

Richard Mayes

List of Publications by Year in descending order

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72
papers

7,905
citations

87723

38
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85405

71
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80
all docs

80
docs citations

80
times ranked

8858
citing authors

#	ARTICLE	IF	CITATIONS
1	Chloride Salt Purification by Reaction With Thionyl Chloride Vapors to Remove Oxygen, Oxygenated Compounds, and Hydroxides. <i>Frontiers in Chemical Engineering</i> , 2022, 4, .	1.3	1
2	Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes. <i>Advanced Functional Materials</i> , 2021, 31, 2008708.	7.8	30
3	Combination of DGA and LN Columns: A Versatile Option for Isotope Production and Purification at Oak Ridge National Laboratory. <i>Solvent Extraction and Ion Exchange</i> , 2021, 39, 166-183.	0.8	3
4	Solid Electrolyte Interphases: Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes (<i>Adv. Funct. Mater.</i> 23/2021). <i>Advanced Functional Materials</i> , 2021, 31, 2170163.	7.8	0
5	Strategies toward the Synthesis of Advanced Functional Sorbent Performance for Uranium Uptake from Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 15037-15044.	1.8	9
6	Thermal and radiation response of 4H α -SiC Schottky diodes with direct-write electrical contacts. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	9
7	Effect of the Ionic Liquid Structure on the Melt Processability of Polyacrylonitrile Fibers. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 8663-8673.	4.0	9
8	Re-establishing the paradigm for evaluating halide salt compatibility to study commercial chloride salts at 600 α -800 α C. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2019, 70, 1439-1449.	0.8	23
9	Enabling chloride salts for thermal energy storage: implications of salt purity. <i>RSC Advances</i> , 2019, 9, 25602-25608.	1.7	55
10	Amorphous and partially-amorphous metal coatings for corrosion resistance in molten chloride salt. <i>Solar Energy Materials and Solar Cells</i> , 2019, 201, 110028.	3.0	28
11	Fabrication of a Pillared ZSM-5 Framework for Shape Selectivity of Ethane Dehydroaromatization. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 7094-7106.	1.8	19
12	Siderophore-inspired chelator hijacks uranium from aqueous medium. <i>Nature Communications</i> , 2019, 10, 819.	5.8	84
13	Hierarchical TiO ₂ :Cu ₂ O Nanostructures for Gas/Vapor Sensing and CO ₂ Sequestration. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 48466-48475.	4.0	18
14	Seawater desalination by over-potential membrane capacitive deionization: Opportunities and hurdles. <i>Chemical Engineering Journal</i> , 2019, 357, 103-111.	6.6	90
15	Electrosorption of organic acids from aqueous bio-oil and conversion into hydrogen via microbial electrolysis cells. <i>Renewable Energy</i> , 2018, 125, 21-31.	4.3	25
16	Fibers with Hyper-crosslinked Functional Porous Frameworks. <i>Macromolecular Rapid Communications</i> , 2018, 39, 1700767.	2.0	8
17	Vacuum-Assisted Low-Temperature Synthesis of Reduced Graphene Oxide Thin-Film Electrodes for High-Performance Transparent and Flexible All-Solid-State Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 11008-11017.	4.0	57
18	Bicarbonate Elution of Uranium from Amidoxime-Based Polymer Adsorbents for Sequestering Uranium from Seawater. <i>ChemistrySelect</i> , 2017, 2, 3769-3774.	0.7	27

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19	Efficient Functionalization of Polyethylene Fibers for the Uranium Extraction from Seawater through Atom Transfer Radical Polymerization. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 10826-10832.	1.8	36
20	Investigations into the Reusability of Amidoxime-Based Polymeric Adsorbents for Seawater Uranium Extraction. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 11603-11611.	1.8	38
21	Materials for the Recovery of Uranium from Seawater. <i>Chemical Reviews</i> , 2017, 117, 13935-14013.	23.0	639
22	Impact of Pore Size on the Sorption of Uranyl under Seawater Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4339-4343.	1.8	18
23	Significantly increasing porosity of mesoporous carbon by NaNH ₂ activation for enhanced CO ₂ adsorption. <i>Microporous and Mesoporous Materials</i> , 2016, 230, 100-108.	2.2	47
24	A report on emergent uranyl binding phenomena by an amidoxime phosphonic acid co-polymer. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 23462-23468.	1.3	13
25	Extracting Uranium from Seawater: Promising AF Series Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4110-4117.	1.8	136
26	Extracting Uranium from Seawater: Promising AI Series Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4103-4109.	1.8	114
27	XAFS investigation of polyamidoxime-bound uranyl contests the paradigm from small molecule studies. <i>Energy and Environmental Science</i> , 2016, 9, 448-453.	15.6	115
28	Acidity of the Poly(acrylamidoxime) Adsorbent in Aqueous Solution: Determination of the Proton Affinity Distribution via Potentiometric Titrations. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4217-4223.	1.8	23
29	Elution of Uranium and Transition Metals from Amidoxime-Based Polymer Adsorbents for Sequestering Uranium from Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4313-4320.	1.8	65
30	Characterization and Testing of Amidoxime-Based Adsorbent Materials to Extract Uranium from Natural Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4285-4293.	1.8	56
31	The Uranium from Seawater Program at the Pacific Northwest National Laboratory: Overview of Marine Testing, Adsorbent Characterization, Adsorbent Durability, Adsorbent Toxicity, and Deployment Studies. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4264-4277.	1.8	107
32	Analysis and simulation of a blue energy cycle. <i>Renewable Energy</i> , 2016, 91, 249-260.	4.3	14
33	Uranium Adsorbent Fibers Prepared by Atom-Transfer Radical Polymerization (ATRP) from Poly(vinyl Tj ETQq1 1 0.784314 rgBT /Over Engineering Chemistry Research, 2016, 55, 4139-4148.	1.8	128
34	Quantifying the binding strength of salicylaldoxime-uranyl complexes relative to competing salicylaldoxime-transition metal ion complexes in aqueous solution: a combined experimental and computational study. <i>Dalton Transactions</i> , 2016, 45, 9051-9064.	1.6	23
35	Experiments and Modeling of Uranium Uptake by Amidoxime-Based Adsorbent in the Presence of Other Ions in Simulated Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4241-4248.	1.8	34
36	Synthesis of Naphthalimidedioxime Ligand-Containing Fibers for Uranium Adsorption from Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4161-4169.	1.8	40

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37	A Poly(acrylonitrile)-Functionalized Porous Aromatic Framework Synthesized by Atom-Transfer Radical Polymerization for the Extraction of Uranium from Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4125-4129.	1.8	58
38	Enhancing Uranium Uptake by Amidoxime Adsorbent in Seawater: An Investigation for Optimum Alkaline Conditioning Parameters. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4294-4302.	1.8	58
39	Alternative Alkaline Conditioning of Amidoxime Based Adsorbent for Uranium Extraction from Seawater. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 4303-4312.	1.8	55
40	Preparation and CO ₂ adsorption properties of soft-templated mesoporous carbons derived from chestnut tannin precursors. <i>Microporous and Mesoporous Materials</i> , 2016, 222, 94-103.	2.2	86
41	Acid-Functionalized Mesoporous Carbon: An Efficient Support for Ruthenium-Catalyzed γ -Valerolactone Production. <i>ChemSusChem</i> , 2015, 8, 2520-2528.	3.6	58
42	The electrochemical reactions of SnO ₂ with Li and Na: A study using thin films and mesoporous carbons. <i>Journal of Power Sources</i> , 2015, 284, 1-9.	4.0	27
43	Transport of Ions in Mesoporous Carbon Electrodes during Capacitive Deionization of High-Salinity Solutions. <i>Langmuir</i> , 2015, 31, 1038-1047.	1.6	56
44	Macroporous monoliths for trace metal extraction from seawater. <i>RSC Advances</i> , 2015, 5, 50005-50010.	1.7	28
45	An efficient low-temperature route to nitrogen-doping and activation of mesoporous carbons for CO ₂ capture. <i>Chemical Communications</i> , 2015, 51, 17261-17264.	2.2	47
46	Enhancement of electrosorption rates using low-amplitude, high-frequency, pulsed electrical potential. <i>Separation and Purification Technology</i> , 2014, 129, 18-24.	3.9	10
47	A non-micellar synthesis of mesoporous carbon via spinodal decomposition. <i>RSC Advances</i> , 2014, 4, 23703-23706.	1.7	4
48	Uptake of Uranium from Seawater by Amidoxime-Based Polymeric Adsorbent: Field Experiments, Modeling, and Updated Economic Assessment. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 6076-6083.	1.8	185
49	Uranium recovery from seawater: development of fiber adsorbents prepared via atom-transfer radical polymerization. <i>Journal of Materials Chemistry A</i> , 2014, 2, 14674-14681.	5.2	138
50	Enhanced CO ₂ /N ₂ selectivity in amidoxime-modified porous carbon. <i>Carbon</i> , 2014, 67, 457-464.	5.4	92
51	Recovery of Uranium from Seawater: A Review of Current Status and Future Research Needs. <i>Separation Science and Technology</i> , 2013, 48, 367-387.	1.3	400
52	Influence of temperature on the electrosorption of ions from aqueous solutions using mesoporous carbon materials. <i>Separation and Purification Technology</i> , 2013, 116, 206-213.	3.9	24
53	Seawater Uranium Sorbents: Preparation from a Mesoporous Copolymer Initiator by Atom-Transfer Radical Polymerization. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 13458-13462.	7.2	222
54	Polymer-coated nanoporous carbons for trace seawater uranium adsorption. <i>Science China Chemistry</i> , 2013, 56, 1510-1515.	4.2	44

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55	Neutron imaging of ion transport in mesoporous carbon materials. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11740.	1.3	17
56	Fluorination of "brick and mortar" soft-templated graphitic ordered mesoporous carbons for high power lithium-ion battery. <i>Journal of Materials Chemistry A</i> , 2013, 1, 9414.	5.2	23
57	Sonochemical functionalization of mesoporous carbon for uranium extraction from seawater. <i>Journal of Materials Chemistry A</i> , 2013, 1, 3016.	5.2	132
58	Nitrogen-enriched ordered mesoporous carbons through direct pyrolysis in ammonia with enhanced capacitive performance. <i>Journal of Materials Chemistry A</i> , 2013, 1, 7920.	5.2	120
59	Phosphorylated mesoporous carbon as effective catalyst for the selective fructose dehydration to HMF. <i>Journal of Energy Chemistry</i> , 2013, 22, 305-311.	7.1	44
60	Characterization of Uranium Uptake Kinetics from Seawater in Batch and Flow-Through Experiments. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 9433-9440.	1.8	72
61	Lithium-Sulfur Batteries Based on Nitrogen-Doped Carbon and an Ionic-Liquid Electrolyte. <i>ChemSusChem</i> , 2012, 5, 2079-2085.	3.6	187
62	"One-pot" synthesis of phosphorylated mesoporous carbon heterogeneous catalysts with tailored surface acidity. <i>Catalysis Today</i> , 2012, 186, 12-19.	2.2	22
63	Boron and nitrogen-rich carbons from ionic liquid precursors with tailorable surface properties. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 13486.	1.3	98
64	Low-Temperature Fluorination of Soft-Templated Mesoporous Carbons for a High-Power Lithium/Carbon Fluoride Battery. <i>Chemistry of Materials</i> , 2011, 23, 4420-4427.	3.2	102
65	Phosphorylated mesoporous carbon as a solid acid catalyst. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 2492-2494.	1.3	26
66	Mesoporous Carbon for Capacitive Deionization of Saline Water. <i>Environmental Science & Technology</i> , 2011, 45, 10243-10249.	4.6	351
67	"Brick and Mortar" Self-Assembly Approach to Graphitic Mesoporous Carbon Nanocomposites. <i>Advanced Functional Materials</i> , 2011, 21, 2208-2215.	7.8	98
68	Carbon Materials for Chemical Capacitive Energy Storage. <i>Advanced Materials</i> , 2011, 23, 4828-4850.	11.1	2,593
69	The targeted synthesis of single site vanadyl species on the surface and in the framework of silicate building block materials. <i>Catalysis Today</i> , 2011, 160, 153-164.	2.2	8
70	Ionothermal carbonization of sugars in a protic ionic liquid under ambient conditions. <i>Carbon</i> , 2010, 48, 3364-3368.	5.4	74
71	Hierarchical ordered mesoporous carbon from phloroglucinol-glyoxal and its application in capacitive deionization of brackish water. <i>Journal of Materials Chemistry</i> , 2010, 20, 8674.	6.7	169
72	Advanced Polymer Sorbents: Performance for Lower V/U Adsorption in Natural Seawater. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0