 |
| 662 | Facile Synthesis of Nanocrystalline TiO <sub>2</sub> Mesoporous Microspheres for Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 2529-2536   | 3.8  | 229 |
| 661 | Performance of a mixed-conducting ceramic membrane reactor with high oxygen permeability for methane conversion. <i>Journal of Membrane Science</i> , <b>2001</b> , 183, 181-192  | 9.6  | 209 |
| 660 | A High-Performance Electrocatalyst for Oxygen Evolution Reaction: LiCo <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>2</sub> . <i>Advanced Materials</i> , <b>2015</b> , 27, 7150-5   | 24   | 205 |
| 659 | Zirconium doping effect on the performance of proton-conducting BaZr <sub>y</sub> Ce <sub>0.8-y</sub> Y <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> (0.0 $\leq$ $\delta$ $\leq$ 0.8) for fuel cell applications. <i>Journal of Power Sources</i> , <b>2009</b> , 193, 400-407 | 8.9  | 202 |
| 658 | Re-evaluation of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> perovskite as oxygen semi-permeable membrane. <i>Journal of Membrane Science</i> , <b>2007</b> , 291, 148-156   | 9.6  | 202 |
| 657 | Phosphorus-Doped Perovskite Oxide as Highly Efficient Water Oxidation Electrocatalyst in Alkaline Solution. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5862-5872  | 15.6 | 199 |

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| 656 | Perovskite/Carbon Composites: Applications in Oxygen Electrocatalysis. <i>Small</i> , <b>2017</b> , 13, 1603793   | 11   | 197 |
| 655 | Co-doping Strategy for Developing Perovskite Oxides as Highly Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>Advanced Science</i> , <b>2016</b> , 3, 1500187  | 13.6 | 196 |
| 654 | Nitrogen-doped simple and complex oxides for photocatalysis: A review. <i>Progress in Materials Science</i> , <b>2018</b> , 92, 33-63   | 42.2 | 189 |
| 653 | Synthesis of pristine and carbon-coated Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> and their low-temperature electrochemical performance. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 4997-5004   | 8.9  | 187 |
| 652 | Mixed Conducting Perovskite Materials as Superior Catalysts for Fast Aqueous-Phase Advanced Oxidation: A Mechanistic Study. <i>ACS Catalysis</i> , <b>2017</b> , 7, 388-397   | 13.1 | 186 |
| 651 | Evaluation of A-site cation-deficient (Ba <sub>0.5</sub> Sr <sub>0.5</sub> ) <sub>1-x</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-x</sub> (x>0) perovskite as a solid-oxide fuel cell cathode. <i>Journal of Power Sources</i> , <b>2008</b> , 182, 24-31  | 8.9  | 186 |
| 650 | Molecular Design of Mesoporous NiCo <sub>2</sub> O <sub>4</sub> and NiCo <sub>2</sub> S <sub>4</sub> with Sub-Micrometer-Polyhedron Architectures for Efficient Pseudocapacitive Energy Storage. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1701229 | 15.6 | 185 |
| 649 | A porous LiFePO <sub>4</sub> and carbon nanotube composite. <i>Chemical Communications</i> , <b>2010</b> , 46, 7151-3   | 5.8  | 178 |
| 648 | Advances in Cathode Materials for Solid Oxide Fuel Cells: Complex Oxides without Alkaline Earth Metal Elements. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500537   | 21.8 | 169 |
| 647 | Recent Advances in Novel Nanostructuring Methods of Perovskite Electrocatalysts for Energy-Related Applications. <i>Small Methods</i> , <b>2018</b> , 2, 1800071  | 12.8 | 169 |
| 646 | Recent Progress on Advanced Materials for Solid-Oxide Fuel Cells Operating Below 500 °C. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700132  | 24   | 167 |
| 645 | Direct evidence of boosted oxygen evolution over perovskite by enhanced lattice oxygen participation. <i>Nature Communications</i> , <b>2020</b> , 11, 2002   | 17.4 | 166 |
| 644 | Promotion of Oxygen Reduction by Exsolved Silver Nanoparticles on a Perovskite Scaffold for Low-Temperature Solid Oxide Fuel Cells. <i>Nano Letters</i> , <b>2016</b> , 16, 512-8   | 11.5 | 164 |
| 643 | Recent advances in the interface engineering of solid-state Li-ion batteries with artificial buffer layers: challenges, materials, construction, and characterization. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 1780-1804                      | 35.4 | 163 |
| 642 | An Amorphous Nickel-Iron-Based Electrocatalyst with Unusual Local Structures for Ultrafast Oxygen Evolution Reaction. <i>Advanced Materials</i> , <b>2019</b> , 31, e1900883  | 24   | 161 |
| 641 | Assessment of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>1-y</sub> FeyO <sub>3</sub> (y=0.0-1.0) for prospective application as cathode for IT-SOFCs or oxygen permeating membrane. <i>Electrochimica Acta</i> , <b>2007</b> , 52, 7343-7351                     | 6.7  | 160 |
| 640 | Nanodiamonds in sp <sup>2</sup> /sp <sup>3</sup> configuration for radical to nonradical oxidation: Core-shell layer dependence. <i>Applied Catalysis B: Environmental</i> , <b>2018</b> , 222, 176-181   | 21.8 | 157 |
| 639 | La-doped BaFeO <sub>3</sub> perovskite as a cobalt-free oxygen reduction electrode for solid oxide fuel cells with oxygen-ion conducting electrolyte. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 15071   |      | 156 |

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|-----|---|------|-----|
| 638 | Metal oxide-based materials as an emerging family of hydrogen evolution electrocatalysts. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 3361-3392   | 35.4 | 151 |
| 637 | Fundamental Understanding of Photocurrent Hysteresis in Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1803017   | 21.8 | 148 |
| 636 | A niobium and tantalum co-doped perovskite cathode for solid oxide fuel cells operating below 500 °C. <i>Nature Communications</i> , <b>2017</b> , 8, 13990   | 17.4 | 144 |
| 635 | Self-Catalyzed Growth of Co, N-Codoped CNTs on Carbon-Encased CoS <sub>x</sub> Surface: A Noble-Metal-Free Bifunctional Oxygen Electrocatalyst for Flexible Solid Zn/Air Batteries. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1904481  | 15.6 | 144 |
| 634 | Developing a "Water-Defendable" and "Dendrite-Free" Lithium-Metal Anode Using a Simple and Promising GeCl Pretreatment Method. <i>Advanced Materials</i> , <b>2018</b> , 30, e1705711   | 24   | 142 |
| 633 | Facile spray-drying/pyrolysis synthesis of core-shell structure graphite/silicon-porous carbon composite as a superior anode for Li-ion batteries. <i>Journal of Power Sources</i> , <b>2014</b> , 248, 721-728   | 8.9  | 141 |
| 632 | Synthesis, oxygen permeation study and membrane performance of a Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-δ</sub> oxygen-permeable dense ceramic reactor for partial oxidation of methane to syngas. <i>Separation and Purification Technology</i> , <b>2001</b> , 25, 97-116 | 8.3  | 141 |
| 631 | A new symmetric solid-oxide fuel cell with La <sub>0.8</sub> Sr <sub>0.2</sub> Sc <sub>0.2</sub> Mn <sub>0.8</sub> O <sub>3-δ</sub> perovskite oxide as both the anode and cathode. <i>Acta Materialia</i> , <b>2009</b> , 57, 1165-1175  | 8.4  | 140 |
| 630 | Bigger is Surprisingly Better: Agglomerates of Larger RuP Nanoparticles Outperform Benchmark Pt Nanocatalysts for the Hydrogen Evolution Reaction. <i>Advanced Materials</i> , <b>2018</b> , 30, e1800047   | 24   | 139 |
| 629 | Evaluation of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-δ</sub> as a potential cathode for an anode-supported proton-conducting solid-oxide fuel cell. <i>Journal of Power Sources</i> , <b>2008</b> , 180, 15-22  | 8.9  | 138 |
| 628 | Perovskite Oxide Based Electrodes for High-Performance Photoelectrochemical Water Splitting. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 136-152   | 16.4 | 135 |
| 627 | Two orders of magnitude enhancement in oxygen evolution reactivity on amorphous BaSrCoFeO nanofilms with tunable oxidation state. <i>Science Advances</i> , <b>2017</b> , 3, e1603206   | 14.3 | 134 |
| 626 | Binder-free H-MoO <sub>3</sub> nanobelt electrode for lithium-ion batteries utilizing van der Waals forces for film formation and connection with current collector. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 4736  | 13   | 133 |
| 625 | Anion Doping: A New Strategy for Developing High-Performance Perovskite-Type Cathode Materials of Solid Oxide Fuel Cells. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1700242   | 21.8 | 132 |
| 624 | Water Splitting with an Enhanced Bifunctional Double Perovskite. <i>ACS Catalysis</i> , <b>2018</b> , 8, 364-371  | 13.1 | 132 |
| 623 | Self-Assembled Triple-Conducting Nanocomposite as a Superior Protonic Ceramic Fuel Cell Cathode. <i>Joule</i> , <b>2019</b> , 3, 2842-2853  | 27.8 | 127 |
| 622 | Surface exchange and bulk diffusion properties of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-δ</sub> mixed conductor. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 6948-6956   | 6.7  | 124 |
| 621 | Double Perovskites in Catalysis, Electrocatalysis, and Photo(electro)catalysis. <i>Trends in Chemistry</i> , <b>2019</b> , 1, 410-424   | 14.8 | 123 |

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| 620 | Research progress and materials selection guidelines on mixed conducting perovskite-type ceramic membranes for oxygen production. <i>RSC Advances</i> , <b>2011</b> , 1, 1661  | 3.7  | 123 |
| 619 | High performance cobalt-free perovskite cathode for intermediate temperature solid oxide fuel cells. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 9619  |      | 123 |
| 618 | Boosting Oxygen Evolution Reaction by Creating Both Metal Ion and Lattice-Oxygen Active Sites in a Complex Oxide. <i>Advanced Materials</i> , <b>2020</b> , 32, e1905025   | 24   | 122 |
| 617 | Combustion synthesis of high-performance Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> for secondary Li-ion battery. <i>Ceramics International</i> , <b>2009</b> , 35, 1757-1768   | 5.1  | 121 |
| 616 | Unusual synergistic effect in layered Ruddlesden-Popper oxide enables ultrafast hydrogen evolution. <i>Nature Communications</i> , <b>2019</b> , 10, 149   | 17.4 | 116 |
| 615 | A novel efficient oxide electrode for electrocatalytic oxygen reduction at 400-600 degrees C. <i>Chemical Communications</i> , <b>2008</b> , 5791-3  | 5.8  | 115 |
| 614 | Efficient stabilization of cubic perovskite SrCoO <sub>3</sub> by B-site low concentration scandium doping combined with sol-gel synthesis. <i>Journal of Alloys and Compounds</i> , <b>2008</b> , 455, 465-470                  | 5.7  | 114 |
| 613 | Advances in three-dimensional graphene-based materials: configurations, preparation and application in secondary metal (Li, Na, K, Mg, Al)-ion batteries. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 2030-2053  | 35.4 | 113 |
| 612 | A new carbon fuel cell with high power output by integrating with in situ catalytic reverse Boudouard reaction. <i>Electrochemistry Communications</i> , <b>2009</b> , 11, 1265-1268   | 5.1  | 112 |
| 611 | Metal-organic frameworks derived porous carbon, metal oxides and metal sulfides-based compounds for supercapacitors application. <i>Energy Storage Materials</i> , <b>2020</b> , 26, 1-22  | 19.4 | 110 |
| 610 | Synthesis of nanocrystalline conducting composite oxides based on a non-ion selective combined complexing process for functional applications. <i>Journal of Alloys and Compounds</i> , <b>2006</b> , 426, 368-374               | 5.7  | 109 |
| 609 | Systematic Study of Oxygen Evolution Activity and Stability on LaSr FeO Perovskite Electrocatalysts in Alkaline Media. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 11715-11721                             | 9.5  | 107 |
| 608 | Process investigation, electrochemical characterization and optimization of LiFePO <sub>4</sub> /C composite from mechanical activation using sucrose as carbon source. <i>Electrochimica Acta</i> , <b>2009</b> , 54, 2861-2868 | 6.7  | 106 |
| 607 | Nitrogen- and TiN-modified Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> : one-step synthesis and electrochemical performance optimization. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 17773                    |      | 104 |
| 606 | Co O Nanosheets as Active Material for Hybrid Zn Batteries. <i>Small</i> , <b>2018</b> , 14, e1800225  | 11   | 103 |
| 605 | Systematic investigation on new SrCo <sub>1-x</sub> NbyO <sub>3</sub> ceramic membranes with high oxygen semi-permeability. <i>Journal of Membrane Science</i> , <b>2008</b> , 323, 436-443                                      | 9.6  | 103 |
| 604 | Recent Advances in Perovskite Oxides as Electrode Materials for Nonaqueous Lithium-Oxygen Batteries. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602674   | 21.8 | 102 |
| 603 | Boosting Oxygen Reduction Reaction Activity of Palladium by Stabilizing Its Unusual Oxidation States in Perovskite. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 3048-3054  | 9.6  | 102 |



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| 602 | Barium- and strontium-enriched $(\text{Ba}_{0.5}\text{Sr}_{0.5})_{1+x}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ oxides as high-performance cathodes for intermediate-temperature solid-oxide fuel cells. <i>Acta Materialia</i> , <b>2008</b> , 56, 2687-2698 | 8.4  | 101 |
| 601 | $\text{SrCo}_{0.9}\text{Ti}_{0.1}\text{O}_{3-\delta}$ As a New Electrocatalyst for the Oxygen Evolution Reaction in Alkaline Electrolyte with Stable Performance. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 17663-70                            | 9.5  | 97  |
| 600 | Novel $\text{SrSc}_{0.2}\text{Co}_{0.8}\text{O}_{3-\delta}$ As a cathode material for low temperature solid-oxide fuel cell. <i>Electrochemistry Communications</i> , <b>2008</b> , 10, 1647-1651  | 5.1  | 97  |
| 599 | Thermal-expansion offset for high-performance fuel cell cathodes. <i>Nature</i> , <b>2021</b> , 591, 246-251   | 50.4 | 97  |
| 598 | Progress and Prospects in Symmetrical Solid Oxide Fuel Cells with Two Identical Electrodes. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1500188  | 21.8 | 96  |
| 597 | Properties and performance of A-site deficient $(\text{Ba}_{0.5}\text{Sr}_{0.5})_{1-x}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ for oxygen permeating membrane. <i>Journal of Membrane Science</i> , <b>2007</b> , 306, 318-328                               | 9.6  | 96  |
| 596 | Rationally Designed Hierarchically Structured Tungsten Nitride and Nitrogen-Rich Graphene-Like Carbon Nanocomposite as Efficient Hydrogen Evolution Electrocatalyst. <i>Advanced Science</i> , <b>2018</b> , 5, 1700603  | 13.6 | 95  |
| 595 | Investigation on POM reaction in a new perovskite membrane reactor. <i>Catalysis Today</i> , <b>2001</b> , 67, 3-13  | 5.3  | 94  |
| 594 | High-Performance GeTe-Based Thermoelectrics: from Materials to Devices. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2000367   | 21.8 | 94  |
| 593 | Plasma activation and atomic layer deposition of $\text{TiO}_2$ on polypropylene membranes for improved performances of lithium-ion batteries. <i>Journal of Membrane Science</i> , <b>2014</b> , 458, 217-224   | 9.6  | 93  |
| 592 | $\text{BaNb}_{0.05}\text{Fe}_{0.95}\text{O}_{3-\delta}$ As a new oxygen reduction electrocatalyst for intermediate temperature solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 9781   | 13   | 93  |
| 591 | Cobalt Oxide and Cobalt-Graphitic Carbon Core-Shell Based Catalysts with Remarkably High Oxygen Reduction Reaction Activity. <i>Advanced Science</i> , <b>2016</b> , 3, 1600060  | 13.6 | 92  |
| 590 | Facile mechanochemical synthesis of nano $\text{SnO}_2$ /graphene composite from coarse metallic Sn and graphite oxide: an outstanding anode material for lithium-ion batteries. <i>Chemistry - A European Journal</i> , <b>2014</b> , 20, 4055-63                     | 4.8  | 90  |
| 589 | Simultaneous Power Conversion Efficiency and Stability Enhancement of $\text{Cs}_2\text{AgBiBr}_6$ Lead-Free Inorganic Perovskite Solar Cell through Adopting a Multifunctional Dye Interlayer. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2001557       | 15.6 | 90  |
| 588 | Scalable synthesis of self-standing sulfur-doped flexible graphene films as recyclable anode materials for low-cost sodium-ion batteries. <i>Carbon</i> , <b>2016</b> , 107, 67-73   | 10.4 | 89  |
| 587 | Facile synthesis of nitrogen-doped carbon nanotubes encapsulating nickel cobalt alloys 3D networks for oxygen evolution reaction in an alkaline solution. <i>Journal of Power Sources</i> , <b>2017</b> , 338, 26-33   | 8.9  | 89  |
| 586 | Trapping sulfur in hierarchically porous, hollow indented carbon spheres: a high-performance cathode for lithium-sulfur batteries. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 9526-9535  | 13   | 87  |
| 585 | Recent Advances in Metal-Organic Framework Derivatives as Oxygen Catalysts for Zinc-Air Batteries. <i>Batteries and Supercaps</i> , <b>2019</b> , 2, 272-289   | 5.6  | 87  |

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|-----|--|------|----|
| 584 | A Universal Strategy to Design Superior Water-Splitting Electrocatalysts Based on Fast In Situ Reconstruction of Amorphous Nanofilm Precursors. <i>Advanced Materials</i> , <b>2018</b> , 30, e1804333   | 24   | 86 |
| 583 | Synthesis and oxygen permeation study of novel perovskite-type BaBixCo <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3-<math>\delta</math></sub> ceramic membranes. <i>Journal of Membrane Science</i> , <b>2000</b> , 164, 167-176  | 9.6  | 85 |
| 582 | Flexible, Flame-Resistant, and Dendrite-Impermeable Gel-Polymer Electrolyte for Li-O <sub>2</sub> /Air Batteries Workable Under Hurdle Conditions. <i>Small</i> , <b>2018</b> , 14, e1801798   | 11   | 83 |
| 581 | A Comparative Study of Oxygen Reduction Reaction on Bi- and La-Doped SrFeO <sub>3</sub> Perovskite Cathodes. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, B132   | 3.9  | 83 |
| 580 | Facile synthesis of a MoO <sub>2</sub> /Mo <sub>2</sub> C <sub>3</sub> composite and its application as favorable anode material for lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2016</b> , 307, 552-560   | 8.9  | 82 |
| 579 | Green synthesis of mesoporous ZnFe <sub>2</sub> O <sub>4</sub> /C composite microspheres as superior anode materials for lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2014</b> , 258, 305-313   | 8.9  | 80 |
| 578 | Systematic evaluation of Co-free LnBaFe <sub>2</sub> O <sub>5+<math>\delta</math></sub> (Ln=Lanthanides or Y) oxides towards the application as cathodes for intermediate-temperature solid oxide fuel cells. <i>Electrochimica Acta</i> , <b>2012</b> , 78, 466-474                     | 6.7  | 80 |
| 577 | Electrochemical performance of silver-modified Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> cathodes prepared via electroless deposition. <i>Electrochimica Acta</i> , <b>2008</b> , 53, 4370-4380                         | 6.7  | 80 |
| 576 | High power-density single-chamber fuel cells operated on methane. <i>Journal of Power Sources</i> , <b>2006</b> , 162, 589-596   | 8.9  | 80 |
| 575 | Activity and Stability of Ruddlesden-Popper-Type La <sub>(n+1)</sub> Ni <sub>(n)</sub> O <sub>(3n+1)</sub> (n=1, 2, 3, and $\infty$ ) Electrocatalysts for Oxygen Reduction and Evolution Reactions in Alkaline Media. <i>Chemistry - A European Journal</i> , <b>2016</b> , 22, 2719-27 | 4.8  | 80 |
| 574 | Highly flexible self-standing film electrode composed of mesoporous rutile TiO <sub>2</sub> /C nanofibers for lithium-ion batteries. <i>Electrochimica Acta</i> , <b>2012</b> , 85, 636-643  | 6.7  | 78 |
| 573 | Properties and performance of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> /Sm <sub>0.2</sub> Ce <sub>0.8</sub> O <sub>1.9</sub> composite cathode. <i>Journal of Power Sources</i> , <b>2008</b> , 179, 60-68             | 8.9  | 78 |
| 572 | Boosting performance of lanthanide magnetism perovskite for advanced oxidation through lattice doping with catalytically inert element. <i>Chemical Engineering Journal</i> , <b>2019</b> , 355, 721-730   | 14.7 | 78 |
| 571 | An A-site-deficient perovskite offers high activity and stability for low-temperature solid-oxide fuel cells. <i>ChemSusChem</i> , <b>2013</b> , 6, 2249-54  | 8.3  | 77 |
| 570 | Proton-conducting fuel cells operating on hydrogen, ammonia and hydrazine at intermediate temperatures. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 2637-2642  | 6.7  | 77 |
| 569 | Recent advances in anion-doped metal oxides for catalytic applications. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 7280-7300   | 13   | 76 |
| 568 | Highly Defective Layered Double Perovskite Oxide for Efficient Energy Storage via Reversible Pseudocapacitive Oxygen-Anion Intercalation. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702604  | 21.8 | 76 |
| 567 | A universal and facile way for the development of superior bifunctional electrocatalysts for oxygen reduction and evolution reactions utilizing the synergistic effect. <i>Chemistry - A European Journal</i> , <b>2014</b> , 20, 15533-42   | 4.8  | 76 |



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| 566 | Different Effect of the Atmospheres on the Phase Formation and Performance of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Prepared from Ball-Milling-Assisted Solid-Phase Reaction with Pristine and Carbon-Precoated TiO <sub>2</sub> as Starting Materials. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 4943-4952      | 3.8  | 76 |
| 565 | Enhancing Electrode Performance by Exsolved Nanoparticles: A Superior Cobalt-Free Perovskite Electrocatalyst for Solid Oxide Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 35308-35314  | 9.5  | 76 |
| 564 | Design of Perovskite Oxides as Anion-Intercalation-Type Electrodes for Supercapacitors: Cation Leaching Effect. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 23774-83  | 9.5  | 75 |
| 563 | Screening highly active perovskites for hydrogen-evolving reaction via unifying ionic electronegativity descriptor. <i>Nature Communications</i> , <b>2019</b> , 10, 3755  | 17.4 | 75 |
| 562 | Surprisingly high activity for oxygen reduction reaction of selected oxides lacking long oxygen-ion diffusion paths at intermediate temperatures: a case study of cobalt-free BaFeO(3- $\delta$ ). <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 11180-9  | 9.5  | 75 |
| 561 | Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> // LaCoO <sub>3</sub> composite cathode for Sm <sub>0.2</sub> Ce <sub>0.8</sub> O <sub>1.9</sub> -electrolyte based intermediate-temperature solid-oxide fuel cells. <i>Journal of Power Sources</i> , <b>2007</b> , 168, 330-337 | 8.9  | 75 |
| 560 | Facile Synthesis of a 3D Nanoarchitected Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Electrode for Ultrafast Energy Storage. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1500924   | 21.8 | 74 |
| 559 | Anode-supported ScSZ-electrolyte SOFC with whole cell materials from combined EDTA-triurate complexing synthesis process. <i>Journal of Power Sources</i> , <b>2007</b> , 172, 704-712   | 8.9  | 74 |
| 558 | Structural and oxygen-transport studies of double perovskites PrBa <sub>1-x</sub> Co <sub>2</sub> O <sub>5+<math>\delta</math></sub> (x = 0.00, 0.05, and 0.10) toward their application as superior oxygen reduction electrodes. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 20520-20529                                     | 13   | 73 |
| 557 | Advanced Symmetric Solid Oxide Fuel Cell with an Infiltrated K <sub>2</sub> NiF <sub>4</sub> -Type La <sub>2</sub> NiO <sub>4</sub> Electrode. <i>Energy &amp; Fuels</i> , <b>2014</b> , 28, 356-362   | 4.1  | 73 |
| 556 | Novel CO <sub>2</sub> -tolerant ion-transporting ceramic membranes with an external short circuit for oxygen separation at intermediate temperatures. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 5257-5264   | 35.4 | 73 |
| 555 | Cellulose-assisted combustion synthesis of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> adopting anatase TiO <sub>2</sub> solid as raw material with high electrochemical performance. <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 477, 665-672  | 5.7  | 73 |
| 554 | Mesoporous and Nanostructured TiO layer with Ultra-High Loading on Nitrogen-Doped Carbon Foams as Flexible and Free-Standing Electrodes for Lithium-Ion Batteries. <i>Small</i> , <b>2016</b> , 12, 6724-6734  | 11   | 72 |
| 553 | Evaluation of the CO <sub>2</sub> Poisoning Effect on a Highly Active Cathode SrSc <sub>0.175</sub> Nb <sub>0.025</sub> Co <sub>0.8</sub> O(3- $\delta$ ) in the Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 3003-11   | 9.5  | 71 |
| 552 | Bifunctionality from Synergy: CoP Nanoparticles Embedded in Amorphous CoO <sub>x</sub> Nanoplates with Heterostructures for Highly Efficient Water Electrolysis. <i>Advanced Science</i> , <b>2018</b> , 5, 1800514  | 13.6 | 71 |
| 551 | A new cathode for solid oxide fuel cells capable of in situ electrochemical regeneration. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 15343  |      | 71 |
| 550 | Ruddlesden-Popper perovskites in electrocatalysis. <i>Materials Horizons</i> , <b>2020</b> , 7, 2519-2565  | 14.4 | 71 |
| 549 | Porous TiO <sub>2</sub> (B)/anatase microspheres with hierarchical nano and microstructures for high-performance lithium-ion batteries. <i>Electrochimica Acta</i> , <b>2013</b> , 97, 386-392   | 6.7  | 70 |

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| 548 | Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> /Sn composite anodes for lithium-ion batteries: Synthesis and electrochemical performance. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 8244-8250   | 8.9  | 70 |
| 547 | Advances in Porous Perovskites: Synthesis and Electrocatalytic Performance in Fuel Cells and Metal-Air Batteries. <i>Energy and Environmental Materials</i> , <b>2020</b> , 3, 121-145  | 13   | 69 |
| 546 | A 3D porous architecture composed of TiO <sub>2</sub> nanotubes connected with a carbon nanofiber matrix for fast energy storage. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 12310  | 13   | 69 |
| 545 | Assessment of PrBaCo <sub>2</sub> O <sub>5+δ</sub> /Sm <sub>0.2</sub> Ce <sub>0.8</sub> O <sub>1.9</sub> composites prepared by physical mixing as electrodes of solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 7187-7195                     | 8.9  | 69 |
| 544 | Perovskite SrCo <sub>0.9</sub> Nb <sub>0.1</sub> O <sub>3-δ</sub> as an Anion-Intercalated Electrode Material for Supercapacitors with Ultrahigh Volumetric Energy Density. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 9576-9                     | 16.4 | 68 |
| 543 | Stable direct-methane solid oxide fuel cells with calcium-oxide-modified nickel-based anodes operating at reduced temperatures. <i>Applied Energy</i> , <b>2016</b> , 164, 563-571  | 10.7 | 68 |
| 542 | Non-aqueous hybrid supercapacitors fabricated with mesoporous TiO <sub>2</sub> microspheres and activated carbon electrodes with superior performance. <i>Journal of Power Sources</i> , <b>2014</b> , 253, 80-89   | 8.9  | 68 |
| 541 | In situ catalyzed Boudouard reaction of coal char for solid oxide-based carbon fuel cells with improved performance. <i>Applied Energy</i> , <b>2015</b> , 141, 200-208   | 10.7 | 68 |
| 540 | Performance of PrBaCo <sub>2</sub> O <sub>(5+δ)</sub> as a proton-conducting solid-oxide fuel cell cathode. <i>Journal of Physical Chemistry A</i> , <b>2010</b> , 114, 3764-72   | 2.8  | 68 |
| 539 | Nano La <sub>0.6</sub> Ca <sub>0.4</sub> Fe <sub>0.8</sub> Ni <sub>0.2</sub> O <sub>3-δ</sub> -decorated porous doped ceria as a novel cobalt-free electrode for Symmetrical Solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 19526-19535 | 13   | 67 |
| 538 | From Paper to Paper-like Hierarchical Anatase TiO <sub>2</sub> Film Electrode for High-Performance Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 17440-17447   | 3.8  | 67 |
| 537 | Designing High-Valence Metal Sites for Electrochemical Water Splitting. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2009779  | 15.6 | 67 |
| 536 | Nanostructured Co-Mn containing perovskites for degradation of pollutants: Insight into the activity and stability. <i>Journal of Hazardous Materials</i> , <b>2018</b> , 349, 177-185  | 12.8 | 66 |
| 535 | A comparative study of Sm <sub>0.5</sub> Sr <sub>0.5</sub> MO <sub>3-δ</sub> (M = Co and Mn) as oxygen reduction electrodes for solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 4377-4387                                       | 6.7  | 66 |
| 534 | High-Quality Ruddlesden-Popper Perovskite Film Formation for High-Performance Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2021</b> , 33, e2002582  | 24   | 66 |
| 533 | Searching General Sufficient-and-Necessary Conditions for Ultrafast Hydrogen-Evolving Electrocatalysis. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900704  | 15.6 | 65 |
| 532 | Structural, electrical and electrochemical characterizations of SrNb <sub>0.1</sub> Co <sub>0.9</sub> O <sub>3-δ</sub> as a cathode of solid oxide fuel cells operating below 600 °C. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 1356-1366         | 6.7  | 65 |
| 531 | SrNb <sub>0.1</sub> Co <sub>0.7</sub> Fe <sub>0.2</sub> O <sub>3-δ</sub> Perovskite as a Next-Generation Electrocatalyst for Oxygen Evolution in Alkaline Solution. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 3969-3973   | 3.6  | 64 |

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| 530 | Electrospinning based fabrication and performance improvement of film electrodes for lithium-ion batteries composed of TiO <sub>2</sub> hollow fibers. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 15041                                     |      | 64 |
| 529 | Evaluation and optimization of Bi <sub>1-x</sub> Sr <sub>x</sub> FeO <sub>3-δ</sub> perovskites as cathodes of solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 3179-3186                                       | 6.7  | 64 |
| 528 | Novel mixed conducting SrSc <sub>0.05</sub> Co <sub>0.95</sub> O <sub>3-δ</sub> ceramic membrane for oxygen separation. <i>AICHE Journal</i> , <b>2007</b> , 53, 3116-3124   | 3.6  | 64 |
| 527 | LSCF Nanopowder from Cellulose-Glycine-Nitrate Process and its Application in Intermediate-Temperature Solid-Oxide Fuel Cells. <i>Journal of the American Ceramic Society</i> , <b>2008</b> , 91, 1155-1162  | 3.8  | 64 |
| 526 | Boosting oxygen reduction/evolution reaction activities with layered perovskite catalysts. <i>Chemical Communications</i> , <b>2016</b> , 52, 10739-42   | 5.8  | 64 |
| 525 | Electric power and synthesis gas co-generation from methane with zero waste gas emission. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 1792-7  | 16.4 | 63 |
| 524 | Anode-supported thin-film fuel cells operated in a single chamber configuration 2T-I-12. <i>Solid State Ionics</i> , <b>2004</b> , 175, 39-46  | 3.3  | 63 |
| 523 | Toward Reducing the Operation Temperature of Solid Oxide Fuel Cells: Our Past 15 Years of Efforts in Cathode Development. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 15169-15194  | 4.1  | 63 |
| 522 | Multifunctional Iron Oxide Nanoflake/Graphene Composites Derived from Mechanochemical Synthesis for Enhanced Lithium Storage and Electrocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 14446-55                               | 9.5  | 62 |
| 521 | A novel method to enhance rate performance of an Al-doped Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> electrode by post-synthesis treatment in liquid formaldehyde at room temperature. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 8013 |      | 62 |
| 520 | Si/C composite lithium-ion battery anodes synthesized from coarse silicon and citric acid through combined ball milling and thermal pyrolysis. <i>Electrochimica Acta</i> , <b>2010</b> , 55, 3876-3883  | 6.7  | 62 |
| 519 | Cobalt-free SrNbxFe <sub>1-x</sub> O <sub>3-δ</sub> (x = 0.05, 0.1 and 0.2) perovskite cathodes for intermediate temperature solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2015</b> , 298, 209-216  | 8.9  | 61 |
| 518 | Probing CO <sub>2</sub> reaction mechanisms and effects on the SrNb <sub>0.1</sub> Co <sub>0.9-x</sub> FexO <sub>3-δ</sub> cathodes for solid oxide fuel cells. <i>Applied Catalysis B: Environmental</i> , <b>2015</b> , 172-173, 52-57                   | 21.8 | 61 |
| 517 | Synthesis of well-crystallized Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> nanoplates for lithium-ion batteries with outstanding rate capability and cycling stability. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 13233               | 13   | 61 |
| 516 | High-performance non-enzymatic perovskite sensor for hydrogen peroxide and glucose electrochemical detection. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 244, 482-491  | 8.5  | 60 |
| 515 | New reduced-temperature ceramic fuel cells with dual-ion conducting electrolyte and triple-conducting double perovskite cathode. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 13265-13274  | 13   | 60 |
| 514 | Ultrahigh-performance tungsten-doped perovskites for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 9854-9859   | 13   | 60 |
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| 511 | A Cobalt-Free Multi-Phase Nanocomposite as Near-Ideal Cathode of Intermediate-Temperature Solid Oxide Fuel Cells Developed by Smart Self-Assembly. <i>Advanced Materials</i> , <b>2020</b> , 32, e1906979   | 24   | 59 |
| 510 | Perovskite materials in energy storage and conversion. <i>Asia-Pacific Journal of Chemical Engineering</i> , <b>2016</b> , 11, 338-369  | 1.3  | 59 |
| 509 | A surface-modified antiperovskite as an electrocatalyst for water oxidation. <i>Nature Communications</i> , <b>2018</b> , 9, 2326   | 17.4 | 59 |
| 508 | High-performance SrNb <sub>0.1</sub> Co <sub>0.9</sub> Fe <sub>x</sub> O <sub>3-<math>\delta</math></sub> perovskite cathodes for low-temperature solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 15454-15462                                  | 13   | 58 |
| 507 | Hierarchical CO <sub>2</sub> -protective shell for highly efficient oxygen reduction reaction. <i>Scientific Reports</i> , <b>2012</b> , 2, 327   | 4.9  | 57 |
| 506 | Toward Enhanced Oxygen Evolution on Perovskite Oxides Synthesized from Different Approaches: A Case Study of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> . <i>Electrochimica Acta</i> , <b>2016</b> , 219, 553-559 | 6.7  | 57 |
| 505 | Synergistically enhanced hydrogen evolution electrocatalysis by in situ exsolution of metallic nanoparticles on perovskites. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 13582-13587   | 13   | 56 |
| 504 | Formation of hollow MoS <sub>2</sub> /carbon microspheres for high capacity and high rate reversible alkali-ion storage. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 8280-8288   | 13   | 56 |
| 503 | Fast lithium-ion insertion of TiO <sub>2</sub> nanotube and graphene composites. <i>Electrochimica Acta</i> , <b>2013</b> , 88, 847-857   | 6.7  | 56 |
| 502 | Cobalt-free polycrystalline Ba <sub>0.95</sub> La <sub>0.05</sub> FeO <sub>3-<math>\delta</math></sub> thin films as cathodes for intermediate-temperature solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2014</b> , 250, 188-195                                   | 8.9  | 55 |
| 501 | Self-assembled mesoporous TiO <sub>2</sub> /carbon nanotube composite with a three-dimensional conducting nanonetwork as a high-rate anode material for lithium-ion battery. <i>Journal of Power Sources</i> , <b>2014</b> , 254, 18-28   | 8.9  | 55 |
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| 499 | Silver-modified Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> as cathodes for a proton conducting solid-oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 8281-8288               | 6.7  | 55 |
| 498 | Rational Design of Ag-Based Catalysts for the Electrochemical CO Reduction to CO: A Review. <i>ChemSusChem</i> , <b>2020</b> , 13, 39-58  | 8.3  | 55 |
| 497 | Compositional engineering of perovskite oxides for highly efficient oxygen reduction reactions. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 8562-71  | 9.5  | 54 |
| 496 | An efficient electrocatalyst as cathode material for solid oxide fuel cells: BaFe <sub>0.95</sub> Sn <sub>0.05</sub> O <sub>3-<math>\delta</math></sub> . <i>Journal of Power Sources</i> , <b>2016</b> , 326, 459-465  | 8.9  | 54 |
| 495 | Advances in modeling and simulation of Li-ion batteries. <i>Progress in Energy and Combustion Science</i> , <b>2017</b> , 62, 155-189   | 33.6 | 54 |

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| 494 | Sm <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> infiltrated cathodes for solid oxide fuel cells with improved oxygen reduction activity and stability. <i>Journal of Power Sources</i> , <b>2012</b> , 216, 208-215   | 8.9  | 54 |
| 493 | Influence of M cations on structural, thermal and electrical properties of new oxygen selective membranes based on SrCo <sub>0.95</sub> M <sub>0.05</sub> O <sub>3</sub> perovskite. <i>Separation and Purification Technology</i> , <b>2009</b> , 67, 304-311   | 8.3  | 54 |
| 492 | Effect of milling method and time on the properties and electrochemical performance of LiFePO <sub>4</sub> /C composites prepared by ball milling and thermal treatment. <i>Electrochimica Acta</i> , <b>2010</b> , 55, 2653-2661                                | 6.7  | 54 |
| 491 | A new dual-ion hybrid energy storage system with energy density comparable to that of ternary lithium ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 2571-2580  | 13   | 54 |
| 490 | Realizing Ultrafast Oxygen Evolution by Introducing Proton Acceptor into Perovskites. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1900429  | 21.8 | 53 |
| 489 | The solid-state chelation synthesis of LiNi <sub>1/3</sub> Co <sub>1/3</sub> Mn <sub>1/3</sub> O <sub>2</sub> as a cathode material for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 10536-10544                            | 13   | 53 |
| 488 | Combustion-derived nanocrystalline LiMn <sub>2</sub> O <sub>4</sub> as a promising cathode material for lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2015</b> , 275, 38-44  | 8.9  | 53 |
| 487 | A NiFeCu alloy anode catalyst for direct-methane solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2014</b> , 258, 134-141  | 8.9  | 53 |
| 486 | A new Gd-promoted nickel catalyst for methane conversion to syngas and as an anode functional layer in a solid oxide fuel cell. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 3855-3862   | 8.9  | 53 |
| 485 | A Green Route to a NaFePO <sub>4</sub> -Based Cathode for Sodium Ion Batteries of High Rate and Long Cycling Life. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 16280-16287  | 9.5  | 52 |
| 484 | High-Performance Platinum-Perovskite Composite Bifunctional Oxygen Electrocatalyst for Rechargeable Zn/Air Battery. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1903271   | 21.8 | 52 |
| 483 | SrCoTiO perovskites as excellent catalysts for fast degradation of water contaminants in neutral and alkaline solutions. <i>Scientific Reports</i> , <b>2017</b> , 7, 44215  | 4.9  | 51 |
| 482 | Nickel-based anode with water storage capability to mitigate carbon deposition for direct ethanol solid oxide fuel cells. <i>ChemSusChem</i> , <b>2014</b> , 7, 1719-28  | 8.3  | 51 |
| 481 | Characterization and evaluation of BaCo <sub>0.7</sub> Fe <sub>0.2</sub> Nb <sub>0.1</sub> O <sub>3</sub> as a cathode for proton-conducting solid oxide fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 484-497                 | 6.7  | 51 |
| 480 | Utilizing ion leaching effects for achieving high oxygen-evolving performance on hybrid nanocomposite with self-optimized behaviors. <i>Nature Communications</i> , <b>2020</b> , 11, 3376   | 17.4 | 50 |
| 479 | In situ fabrication of (Sr,Lu)FeO <sub>4</sub> with CoFe alloy nanoparticles as an independent catalyst layer for direct methane-based solid oxide fuel cells with a nickel cermet anode. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 13997-14007 | 13   | 50 |
| 478 | sp <sup>2</sup> /sp <sup>3</sup> Framework from Diamond Nanocrystals: A Key Bridge of Carbonaceous Structure to Carbocatalysis. <i>ACS Catalysis</i> , <b>2019</b> , 9, 7494-7519  | 13.1 | 50 |
| 477 | Amorphous V-O-C composite nanofibers electrospun from solution precursors as binder- and conductive additive-free electrodes for supercapacitors with outstanding performance. <i>Nanoscale</i> , <b>2013</b> , 5, 12589-97                                      | 7.7  | 50 |



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| 476 | Boosting the Activity of BaCo <sub>0.4</sub> Fe <sub>0.4</sub> Zr <sub>0.1</sub> Y <sub>0.1</sub> O <sub>3</sub> Perovskite for Oxygen Reduction Reactions at Low-to-Intermediate Temperatures through Tuning B-Site Cation Deficiency. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1902384           | 21.8 | 49 |
| 475 | Single-phase perovskite oxide with super-exchange induced atomic-scale synergistic active centers enables ultrafast hydrogen evolution. <i>Nature Communications</i> , <b>2020</b> , 11, 5657   | 17.4 | 49 |
| 474 | Recent Advances in Filler Engineering of Polymer Electrolytes for Solid-State Li-Ion Batteries: A Review. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 9189-9207   | 4.1  | 49 |
| 473 | Computational and experimental analysis of Ba <sub>0.95</sub> La <sub>0.05</sub> FeO <sub>3</sub> as a cathode material for solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 14154-14163  | 13   | 49 |
| 472 | Solution combustion synthesis of high-rate performance carbon-coated lithium iron phosphate from inexpensive iron (III) raw material. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 2900-2907   |      | 49 |
| 471 | Methane-fueled SOFC with traditional nickel-based anode by applying Ni/Al <sub>2</sub> O <sub>3</sub> as a dual-functional layer. <i>Electrochemistry Communications</i> , <b>2009</b> , 11, 194-197  | 5.1  | 49 |
| 470 | New Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3</sub> -Co <sub>3</sub> O <sub>4</sub> composite electrode for IT-SOFCs with improved electrical conductivity and catalytic activity. <i>Electrochemistry Communications</i> , <b>2011</b> , 13, 197-199                  | 5.1  | 49 |
| 469 | Evaluation of Ba <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.9</sub> Nb <sub>0.1</sub> O <sub>3</sub> mixed conductor as a cathode for intermediate-temperature oxygen-ionic solid-oxide fuel cells. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 5176-5184  | 8.9  | 49 |
| 468 | Optimizing the modification method of zinc-enhanced sintering of BaZr <sub>0.4</sub> Ce <sub>0.4</sub> Y <sub>0.2</sub> O <sub>3</sub> based electrolytes for application in an anode-supported protonic solid oxide fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 5611-5620 | 6.7  | 49 |
| 467 | Hierarchical carbon-coated acanthosphere-like Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> microspheres for high-power lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2016</b> , 314, 18-27   | 8.9  | 48 |
| 466 | Solid-Oxide Fuel Cells: Recent Progress on Advanced Materials for Solid-Oxide Fuel Cells Operating Below 500 °C (Adv. Mater. 48/2017). <i>Advanced Materials</i> , <b>2017</b> , 29, 1770345  | 24   | 48 |
| 465 | Recent advances in single-chamber fuel-cells: Experiment and modeling. <i>Solid State Ionics</i> , <b>2006</b> , 177, 2013-2021   | 3.3  | 48 |
| 464 | Recent Advances in Cs <sub>2</sub> AgBiBr <sub>6</sub> -Based Halide Double Perovskites as Lead-Free and Inorganic Light Absorbers for Perovskite Solar Cells. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 10513-10528  | 4.1  | 48 |
| 463 | An Aurivillius Oxide Based Cathode with Excellent CO <sub>2</sub> Tolerance for Intermediate-Temperature Solid Oxide Fuel Cells. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 8988-93   | 16.4 | 48 |
| 462 | Enabling High and Stable Electrocatalytic Activity of Iron-Based Perovskite Oxides for Water Splitting by Combined Bulk Doping and Morphology Designing. <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1801317  | 4.6  | 48 |
| 461 | Recent progress in metal-organic frameworks for lithium-sulfur batteries. <i>Polyhedron</i> , <b>2018</b> , 155, 464-484  | 2.7  | 48 |
| 460 | Self-Recovery Chemistry and Cobalt-Catalyzed Electrochemical Deposition of Cathode for Boosting Performance of Aqueous Zinc-Ion Batteries. <i>IScience</i> , <b>2020</b> , 23, 100943   | 6.1  | 47 |
| 459 | B-Site Cation-Ordered Double-Perovskite Oxide as an Outstanding Electrode Material for Supercapacitive Energy Storage Based on the Anion Intercalation Mechanism. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 9415-9423   | 9.5  | 47 |



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| 458 | Surfactant-free self-assembly of reduced graphite oxide-MoO <sub>2</sub> nanobelt composites used as electrode for lithium-ion batteries. <i>Electrochimica Acta</i> , <b>2016</b> , 211, 972-981  | 6.7  | 47 |
| 457 | Pt/CNiCoO <sub>2</sub> composites with ultralow Pt loadings as synergistic bifunctional electrocatalysts for oxygen reduction and evolution reactions. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 4516-4524  | 13   | 47 |
| 456 | A mechanism study of synthesis of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> from TiO <sub>2</sub> anatase. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 505, 367-373   | 5.7  | 47 |
| 455 | B-Site Cation Ordered Double Perovskites as Efficient and Stable Electrocatalysts for Oxygen Evolution Reaction. <i>Chemistry - A European Journal</i> , <b>2017</b> , 23, 5722-5728   | 4.8  | 46 |
| 454 | Rich atomic interfaces between sub-1 nm RuO <sub>x</sub> clusters and porous Co <sub>3</sub> O <sub>4</sub> nanosheets boost oxygen electrocatalysis bifunctionality for advanced Zn-air batteries. <i>Energy Storage Materials</i> , <b>2020</b> , 32, 20-29                          | 19.4 | 46 |
| 453 | Gas Humidification Impact on the Properties and Performance of Perovskite-Type Functional Materials in Proton-Conducting Solid Oxide Cells. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1802592   | 15.6 | 46 |
| 452 | Water-proof, electrolyte-nonvolatile, and flexible Li-Air batteries via O <sub>2</sub> -Permeable silica-aerogel-reinforced polydimethylsiloxane external membranes. <i>Energy Storage Materials</i> , <b>2020</b> , 27, 297-306   | 19.4 | 45 |
| 451 | Promoting the Efficiency and Stability of CsPbI <sub>3</sub> -Based All-Inorganic Perovskite Solar Cells through a Functional Cu Doping Strategy. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 23984-23994  | 9.5  | 45 |
| 450 | Tuning layer-structured La <sub>0.6</sub> Sr <sub>1.4</sub> MnO <sub>4</sub> into a promising electrode for intermediate-temperature symmetrical solid oxide fuel cells through surface modification. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 10641-10649           | 13   | 45 |
| 449 | Interweaved Si@C/CNTs&CNFs composites as anode materials for Li-ion batteries. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 588, 206-211   | 5.7  | 45 |
| 448 | Novel Approach for Developing Dual-Phase Ceramic Membranes for Oxygen Separation through Beneficial Phase Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 22918-26  | 9.5  | 44 |
| 447 | Impregnated LaCo <sub>0.3</sub> Fe <sub>0.67</sub> Pd <sub>0.03</sub> O <sub>3-δ</sub> as a promising electrocatalyst for symmetrical intermediate-temperature solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2016</b> , 306, 92-99                                      | 8.9  | 44 |
| 446 | BaCo <sub>0.6</sub> Fe <sub>0.3</sub> Sn <sub>0.1</sub> O <sub>3-δ</sub> perovskite as a new superior oxygen reduction electrode for intermediate-to-low temperature solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 15078                          | 13   | 44 |
| 445 | Synthesis of lithium insertion material Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> from rutile TiO <sub>2</sub> via surface activation. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 2883-2887  | 8.9  | 44 |
| 444 | Oxygen selective membranes based on B-site cation-deficient (Ba <sub>0.5</sub> Sr <sub>0.5</sub> )(Co <sub>0.8</sub> Fe <sub>0.2</sub> ) <sub>y</sub> O <sub>3-δ</sub> perovskite with improved operational stability. <i>Journal of Membrane Science</i> , <b>2008</b> , 318, 182-190 | 9.6  | 44 |
| 443 | High-Performance Perovskite Composite Electrocatalysts Enabled by Controllable Interface Engineering. <i>Small</i> , <b>2021</b> , 17, e2101573  | 11   | 44 |
| 442 | Fine-Tuning Surface Properties of Perovskites via Nanocompositing with Inert Oxide toward Developing Superior Catalysts for Advanced Oxidation. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1804654   | 15.6 | 44 |
| 441 | Super-Exchange Interaction Induced Overall Optimization in Ferromagnetic Perovskite Oxides Enables Ultrafast Water Oxidation. <i>Small</i> , <b>2019</b> , 15, e1903120  | 11   | 43 |

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| 440 | Tin-doped perovskite mixed conducting membrane for efficient air separation. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 9666-9674  | 13  | 43 |
| 439 | Phase transition of a cobalt-free perovskite as a high-performance cathode for intermediate-temperature solid oxide fuel cells. <i>ChemSusChem</i> , <b>2012</b> , 5, 2023-31  | 8.3 | 43 |
| 438 | Performance of SrSc <sub>0.2</sub> Co <sub>0.8</sub> O <sub>3-<math>\delta</math></sub> /Sm <sub>0.5</sub> Sr <sub>0.5</sub> CoO <sub>3</sub> mixed-conducting composite electrodes for oxygen reduction at intermediate temperatures. <i>International Journal of Hydrogen Energy</i> , <b>2009</b> , 34, 9496-9504 | 6.7 | 43 |
| 437 | Nickel catalyst prepared via glycine nitrate process for partial oxidation of methane to syngas. <i>Catalysis Communications</i> , <b>2008</b> , 9, 1418-1425  | 3.2 | 43 |
| 436 | Recent Advances in the Development of Anode Materials for Solid Oxide Fuel Cells Utilizing Liquid Oxygenated Hydrocarbon Fuels: A Mini Review. <i>Energy Technology</i> , <b>2019</b> , 7, 33-44   | 3.5 | 43 |
| 435 | Postsynthesis Growth of CoOOH Nanostructure on SrCo <sub>0.6</sub> Ti <sub>0.4</sub> O <sub>3</sub> Perovskite Surface for Enhanced Degradation of Aqueous Organic Contaminants. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 15737-15748   | 8.3 | 43 |
| 434 | Role of silver current collector on the operational stability of selected cobalt-containing oxide electrodes for oxygen reduction reaction. <i>Journal of Power Sources</i> , <b>2012</b> , 210, 146-153   | 8.9 | 42 |
| 433 | Stable and easily sintered BaCe <sub>0.5</sub> Zr <sub>0.3</sub> Y <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> electrolytes using ZnO and Na <sub>2</sub> CO <sub>3</sub> additives for protonic oxide fuel cells. <i>Electrochimica Acta</i> , <b>2013</b> , 95, 95-101                                       | 6.7 | 42 |
| 432 | Lithium and lanthanum promoted Ni-Al <sub>2</sub> O <sub>3</sub> as an active and highly coking resistant catalyst layer for solid-oxide fuel cells operating on methane. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 90-97   | 8.9 | 42 |
| 431 | Development of a NiCe <sub>0.8</sub> Zr <sub>0.2</sub> O <sub>2</sub> catalyst for solid oxide fuel cells operating on ethanol through internal reforming. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 6177-6185  | 8.9 | 42 |
| 430 | Integration of Zn-Ag and Zn-Air Batteries: A Hybrid Battery with the Advantages of Both. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 36873-36881   | 9.5 | 42 |
| 429 | A comprehensive evaluation of a NiAl <sub>2</sub> O <sub>3</sub> catalyst as a functional layer of solid-oxide fuel cell anode. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 402-411   | 8.9 | 41 |
| 428 | Synthesis and assessment of La <sub>0.8</sub> Sr <sub>0.2</sub> Sc <sub>y</sub> Mn <sub>1-y</sub> O <sub>3-<math>\delta</math></sub> cathodes for solid-oxide fuel cells on scandium-stabilized zirconia electrolyte. <i>Journal of Power Sources</i> , <b>2008</b> , 183, 471-478                                   | 8.9 | 41 |
| 427 | A high-performance no-chamber fuel cell operated on ethanol flame. <i>Journal of Power Sources</i> , <b>2008</b> , 177, 33-39  | 8.9 | 41 |
| 426 | Influence of high-energy ball milling of precursor on the morphology and electrochemical performance of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Ball-milling time. <i>Solid State Ionics</i> , <b>2008</b> , 179, 946-950  | 3.3 | 41 |
| 425 | Spherical Ruthenium Disulfide-Sulfur-Doped Graphene Composite as an Efficient Hydrogen Evolution Electrocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 34098-34107  | 9.5 | 41 |
| 424 | Cobalt-free SrFe <sub>0.9</sub> Ti <sub>0.1</sub> O <sub>3-<math>\delta</math></sub> as a high-performance electrode material for oxygen reduction reaction on doped ceria electrolyte with favorable CO <sub>2</sub> tolerance. <i>Journal of the European Ceramic Society</i> , <b>2015</b> , 35, 2531-2539        | 6   | 40 |
| 423 | Earth-Abundant Silicon for Facilitating Water Oxidation over Iron-Based Perovskite Electrocatalyst. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1701693  | 4.6 | 40 |

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| 4 <sup>22</sup> | 3D core-shell architecture from infiltration and beneficial reactive sintering as highly efficient and thermally stable oxygen reduction electrode. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 1284-1293  | 13   | 40 |
| 4 <sup>21</sup> | Carbon nanotube and graphene nanosheet co-modified LiFePO <sub>4</sub> nanoplate composite cathode material by a facile polyol process. <i>Applied Surface Science</i> , <b>2013</b> , 283, 999-1005  | 6.7  | 40 |
| 4 <sup>20</sup> | A polyaniline-coated mechanochemically synthesized tin oxide/graphene nanocomposite for high-power and high-energy lithium-ion batteries. <i>Journal of Power Sources</i> , <b>2015</b> , 290, 61-70  | 8.9  | 40 |
| 4 <sup>19</sup> | Further performance improvement of Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> perovskite membranes for air separation. <i>Ceramics International</i> , <b>2009</b> , 35, 2455-2461  | 5.1  | 40 |
| 4 <sup>18</sup> | Effect of Ba nonstoichiometry on the phase structure, sintering, electrical conductivity and phase stability of Ba <sub>1-x</sub> Ce <sub>0.4</sub> Zr <sub>0.4</sub> Y <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> (0.0-0.20) proton conductors. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 8450-8460 | 6.7  | 40 |
| 4 <sup>17</sup> | Coking-free direct-methanol-flame fuel cell with traditional nickel/bermet anode. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 7971-7981   | 6.7  | 40 |
| 4 <sup>16</sup> | Fabrication and performance test of a catalyst-coated membrane from direct spray deposition. <i>Solid State Ionics</i> , <b>2008</b> , 179, 960-965   | 3.3  | 40 |
| 4 <sup>15</sup> | Boosting the oxygen evolution reaction activity of a perovskite through introducing multi-element synergy and building an ordered structure. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 9924-9932   | 13   | 39 |
| 4 <sup>14</sup> | Self-adhesive Co <sub>3</sub> O <sub>4</sub> /expanded graphite paper as high-performance flexible anode for Li-ion batteries. <i>Carbon</i> , <b>2015</b> , 95, 494-496  | 10.4 | 39 |
| 4 <sup>13</sup> | Assessment of nickel cermet and La <sub>0.8</sub> Sr <sub>0.2</sub> Sc <sub>0.2</sub> Mn <sub>0.8</sub> O <sub>3</sub> as solid-oxide fuel cell anodes operating on carbon monoxide fuel. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 1333-1343  | 8.9  | 39 |
| 4 <sup>12</sup> | Cobalt-free Ba <sub>0.5</sub> Sr <sub>0.5</sub> Fe <sub>0.8</sub> Cu <sub>0.1</sub> Ti <sub>0.1</sub> O <sub>3-<math>\delta</math></sub> as a bi-functional electrode material for solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2015</b> , 298, 184-192   | 8.9  | 38 |
| 4 <sup>11</sup> | Monoclinic SrIrO <sub>3</sub> : An Easily Synthesized Conductive Perovskite Oxide with Outstanding Performance for Overall Water Splitting in Alkaline Solution. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 4509-4517  | 9.6  | 38 |
| 4 <sup>10</sup> | In situ formation of a 3D core-shell and triple-conducting oxygen reduction reaction electrode for proton-conducting SOFCs. <i>Journal of Power Sources</i> , <b>2018</b> , 385, 76-83  | 8.9  | 38 |
| 4 <sup>09</sup> | H <sub>2</sub> S poisoning effect and ways to improve sulfur tolerance of nickel cermet anodes operating on carbonaceous fuels. <i>Applied Energy</i> , <b>2016</b> , 179, 765-777  | 10.7 | 38 |
| 4 <sup>08</sup> | Interconnected graphene nanosheets with confined FeS <sub>2</sub> /FeS binary nanoparticles as anode material of sodium-ion batteries. <i>Chemical Engineering Journal</i> , <b>2019</b> , 378, 122168  | 14.7 | 38 |
| 4 <sup>07</sup> | Aluminum oxide as a dual-functional modifier of Ni-based anodes of solid oxide fuel cells for operation on simulated biogas. <i>Journal of Power Sources</i> , <b>2014</b> , 268, 787-793   | 8.9  | 38 |
| 4 <sup>06</sup> | Nanoscaled Sm-doped CeO <sub>2</sub> buffer layers for intermediate-temperature solid oxide fuel cells. <i>Electrochemistry Communications</i> , <b>2013</b> , 35, 131-134  | 5.1  | 38 |
| 4 <sup>05</sup> | 3D non-precious metal-based electrocatalysts for the oxygen reduction reaction in acid media. <i>International Journal of Hydrogen Energy</i> , <b>2010</b> , 35, 8295-8302   | 6.7  | 38 |

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| 404 | Selenic Acid Etching Assisted Vacancy Engineering for Designing Highly Active Electrocatalysts toward the Oxygen Evolution Reaction. <i>Advanced Materials</i> , <b>2021</b> , 33, e2007523   | 24   | 38 |
| 403 | Perovskite SrCo <sub>0.9</sub> Nb <sub>0.1</sub> O <sub>3</sub> as an Anion-Intercalated Electrode Material for Supercapacitors with Ultrahigh Volumetric Energy Density. <i>Angewandte Chemie</i> , <b>2016</b> , 128, 9728-9731   | 3.6  | 38 |
| 402 | Highly Active Carbon/MnO <sub>2</sub> Hybrid Oxygen Reduction Reaction Electrocatalysts. <i>ChemElectroChem</i> , <b>2016</b> , 3, 1760-1767  | 4.3  | 37 |
| 401 | Facile single-step ammonia heat-treatment and quenching process for the synthesis of improved Pt/N-graphene catalysts. <i>Applied Surface Science</i> , <b>2013</b> , 266, 433-439  | 6.7  | 37 |
| 400 | A strongly coupled CoS <sub>2</sub> / reduced graphene oxide nanostructure as an anode material for efficient sodium-ion batteries. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 726, 394-402   | 5.7  | 37 |
| 399 | A top-down strategy for the synthesis of mesoporous Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3</sub> as a cathode precursor for buffer layer-free deposition on stabilized zirconia electrolyte with a superior electrochemical performance. <i>Journal of Power Sources</i> , <b>2015</b> , 274, 1024-1033 | 8.9  | 36 |
| 398 | Anchoring perovskite LaMnO <sub>3</sub> nanoparticles on biomass-derived N, P co-doped porous carbon for efficient oxygen reduction. <i>Electrochimica Acta</i> , <b>2018</b> , 274, 40-48  | 6.7  | 36 |
| 397 | Structure, sinterability, chemical stability and conductivity of proton-conducting BaZr <sub>0.6</sub> Mo <sub>0.2</sub> Y <sub>0.2</sub> O <sub>3</sub> electrolyte membranes: The effect of the M dopant. <i>Journal of Membrane Science</i> , <b>2014</b> , 467, 100-108   | 9.6  | 36 |
| 396 | A novel approach for substantially improving the sinterability of BaZr <sub>0.4</sub> Ce <sub>0.4</sub> Y <sub>0.2</sub> O <sub>3</sub> electrolyte for fuel cells by impregnating the green membrane with zinc nitrate as a sintering aid. <i>Journal of Membrane Science</i> , <b>2013</b> , 437, 189-195                                       | 9.6  | 36 |
| 395 | A Function-Separated Design of Electrode for Realizing High-Performance Hybrid Zinc Battery. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2002992   | 21.8 | 36 |
| 394 | Evaluation of SrSc <sub>0.175</sub> Nb <sub>0.025</sub> Co <sub>0.8</sub> O <sub>3</sub> -perovskite as a cathode for proton-conducting solid oxide fuel cells: The possibility of in situ creating protonic conductivity and electrochemical performance. <i>Electrochimica Acta</i> , <b>2018</b> , 259, 559-565                                | 6.7  | 36 |
| 393 | Enhanced electrochemical performance, water storage capability and coking resistance of a Ni+BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> Yb <sub>0.1</sub> O <sub>3</sub> anode for solid oxide fuel cells operating on ethanol. <i>Chemical Engineering Science</i> , <b>2015</b> , 126, 22-31  | 4.4  | 35 |
| 392 | Thermal inkjet printing of thin-film electrolytes and buffering layers for solid oxide fuel cells with improved performance. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 9310-9319  | 6.7  | 35 |
| 391 | Ballmilling-Assisted Synthesis and Electrochemical Performance of LiFePO <sub>4</sub> /C for Lithium-Ion Battery Adopting Citric Acid as Carbon Precursor. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, A8023-9   | 23.9 | 35 |
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| 389 | Cobalt-free niobium-doped barium ferrite as potential materials of dense ceramic membranes for oxygen separation. <i>Journal of Membrane Science</i> , <b>2014</b> , 455, 75-82   | 9.6  | 34 |
| 388 | Combustion-synthesized Ru/Al <sub>2</sub> O <sub>3</sub> composites as anode catalyst layer of a solid oxide fuel cell operating on methane. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 755-764  | 6.7  | 34 |
| 387 | Facile autocombustion synthesis of La <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3</sub> (LSCF) perovskite via a modified complexing sol-gel process with NH <sub>4</sub> NO <sub>3</sub> as combustion aid. <i>Journal of Alloys and Compounds</i> , <b>2008</b> , 450, 338-347                                 | 5.7  | 34 |

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