# Zhiyang Lyu

List of Publications by Year
in descending order

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|---|---|---|---|
| 53 papers | 4,514 citations | 168829 31 h-index | 198040 52 g-index |
| 54 all docs | 54 docs citations | 54 times ranked | 7630 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Integrated Porous Cu Host Induced Highâ€Stable Bidirectional Li Plating/Stripping Behavior for Practical Li Metal Batteries. Small, 2022, 18, e2105999. | 5.2 | 30 |
| 2 | Effect of surface-patterned topographies of ceramic membranes on the filtration of activated sludge and their interaction with different particle sizes. Journal of Membrane Science, 2022, 645, 120125. | 4.1 | 13 |
| 3 | Support-based modulation strategies in single-atom catalysts for electrochemical CO<sub>2</sub> reduction: graphene and conjugated macrocyclic complexes. Journal of Materials Chemistry A, 2022, 10, 5699-5716. | 5.2 | 13 |
| 4 | 3D spray-coated gradient profile ceramic membranes enables improved filtration performance in aerobic submerged membrane bioreactor. Water Research, 2022, 220, 118661. | 5.3 | 4 |
| 5 | Direct ink writing of programmable functional siliconeâ€based composites for 4D printing applications. , 2022, 1, 507-516. | | 25 |
| 6 | Efficient Hydrogen Evolution of Oxidized Niâ€N<sub>3</sub> Defective Sites for Alkaline Freshwater and Seawater Electrolysis. Advanced Materials, 2021, 33, e2003846. | 11.1 | 198 |
| 7 | Ultrathin TiO2 microfiltration membranes supported on a holey intermediate layer to raise filtration performance. Journal of the European Ceramic Society, 2021, 41, 1622-1628. | 2.8 | 11 |
| 8 | Chloride Ion as Redox Mediator in Reducing Charge Overpotential of Aprotic Lithiumâ€Oxygen Batteries. Batteries and Supercaps, 2021, 4, 232-239. | 2.4 | 15 |
| 9 | Design and Manufacture of 3D-Printed Batteries. Joule, 2021, 5, 89-114. | 11.7 | 137 |
| 10 | Chemical-grafting of graphene oxide quantum dots (GOQDs) onto ceramic microfiltration membranes for enhanced water permeability and anti-organic fouling potential. Applied Surface Science, 2020, 502, 144128. | 3.1 | 50 |
| 11 | 3D-printed electrodes for lithium metal batteries with high areal capacity and high-rate capability. Energy Storage Materials, 2020, 24, 336-342. | 9.5 | 105 |
| 12 | Effect of gradient profile in ceramic membranes on filtration characteristics: Implications for membrane development. Journal of Membrane Science, 2020, 595, 117576. | 4.1 | 42 |
| 13 | Water treatment residual: A critical review of its applications on pollutant removal from stormwater runoff and future perspectives. Journal of Environmental Management, 2020, 259, 109649. | 3.8 | 69 |
| 14 | Highly permeable Al 2 O 3 microfiltration membranes with holey interior structure achieved through sacrificial C particles. Journal of the American Ceramic Society, 2020, 103, 3361-3372. | 1.9 | 11 |
| 15 | Hydrogenated TiO2 membrane with photocatalytically enhanced anti-fouling for ultrafiltration of surface water. Applied Catalysis B: Environmental, 2020, 264, 118528. | 10.8 | 37 |
| 16 | Alumina double-layered ultrafiltration membranes with enhanced water flux. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 587, 124324. | 2.3 | 9 |
| 17 | Interfacial diffusion assisted chemical deposition (ID-CD) for confined surface modification of alumina microfiltration membranes toward high-flux and anti-fouling. Separation and Purification Technology, 2020, 235, 116177. | 3.9 | 27 |
| 18 | Surface engineered alumina microfiltration membranes based on rationally constructed core-shell particles. Journal of the European Ceramic Society, 2020, 40, 5951-5958. | 2.8 | 20 |

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|---|---|---|---|
| 19 | 3D-printed surface-patterned ceramic membrane with enhanced performance in crossflow filtration. Journal of Membrane Science, 2020, 606, 118138. | 4.1 | 53 |
| 20 | Robust pure copper framework by extrusion 3D printing for advanced lithium metal anodes. Journal of Materials Chemistry A, 2020, 8, 9058-9067. | 5.2 | 51 |
| 21 | Heterogeneous ZIF-L membranes with improved hydrophilicity and anti-bacterial adhesion for potential application in water treatment. RSC Advances, 2019, 9, 1591-1601. | 1.7 | 51 |
| 22 | Ceramic-based membranes for water and wastewater treatment. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 578, 123513. | 2.3 | 179 |
| 23 | Role of metal modified water treatment residual on removal of Escherichia coli from stormwater runoff. Science of the Total Environment, 2019, 678, 594-602. | 3.9 | 14 |
| 24 | Nanowires versus nanosheets â€“ Effects of NiCo2O4 nanostructures on ceramic membrane permeability and fouling potential. Separation and Purification Technology, 2019, 215, 644-651. | 3.9 | 13 |
| 25 | Polysulfide-driven low charge overpotential for aprotic lithiumâ€“oxygen batteries. Journal of Materials Chemistry A, 2019, 7, 8777-8784. | 5.2 | 3 |
| 26 | Promoting defective-Li<sub>2</sub>O<sub>2</sub> formation via Na doping for Liâ€“O<sub>2</sub> batteries with low charge overpotentials. Journal of Materials Chemistry A, 2019, 7, 10389-10396. | 5.2 | 17 |
| 27 | Twinned Tungsten Carbonitride Nanocrystals Boost Hydrogen Evolution Activity and Stability. Small, 2019, 15, e1900248. | 5.2 | 57 |
| 28 | 3Dâ€Printed MOFâ€Derived Hierarchically Porous Frameworks for Practical Highâ€Energy Density Liâ€“O<sub>2</sub> Batteries. Advanced Functional Materials, 2019, 29, 1806658. | 7.8 | 197 |
| 29 | Stretchable fiber-shaped lithium metal anode. Energy Storage Materials, 2019, 22, 179-184. | 9.5 | 65 |
| 30 | Efficient synergism of electrocatalysis and physical confinement leading to durable high-power lithium-sulfur batteries. Nano Energy, 2019, 57, 34-40. | 8.2 | 104 |
| 31 | Spinel Nickel Cobaltite Mesostructures Assembled from Ultrathin Nanosheets for High-Performance Electrochemical Energy Storage. ACS Applied Energy Materials, 2018, 1, 684-691. | 2.5 | 14 |
| 32 | Atomic engineering of high-density isolated Co atoms on graphene with proximal-atom controlled reaction selectivity. Nature Communications, 2018, 9, 3197. | 5.8 | 146 |
| 33 | Ruthenâ€Functionalized Hierarchical Carbon Nanocages as Efficient Catalysts for Liâ€O<sub>2</sub> Batteries. ChemNanoMat, 2017, 3, 415-419. | 1.5 | 14 |
| 34 | Synthesis of porous CoMoO<sub>4</sub>nanorods as a bifunctional cathode catalyst for a Liâ€“O<sub>2</sub>battery and superior anode for a Li-ion battery. Nanoscale, 2017, 9, 3898-3904. | 2.8 | 60 |
| 35 | Effect of oxygen adsorbability on the control of Li2O2 growth in Li-O2 batteries: Implications for cathode catalyst design. Nano Energy, 2017, 36, 68-75. | 8.2 | 93 |
| 36 | Waterâ€Catalyzed Oxidation of Fewâ€Layer Black Phosphorous in a Dark Environment. Angewandte Chemie - International Edition, 2017, 56, 9131-9135. | 7.2 | 141 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Recent advances in understanding of the mechanism and control of Li<sub>2</sub>O<sub>2</sub>formation in aprotic Liâ€“O<sub>2</sub>batteries. Chemical Society Reviews, 2017, 46, 6046-6072. | 18.7 | 314 |
| 38 | Waterâ€Catalyzed Oxidation of Fewâ€Layer Black Phosphorous in a Dark Environment. Angewandte Chemie, 2017, 129, 9259-9263. | 1.6 | 16 |
| 39 | Co<sub>3</sub>O<sub>4</sub> functionalized porous carbon nanotube oxygen-cathodes to promote Li<sub>2</sub>O<sub>2</sub> surface growth for improved cycling stability of Liâ€“O<sub>2</sub> batteries. Journal of Materials Chemistry A, 2017, 5, 25501-25508. | 5.2 | 31 |
| 40 | Monodispersed Ru Nanoparticles Functionalized Graphene Nanosheets as Efficient Cathode Catalysts for O<sub>2</sub>-Assisted Liâ€“CO<sub>2</sub> Battery. ACS Omega, 2017, 2, 9280-9286. | 1.6 | 63 |
| 41 | Facile synthesis of hierarchical porous Co<sub>3</sub>O<sub>4</sub> nanoboxes as efficient cathode catalysts for Liâ€“O<sub>2</sub> batteries. Journal of Materials Chemistry A, 2016, 4, 6350-6356. | 5.2 | 75 |
| 42 | Facile synthesis of flower-like hierarchical NiCo<sub>2</sub>O<sub>4</sub> microspheres as high-performance cathode materials for Liâ€“O<sub>2</sub> batteries. RSC Advances, 2016, 6, 98867-98873. | 1.7 | 15 |
| 43 | Porous CuO nanotubes/graphene with sandwich architecture as high-performance anodes for lithium-ion batteries. Nanoscale, 2016, 8, 19343-19351. | 2.8 | 48 |
| 44 | CoS<sub>2</sub>nanoparticlesâ€“graphene hybrid as a cathode catalyst for aprotic Liâ€“O<sub>2</sub>batteries. RSC Advances, 2016, 6, 31739-31743. | 1.7 | 25 |
| 45 | Mesostructured NiO/Ni composites for high-performance electrochemical energy storage. Energy and Environmental Science, 2016, 9, 2053-2060. | 15.6 | 212 |
| 46 | Hierarchical carbon nanocages confining high-loading sulfur for high-rate lithiumâ€“sulfur batteries. Nano Energy, 2015, 12, 657-665. | 8.2 | 231 |
| 47 | Synthesis of hierarchical porous Î´-MnO<sub>2</sub>nanoboxes as an efficient catalyst for rechargeable Liâ€“O<sub>2</sub>batteries. Nanoscale, 2015, 7, 14881-14888. | 2.8 | 82 |
| 48 | Hydrophilic Hierarchical Nitrogenâ€Doped Carbon Nanocages for Ultrahigh Supercapacitive Performance. Advanced Materials, 2015, 27, 3541-3545. | 11.1 | 680 |
| 49 | Significant Contribution of Intrinsic Carbon Defects to Oxygen Reduction Activity. ACS Catalysis, 2015, 5, 6707-6712. | 5.5 | 519 |
| 50 | Palladium nanoparticle functionalized graphene nanosheets for Liâ€“O<sub>2</sub>batteries: enhanced performance by tailoring the morphology of the discharge product. RSC Advances, 2015, 5, 73451-73456. | 1.7 | 35 |
| 51 | Hierarchical carbon nanocages as high-rate anodes for Li- and Na-ion batteries. Nano Research, 2015, 8, 3535-3543. | 5.8 | 71 |
| 52 | Synthesis of three-dimensional AlNâ€“Si<sub>3</sub>N<sub>4</sub> branched heterostructures and their photoluminescence properties. CrystEngComm, 2014, 16, 9555-9559. | 1.3 | 3 |
| 53 | Carbon Nanocages Supported LiFePO<sub>4</sub>Nanoparticles as High-Performance Cathode for Lithium Ion Batteries. Acta Chimica Sinica, 2014, 72, 653. | 0.5 | 6 |