# Richard Mayes

## List of Publications by Year in descending order



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|---|---|---|---|
| 72 papers | 7,905 citations | 87888 38 h-index | 85541 71 g-index |
| 80 all docs | 80 docs citations | 80 times ranked | 8858 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Carbon Materials for Chemical Capacitive Energy Storage. Advanced Materials, 2011, 23, 4828-4850. | 21.0 | 2,593 |
| 2 | Materials for the Recovery of Uranium from Seawater. Chemical Reviews, 2017, 117, 13935-14013. | 47.7 | 639 |
| 3 | Recovery of Uranium from Seawater: A Review of Current Status and Future Research Needs. Separation Science and Technology, 2013, 48, 367-387. | 2.5 | 400 |
| 4 | Mesoporous Carbon for Capacitive Deionization of Saline Water. Environmental Science & Technology, 2011, 45, 10243-10249. | 10.0 | 351 |
| 5 | Seawater Uranium Sorbents: Preparation from a Mesoporous Copolymer Initiator by Atomâ€Transfer Radical Polymerization. Angewandte Chemie - International Edition, 2013, 52, 13458-13462. | 13.8 | 222 |
| 6 | Lithiumâ€“Sulfur Batteries Based on Nitrogenâ€Doped Carbon and an Ionicâ€Liquid Electrolyte. ChemSusChem, 2012, 5, 2079-2085. | 6.8 | 187 |
| 7 | Uptake of Uranium from Seawater by Amidoxime-Based Polymeric Adsorbent: Field Experiments, Modeling, and Updated Economic Assessment. Industrial & Engineering Chemistry Research, 2014, 53, 6076-6083. | 3.7 | 185 |
| 8 | Hierarchical ordered mesoporous carbon from phloroglucinol-glyoxal and its application in capacitive deionization of brackish water. Journal of Materials Chemistry, 2010, 20, 8674. | 6.7 | 169 |
| 9 | Uranium recovery from seawater: development of fiber adsorbents prepared via atom-transfer radical polymerization. Journal of Materials Chemistry A, 2014, 2, 14674-14681. | 10.3 | 138 |
| 10 | Extracting Uranium from Seawater: Promising AF Series Adsorbents. Industrial & Engineering Chemistry Research, 2016, 55, 4110-4117. | 3.7 | 136 |
| 11 | Sonochemical functionalization of mesoporous carbon for uranium extraction from seawater. Journal of Materials Chemistry A, 2013, 1, 3016. | 10.3 | 132 |
| 12 | Uranium Adsorbent Fibers Prepared by Atom-Transfer Radical Polymerization (ATRP) from Poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5<br>Engineering Chemistry Research, 2016, 55, 4139-4148. | 3.7 | 128 |
| 13 | Nitrogen-enriched ordered mesoporous carbons through direct pyrolysis in ammonia with enhanced capacitive performance. Journal of Materials Chemistry A, 2013, 1, 7920. | 10.3 | 120 |
| 14 | XAFS investigation of polyamidoxime-bound uranyl contests the paradigm from small molecule studies. Energy and Environmental Science, 2016, 9, 448-453. | 30.8 | 115 |
| 15 | Extracting Uranium from Seawater: Promising AI Series Adsorbents. Industrial & Engineering Chemistry Research, 2016, 55, 4103-4109. | 3.7 | 114 |
| 16 | The Uranium from Seawater Program at the Pacific Northwest National Laboratory: Overview of Marine Testing, Adsorbent Characterization, Adsorbent Durability, Adsorbent Toxicity, and Deployment Studies. Industrial & Engineering Chemistry Research, 2016, 55, 4264-4277. | 3.7 | 107 |
| 17 | Low-Temperature Fluorination of Soft-Templated Mesoporous Carbons for a High-Power Lithium/Carbon Fluoride Battery. Chemistry of Materials, 2011, 23, 4420-4427. | 6.7 | 102 |
| 18 | Boron and nitrogen-rich carbons from ionic liquid precursors with tailorable surface properties. Physical Chemistry Chemical Physics, 2011, 13, 13486. | 2.8 | 98 |

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|---|---|---|---|
| 19 | â€œBrickâ€andâ€Mortarâ€•Selfâ€Assembly Approach to Graphitic Mesoporous Carbon Nanocomposites. Advanced Functional Materials, 2011, 21, 2208-2215. | 14.9 | 98 |
| 20 | Enhanced CO2/N2 selectivity in amidoxime-modified porous carbon. Carbon, 2014, 67, 457-464. | 10.3 | 92 |
| 21 | Seawater desalination by over-potential membrane capacitive deionization: Opportunities and hurdles. Chemical Engineering Journal, 2019, 357, 103-111. | 12.7 | 90 |
| 22 | Preparation and CO2 adsorption properties of soft-templated mesoporous carbons derived from chestnut tannin precursors. Microporous and Mesoporous Materials, 2016, 222, 94-103. | 4.4 | 86 |
| 23 | Siderophore-inspired chelator hijacks uranium from aqueous medium. Nature Communications, 2019, 10, 819. | 12.8 | 84 |
| 24 | Ionothermal carbonization of sugars in a protic ionic liquid under ambient conditions. Carbon, 2010, 48, 3364-3368. | 10.3 | 74 |
| 25 | Characterization of Uranium Uptake Kinetics from Seawater in Batch and Flow-Through Experiments. Industrial & Engineering Chemistry Research, 2013, 52, 9433-9440. | 3.7 | 72 |
| 26 | Elution of Uranium and Transition Metals from Amidoxime-Based Polymer Adsorbents for Sequestering Uranium from Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4313-4320. | 3.7 | 65 |
| 27 | Acidâ€Functionalized Mesoporous Carbon: An Efficient Support for Rutheniumâ€Catalyzed Î³â€Valerolactone Production. ChemSusChem, 2015, 8, 2520-2528. | 6.8 | 58 |
| 28 | A Poly(acrylonitrile)-Functionalized Porous Aromatic Framework Synthesized by Atom-Transfer Radical Polymerization for the Extraction of Uranium from Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4125-4129. | 3.7 | 58 |
| 29 | Enhancing Uranium Uptake by Amidoxime Adsorbent in Seawater: An Investigation for Optimum Alkaline Conditioning Parameters. Industrial & Engineering Chemistry Research, 2016, 55, 4294-4302. | 3.7 | 58 |
| 30 | Vacuum-Assisted Low-Temperature Synthesis of Reduced Graphene Oxide Thin-Film Electrodes for High-Performance Transparent and Flexible All-Solid-State Supercapacitors. ACS Applied Materials & Interfaces, 2018, 10, 11008-11017. | 8.0 | 57 |
| 31 | Transport of Ions in Mesoporous Carbon Electrodes during Capacitive Deionization of High-Salinity Solutions. Langmuir, 2015, 31, 1038-1047. | 3.5 | 56 |
| 32 | Characterization and Testing of Amidoxime-Based Adsorbent Materials to Extract Uranium from Natural Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4285-4293. | 3.7 | 56 |
| 33 | Alternative Alkaline Conditioning of Amidoxime Based Adsorbent for Uranium Extraction from Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4303-4312. | 3.7 | 55 |
| 34 | Enabling chloride salts for thermal energy storage: implications of salt purity. RSC Advances, 2019, 9, 25602-25608. | 3.6 | 55 |
| 35 | An efficient low-temperature route to nitrogen-doping and activation of mesoporous carbons for CO<sub>2</sub> capture. Chemical Communications, 2015, 51, 17261-17264. | 4.1 | 47 |
| 36 | Significantly increasing porosity of mesoporous carbon by NaNH2 activation for enhanced CO2 adsorption. Microporous and Mesoporous Materials, 2016, 230, 100-108. | 4.4 | 47 |

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|---|---|---|---|
| 37 | Polymer-coated nanoporous carbons for trace seawater uranium adsorption. Science China Chemistry, 2013, 56, 1510-1515. | 8.2 | 44 |
| 38 | Phosphorylated mesoporous carbon as effective catalyst for the selective fructose dehydration to HMF. Journal of Energy Chemistry, 2013, 22, 305-311. | 12.9 | 44 |
| 39 | Synthesis of Naphthalimidedioxime Ligand-Containing Fibers for Uranium Adsorption from Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4161-4169. | 3.7 | 40 |
| 40 | Investigations into the Reusability of Amidoxime-Based Polymeric Adsorbents for Seawater Uranium Extraction. Industrial & Engineering Chemistry Research, 2017, 56, 11603-11611. | 3.7 | 38 |
| 41 | Efficient Functionalization of Polyethylene Fibers for the Uranium Extraction from Seawater through Atom Transfer Radical Polymerization. Industrial & Engineering Chemistry Research, 2017, 56, 10826-10832. | 3.7 | 36 |
| 42 | Experiments and Modeling of Uranium Uptake by Amidoxime-Based Adsorbent in the Presence of Other Ions in Simulated Seawater. Industrial & Engineering Chemistry Research, 2016, 55, 4241-4248. | 3.7 | 34 |
| 43 | Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes. Advanced Functional Materials, 2021, 31, 2008708. | 14.9 | 30 |
| 44 | Macroporous monoliths for trace metal extraction from seawater. RSC Advances, 2015, 5, 50005-50010. | 3.6 | 28 |
| 45 | Amorphous and partially-amorphous metal coatings for corrosion resistance in molten chloride salt. Solar Energy Materials and Solar Cells, 2019, 201, 110028. | 6.2 | 28 |
| 46 | The electrochemical reactions of SnO2 with Li and Na: A study using thin films and mesoporous carbons. Journal of Power Sources, 2015, 284, 1-9. | 7.8 | 27 |
| 47 | Bicarbonate Elution of Uranium from Amidoximeâ€Based Polymer Adsorbents for Sequestering Uranium from Seawater. ChemistrySelect, 2017, 2, 3769-3774. | 1.5 | 27 |
| 48 | Phosphorylated mesoporous carbon as a solid acid catalyst. Physical Chemistry Chemical Physics, 2011, 13, 2492-2494. | 2.8 | 26 |
| 49 | Electrosorption of organic acids from aqueous bio-oil and conversion into hydrogen via microbial electrolysis cells. Renewable Energy, 2018, 125, 21-31. | 8.9 | 25 |
| 50 | Influence of temperature on the electrosorption of ions from aqueous solutions using mesoporous carbon materials. Separation and Purification Technology, 2013, 116, 206-213. | 7.9 | 24 |
| 51 | Fluorination of â€œbrick and mortarâ€•soft-templated graphitic ordered mesoporous carbons for high power lithium-ion battery. Journal of Materials Chemistry A, 2013, 1, 9414. | 10.3 | 23 |
| 52 | Acidity of the Poly(acrylamidoxime) Adsorbent in Aqueous Solution: Determination of the Proton Affinity Distribution via Potentiometric Titrations. Industrial & Engineering Chemistry Research, 2016, 55, 4217-4223. | 3.7 | 23 |
| 53 | Quantifying the binding strength of salicylaldoximeâ€“uranyl complexes relative to competing salicylaldoximeâ€“transition metal ion complexes in aqueous solution: a combined experimental and computational study. Dalton Transactions, 2016, 45, 9051-9064. | 3.3 | 23 |
| 54 | Reâ€establishing the paradigm for evaluating halide salt compatibility to study commercial chloride salts at 600Â°Câ€“800Â°C. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1439-1449. | 1.5 | 23 |

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| 55 | â€œOne-potâ€•synthesis of phosphorylated mesoporous carbon heterogeneous catalysts with tailored surface acidity. Catalysis Today, 2012, 186, 12-19. | 4.4 | 22 |
| 56 | Fabrication of a Pillared ZSM-5 Framework for Shape Selectivity of Ethane Dehydroaromatization. Industrial & Engineering Chemistry Research, 2019, 58, 7094-7106. | 3.7 | 19 |
| 57 | Impact of Pore Size on the Sorption of Uranyl under Seawater Conditions. Industrial & Engineering Chemistry Research, 2016, 55, 4339-4343. | 3.7 | 18 |
| 58 | Hierarchical TiO<sub>2</sub>:Cu<sub>2</sub>O Nanostructures for Gas/Vapor Sensing and CO<sub>2</sub> Sequestration. ACS Applied Materials & Interfaces, 2019, 11, 48466-48475. | 8.0 | 18 |
| 59 | Neutron imaging of ion transport in mesoporous carbon materials. Physical Chemistry Chemical Physics, 2013, 15, 11740. | 2.8 | 17 |
| 60 | Analysis and simulation of a blue energy cycle. Renewable Energy, 2016, 91, 249-260. | 8.9 | 14 |
| 61 | A report on emergent uranyl binding phenomena by an amidoxime phosphonic acid co-polymer. Physical Chemistry Chemical Physics, 2016, 18, 23462-23468. | 2.8 | 13 |
| 62 | Enhancement of electrosorption rates using low-amplitude, high-frequency, pulsed electrical potential. Separation and Purification Technology, 2014, 129, 18-24. | 7.9 | 10 |
| 63 | Thermal and radiation response of 4Hâ€“SiC Schottky diodes with direct-write electrical contacts. Applied Physics Letters, 2020, 116, . | 3.3 | 9 |
| 64 | Effect of the Ionic Liquid Structure on the Melt Processability of Polyacrylonitrile Fibers. ACS Applied Materials & Interfaces, 2020, 12, 8663-8673. | 8.0 | 9 |
| 65 | Strategies toward the Synthesis of Advanced Functional Sorbent Performance for Uranium Uptake from Seawater. Industrial & Engineering Chemistry Research, 2021, 60, 15037-15044. | 3.7 | 9 |
| 66 | The targeted synthesis of single site vanadyl species on the surface and in the framework of silicate building block materials. Catalysis Today, 2011, 160, 153-164. | 4.4 | 8 |
| 67 | Fibers with Hyperâ€Crosslinked Functional Porous Frameworks. Macromolecular Rapid Communications, 2018, 39, 1700767. | 3.9 | 8 |
| 68 | A non-micellar synthesis of mesoporous carbon via spinodal decomposition. RSC Advances, 2014, 4, 23703-23706. | 3.6 | 4 |
| 69 | Combination of DGA and LN Columns: A Versatile Option for Isotope Production and Purification at Oak Ridge National Laboratory. Solvent Extraction and Ion Exchange, 2021, 39, 166-183. | 2.0 | 3 |
| 70 | Chloride Salt Purification by Reaction With Thionyl Chloride Vapors to Remove Oxygen, Oxygenated Compounds, and Hydroxides. Frontiers in Chemical Engineering, 2022, 4, . | 2.7 | 1 |
| 71 | Solid Electrolyte Interphases: Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes (Adv. Funct. Mater. 23/2021). Advanced Functional Materials, 2021, 31, 2170163. | 14.9 | 0 |
| 72 | Advanced Polymer Sorbents: Performance for Lower V/U Adsorption in Natural Seawater. SSRN Electronic Journal, 0, , . | 0.4 | 0 |