Shannon M Mahurin

List of Publications by Year
in descending order

83 papers	6,408 citations	109321 35 h-index	64796 79 g-index
94 all docs	94 docs citations	94 times ranked	9080 citing authors

#	Article	IF	Citations
1	Visualizing time-dependent microstructural and chemical evolution during molten salt corrosion of Ni-20Cr model alloy using correlative quasi in situ TEM and in situ synchrotron X-ray nano-tomography. Corrosion Science, 2022, 195, 109962.	6.6	19
2	Ionic liquids for carbon capture. MRS Bulletin, 2022, 47, 395-404.	3.5	11
3	Investigating corrosion behavior of Ni and Ni-20Cr in molten ZnCl2. Corrosion Science, 2021, 179, 109105.	6.6	22
4	Surpassing the Organic Cathode Performance for Lithium-Ion Batteries with Robust Fluorinated Covalent Quinazoline Networks. ACS Energy Letters, 2021, 6, 41-51.	17.4	32
5	X-ray scattering reveals ion clustering of dilute chromium species in molten chloride medium. Chemical Science, 2021, 12, 8026-8035.	7.4	13
6	Design of Graphene/Ionic Liquid Composites for Carbon Capture. ACS Applied Materials & Interfaces, 2021, 13, 17511-17516.	8.0	17
7	Synthesis and Characterization of Macrocyclic Ionic Liquids for CO₂ Separation. Industrial & Engineering Chemistry Research, 2021, 60, 8218-8226.	3.7	6
8	Determining oxidation states of transition metals in molten salt corrosion using electron energy loss spectroscopy. Scripta Materialia, 2021, 197, 113790.	5.2	15
9	Unraveling Local Structure of Molten Salts via X-ray Scattering, Raman Spectroscopy, and <i>Ab Initio</i> Molecular Dynamics. Journal of Physical Chemistry B, 2021, 125, 5971-5982.	2.6	23
10	Improving Gas Selectivity in Membranes Using Polymer-Grafted Silica Nanoparticles. ACS Applied Nano Materials, 2021, 4, 5895-5903.	5.0	10
11	Polymer-Grafted Porous Silica Nanoparticles with Enhanced CO₂ Permeability and Mechanical Performance. ACS Applied Materials & Interfaces, 2021, 13, 27411-27418.	8.0	14
12	Formation of three-dimensional bicontinuous structures via molten salt dealloying studied in real-time by in situ synchrotron X-ray nano-tomography. Nature Communications, 2021, 12, 3441.	12.8	36
13	Molecular dynamics simulations of a dicationic ionic liquid for CO2 capture. Journal of Molecular Liquids, 2021, 335, 116163.	4.9	7
14	Synthesis of Poly(ionic Liquid)s-<i>block</i>-poly(methyl Methacrylate) Copolymer-Grafted Silica Particle Brushes with Enhanced CO₂ Permeability and Mechanical Performance. Langmuir, 2021, 37, 10875-10881.	3.5	7
15	FTIR investigation of the interfacial properties and mechanisms of CO2 sorption in porous ionic liquids. Green Chemical Engineering, 2021, 2, 392-401.	6.3	24
16	Benchmark CO2 separation achieved by highly fluorinated nanoporous molecular sieve membranes from nonporous precursor via in situ cross-linking. Journal of Membrane Science, 2021, 638, 119698.	8.2	6
17	Radiation-Assisted Formation of Metal Nanoparticles in Molten Salts. Journal of Physical Chemistry Letters, 2021, 12, 157-164.	4.6	14
18	Bifunctional Ionic Covalent Organic Networks for Enhanced Simultaneous Removal of Chromium(VI) and Arsenic(V) Oxoanions via Synergetic Ion Exchange and Redox Process. Small, 2021, 17, e2104703.	10.0	13

#	ARTICLE	IF	CITATIONS
19	Guanidinium-Based Ionic Covalent-Organic Nanosheets for Sequestration of Cr(VI) and As(V) Oxoanions in Water. ACS Applied Nano Materials, 2021, 4, 13319-13328.	5.0	6
20	Transforming Porous Organic Cages into Porous Ionic Liquids via a Supramolecular Complexation Strategy. Angewandte Chemie, 2020, 132, 2288-2292.	2.0	21
21	Transforming Porous Organic Cages into Porous Ionic Liquids via a Supramolecular Complexation Strategy. Angewandte Chemie - International Edition, 2020, 59, 2268-2272.	13.8	101
22	Broadening the Gas Separation Utility of Monolayer Nanoporous Graphene Membranes by an Ionic Liquid Gating. Nano Letters, 2020, 20, 7995-8000.	9.1	39
23	Alcohol-Induced Low-Temperature Blockage of Supported-Metal Catalysts for Enhanced Catalysis. ACS Catalysis, 2020, 10, 8515-8523.	11.2	18
24	Focusing on Student Learning: Efforts at Multiple Levels. ACS Symposium Series, 2020, , 69-85.	0.5	0
25	H₂O-prompted CO₂ capture on metal silicates <i>in situ</i> generated from SBA-15. RSC Advances, 2020, 10, 28731-28740.	3.6	3
26	Structure and dynamics of the molten alkali-chloride salts from an X-ray, simulation, and rate theory perspective. Physical Chemistry Chemical Physics, 2020, 22, 22900-22917.	2.8	22
27	Temperature Dependence of Short and Intermediate Range Order in Molten MgCl₂ and Its Mixture with KCl. Journal of Physical Chemistry B, 2020, 124, 2892-2899.	2.6	38
28	Ion-gated carbon molecular sieve gas separation membranes. Journal of Membrane Science, 2020, 604, 118013.	8.2	15
29	Revealing 3D Morphological and Chemical Evolution Mechanisms of Metals in Molten Salt by Multimodal Microscopy. ACS Applied Materials & Interfaces, 2020, 12, 17321-17333.	8.0	20
30	Connections between the Speciation and Solubility of Ni(II) and Co(II) in Molten ZnCl₂. Journal of Physical Chemistry B, 2020, 124, 1253-1258.	2.6	24
31	Surpassing Robeson Upper Limit for CO2/N2 Separation with Fluorinated Carbon Molecular Sieve Membranes. CheM, 2020, 6, 631-645.	11.7	73
32	Tailored CO₂-philic Gas Separation Membranes via One-Pot Thiolâ€“ene Chemistry. Macromolecules, 2019, 52, 5819-5828.	4.8	20
33	Porous liquid zeolites: hydrogen bonding-stabilized H-ZSM-5 in branched ionic liquids. Nanoscale, 2019, 11, 1515-1519.	5.6	82
34	Probing microstructure and electrolyte concentration dependent cell chemistry <i>via operando</i> small angle neutron scattering. Energy and Environmental Science, 2019, 12, 1866-1877.	30.8	36
35	Microporous and hollow carbon spheres derived from soft drinks: Promising CO2 separation materials. Microporous and Mesoporous Materials, 2019, 286, 199-206.	4.4	15
36	Elimination of CO₂/N₂ Langmuir Sorption and Promotion of â€œN₂-Phobicityâ€•within High-<i>T</i>_g Glassy Membranes. Macromolecules, 2019, 52, 1589-1600.	4.8	43

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37	Elucidating Ionic Correlations Beyond Simple Charge Alternation in Molten MgCl₂â€“KCl Mixtures. Journal of Physical Chemistry Letters, 2019, 10, 7603-7610.	4.6	49
38	Guanidinium-Based Ionic Covalent Organic Framework for Rapid and Selective Removal of Toxic Cr(VI) Oxoanions from Water. Environmental Science & Technology, 2019, 53, 878-883.	10.0	101
39	New Class of Type III Porous Liquids: A Promising Platform for Rational Adjustment of Gas Sorption Behavior. ACS Applied Materials & Interfaces, 2018, 10, 32-36.	8.0	142
40	Supported bicyclic amidine ionic liquids as a potential CO2/N2 separation medium. Journal of Membrane Science, 2018, 565, 203-212.	8.2	24
41	Impact of tuning CO2-philicity in polydimethylsiloxane-based membranes for carbon dioxide separation. Journal of Membrane Science, 2017, 530, 213-219.	8.2	31
42	Ion-Gated Gas Separation through Porous Graphene. Nano Letters, 2017, 17, 1802-1807.	9.1	109
43	Gas separation mechanism of CO₂ selective amidoxime-poly(1-trimethylsilyl-1-propyne) membranes. Polymer Chemistry, 2017, 8, 3341-3350.	3.9	25
44	Porous Structure Design of Polymeric Membranes for Gas Separation. Small Methods, 2017, 1, 1600051.	8.6	21
45	Electrostaticâ€Assisted Liquefaction of Porous Carbons. Angewandte Chemie - International Edition, 2017, 56, 14958-14962.	13.8	56
46	Electrostaticâ€Assisted Liquefaction of Porous Carbons. Angewandte Chemie, 2017, 129, 15154-15158.	2.0	32
47	Solid-state synthesis of ordered mesoporous carbon catalysts via a mechanochemical assembly through coordination cross-linking. Nature Communications, 2017, 8, 15020.	12.8	164
48	Robust and Elastic Polymer Membranes with Tunable Properties for Gas Separation. ACS Applied Materials & Interfaces, 2017, 9, 26483-26491.	8.0	32
49	Membraneâ€Based Gas Separation Accelerated by Hollow Nanosphere Architectures. Advanced Materials, 2017, 29, 1603797.	21.0	48
50	Probing the interaction of ionic liquids with graphene using surfaceâ€enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2016, 47, 585-590.	2.5	18
51	Effect of Crossâ€Link Density on Carbon Dioxide Separation in Polydimethylsiloxaneâ€Norbornene Membranes. ChemSusChem, 2015, 8, 3595-3604.	6.8	21
52	InnenrÃ¼cktitelbild: Porous Liquids: A Promising Class of Media for Gas Separation (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.0	0
53	Water desalination using nanoporous single-layer graphene. Nature Nanotechnology, 2015, 10, 459-464.	31.5	1,372
54	Porous Liquids: A Promising Class of Media for Gas Separation. Angewandte Chemie - International Edition, 2015, 54, 932-936.	13.8	191

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55	Directed Synthesis of Nanoporous Carbons from Taskâ€Specific Ionic Liquid Precursors for the Adsorption of CO₂. ChemSusChem, 2014, 7, 3284-3289.	6.8	21
56	Enhanced CO2/N2 selectivity in amidoxime-modified porous carbon. Carbon, 2014, 67, 457-464.	10.3	92
57	Polymeric molecular sieve membranes via in situ cross-linking of non-porous polymer membrane templates. Nature Communications, 2014, 5, 3705.	12.8	143
58	â€œBrick-and-mortarâ€•synthesis of free-standing mesoporous carbon nanocomposite membranes as supports of room temperature ionic liquids for CO2â˜N2 separation. Journal of Membrane Science, 2014, 468, 73-80.	8.2	32
59	A new family of fluidic precursors for the self-templated synthesis of hierarchical nanoporous carbons. Chemical Communications, 2013, 49, 7289.	4.1	29
60	Effect of alkyl and aryl substitutions on 1,2,4-triazolium-based ionic liquids for carbon dioxide separation and capture. RSC Advances, 2013, 3, 3981.	3.6	29
61	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
62	Synthesis of Porous, Nitrogenâ€Doped Adsorption/Diffusion Carbonaceous Membranes for Efficient CO₂ Separation. Macromolecular Rapid Communications, 2013, 34, 452-459.	3.9	46
63	Nitrogenâ€Enriched Carbons from Alkali Salts with High Coulombic Efficiency for Energy Storage Applications. Advanced Energy Materials, 2013, 3, 708-712.	19.5	51
64	New Tricks for Old Molecules: Development and Application of Porous Nâ€doped, Carbonaceous Membranes for CO₂ Separation. Advanced Materials, 2013, 25, 4152-4158.	21.0	71
65	Carbon Membranes: New Tricks for Old Molecules: Development and Application of Porous Nâ€doped, Carbonaceous Membranes for CO₂ Separation (Adv. Mater. 30/2013). Advanced Materials, 2013, 25, 4200-4200.	21.0	0
66	High CO2 solubility, permeability and selectivity in ionic liquids with the tetracyanoborate anion. RSC Advances, 2012, 2, 11813.	3.6	109
67	Efficient CO₂ Capture by Porous, Nitrogenâ€Doped Carbonaceous Adsorbents Derived from Taskâ€Specific Ionic Liquids. ChemSusChem, 2012, 5, 1912-1917.	6.8	92
68	Synthesis and Characterization of Thiazolium-Based Room Temperature Ionic Liquids for Gas Separations. Industrial & Engineering Chemistry Research, 2012, 51, 11530-11537.	3.7	44
69	A Superacid-Catalyzed Synthesis of Porous Membranes Based on Triazine Frameworks for CO₂ Separation. Journal of the American Chemical Society, 2012, 134, 10478-10484.	13.7	408
70	â€œOne-potâ€•synthesis of phosphorylated mesoporous carbon heterogeneous catalysts with tailored surface acidity. Catalysis Today, 2012, 186, 12-19.	4.4	22
71	Ring-opened heterocycles: Promising ionic liquids for gas separation and capture. Journal of Membrane Science, 2012, 401-402, 61-67.	8.2	33
72	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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73	Benzyl-Functionalized Room Temperature Ionic Liquids for CO₂/N₂ Separation. Industrial & Engineering Chemistry Research, 2011, 50, 14061-14069.	3.7	61
74	A Reusable Surface-Enhanced Raman Scattering (SERS) Substrate Prepared by Atomic Layer Deposition of Alumina on a Multi-Layer Gold and Silver Film. Applied Spectroscopy, 2011, 65, 417-422.	2.2	37
75	â€œBrickâ€andâ€Mortarâ€•Selfâ€Assembly Approach to Graphitic Mesoporous Carbon Nanocomposites. Advanced Functional Materials, 2011, 21, 2208-2215.	14.9	98
76	Dopamine as a Carbon Source: The Controlled Synthesis of Hollow Carbon Spheres and Yolkâ€Structured Carbon Nanocomposites. Angewandte Chemie - International Edition, 2011, 50, 6799-6802.	13.8	674
77	Ammonia-activated mesoporous carbon membranes for gas separations. Journal of Membrane Science, 2011, 368, 41-47.	8.2	63
78	Performance of nitrile-containing anions in task-specific ionic liquids for improved CO2/N2 separation. Journal of Membrane Science, 2010, 353, 177-183.	8.2	190
79	Use of atomic layer deposition to improve the stability of silver substrates for <i>i</i>n situ, highâ€temperature SERS measurements. Journal of Raman Spectroscopy, 2010, 41, 4-11.	2.5	70
80	Preparation of free-standing high quality mesoporous carbon membranes. Carbon, 2010, 48, 557-560.	10.3	46
81	Computational Investigation of Reactive to Nonreactive Capture of Carbon Dioxide by Oxygen-Containing Lewis Bases. Journal of Physical Chemistry A, 2010, 114, 11761-11767.	2.5	51
82	Direct exfoliation of natural graphite into micrometre size few layers graphene sheets using ionic liquids. Chemical Communications, 2010, 46, 4487.	4.1	295
83	Formation of Oriented Nanostructures from Single Molecules of Conjugated Polymers in Microdroplets of Solution:Â The Role of Solvent. Macromolecules, 2004, 37, 6132-6140.	4.8	32