

James H Davis

List of Publications by Year in descending order

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58
papers

8,221
citations

236833

25
h-index

143943

57
g-index

58
all docs

58
docs citations

58
times ranked

8263
citing authors

#	ARTICLE	IF	CITATIONS
1	CO ₂ Capture by a Task-Specific Ionic Liquid. <i>Journal of the American Chemical Society</i> , 2002, 124, 926-927.	6.6	2,065
2	Energy applications of ionic liquids. <i>Energy and Environmental Science</i> , 2014, 7, 232-250.	15.6	1,455
3	Novel Brønsted Acidic Ionic Liquids and Their Use as Dual Solvent- π -Catalysts. <i>Journal of the American Chemical Society</i> , 2002, 124, 5962-5963.	6.6	1,144
4	Task-Specific Ionic Liquids. <i>Chemistry Letters</i> , 2004, 33, 1072-1077.	0.7	983
5	The third evolution of ionic liquids: active pharmaceutical ingredients. <i>New Journal of Chemistry</i> , 2007, 31, 1429.	1.4	766
6	From curiosities to commodities: ionic liquids begin the transition. <i>Chemical Communications</i> , 2003, , 1209-1212.	2.2	207
7	Reversible CO ₂ Capture by Unexpected Plastic-, Resin-, and Gel-like Ionic Soft Materials Discovered during the Combi-Click Generation of a TSIL Library. <i>Chemistry of Materials</i> , 2007, 19, 3581-3583.	3.2	151
8	Sweet success: ionic liquids derived from non-nutritive sweeteners Electronic supplementary information (ESI) available: experimental details; IR spectra. See http://www.rsc.org/suppdata/cc/b3/b313068a/ . <i>Chemical Communications</i> , 2004, , 630.	2.2	147
9	Novel organic ionic liquids (OILs) incorporating cations derived from the antifungal drug miconazole. <i>Tetrahedron Letters</i> , 1998, 39, 8955-8958.	0.7	113
10	Simultaneous membrane transport of two active pharmaceutical ingredients by charge assisted hydrogen bond complex formation. <i>Chemical Science</i> , 2014, 5, 3449.	3.7	106
11	Ionic liquids of superior thermal stability. <i>Chemical Communications</i> , 2013, 49, 7590.	2.2	93
12	Impact of water on CO ₂ capture by amino acid ionic liquids. <i>Environmental Chemistry Letters</i> , 2014, 12, 201-208.	8.3	81
13	Supported Ionic Liquid Membranes and Facilitated Ionic Liquid Membranes. <i>ACS Symposium Series</i> , 2002, , 69-87.	0.5	80
14	The Fluid-Mosaic Model, Homeoviscous Adaptation, and Ionic Liquids: Dramatic Lowering of the Melting Point by Side-Chain Unsaturation. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 2755-2758.	7.2	76
15	Structure and dynamics of the drug-bound bacterial transporter EmrE in lipid bilayers. <i>Nature Communications</i> , 2021, 12, 172.	5.8	40
16	Exploiting isolobal relationships to create new ionic liquids: novel room-temperature ionic liquids based upon (N-alkylimidazole)(amine)BH ₂ ⁺ boronium ions. <i>Chemical Communications</i> , 2005, , 3679.	2.2	39
17	Enhanced stabilization of the Tobacco mosaic virus using protic ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 10119.	1.3	39
18	Stable Cycling of Lithium Batteries Using Novel Boronium-Cation-Based Ionic Liquid Electrolytes. <i>Chemistry of Materials</i> , 2010, 22, 1038-1045.	3.2	38

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19	Building a bridge between aprotic and protic ionic liquids. <i>RSC Advances</i> , 2013, 3, 337-340.	1.7	38
20	Tuning the melting point of selected ionic liquids through adjustment of the cation's dipole moment. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 12301-12311.	1.3	36
21	Making good on a promise: ionic liquids with genuinely high degrees of thermal stability. <i>Chemical Communications</i> , 2018, 54, 5019-5031.	2.2	35
22	Synthesis of New Lipid-Inspired Ionic Liquids by Thiol-Ene Chemistry: Profound Solvent Effect on Reaction Pathway. <i>Chemistry - A European Journal</i> , 2014, 20, 7576-7580.	1.7	33
23	Do ion tethered functional groups affect IL solvent properties? The case of sulfoxides and sulfones. <i>Chemical Communications</i> , 2006, , 646.	2.2	32
24	Lipidic ionic liquid stationary phases for the separation of aliphatic hydrocarbons by comprehensive two-dimensional gas chromatography. <i>Journal of Chromatography A</i> , 2017, 1481, 127-136.	1.8	26
25	Ethane and Ethylene Solubility in an Imidazolium-Based Lipidic Ionic Liquid. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 5165-5171.	1.8	25
26	Thermally stable bis(trifluoromethylsulfonyl)imide salts and their mixtures. <i>New Journal of Chemistry</i> , 2016, 40, 7157-7161.	1.4	25
27	Thermally robust: triarylsulfonium ionic liquids stable in air for 90 days at 300 °C. <i>RSC Advances</i> , 2017, 7, 7623-7630.	1.7	23
28	Synthesis and thermophysical properties of ionic liquids: cyclopropyl moieties versus olefins as Tm-reducing elements in lipid-inspired ionic liquids. <i>Tetrahedron Letters</i> , 2013, 54, 12-14.	0.7	22
29	Functionalized ionic liquids with highly polar polyhydroxylated appendages and their rapid synthesis via thiol-ene click chemistry. <i>Tetrahedron Letters</i> , 2011, 52, 5173-5175.	0.7	21
30	The Effect of the Sulfur Position on the Melting Points of Lipidic 1-Methyl-3-Thiaalkylimidazolium Ionic Liquids. <i>Journal of Physical Chemistry B</i> , 2014, 118, 10232-10239.	1.2	21
31	Ultra-high thermal stability perarylated ionic liquids as gas chromatographic stationary phases for the selective separation of polyaromatic hydrocarbons and polychlorinated biphenyls. <i>Journal of Chromatography A</i> , 2019, 1604, 460466.	1.8	20
32	The effect of structural modifications on the thermal stability, melting points and ion interactions for a series of tetraaryl-phosphonium-based mesothermal ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 31560-31571.	1.3	19
33	Working Salts: Syntheses and Uses of Ionic Liquids Containing Functionalized Ions. <i>ACS Symposium Series</i> , 2002, , 247-258.	0.5	18
34	An evaluation of anion suitability for use in ionic liquids with long-term, high-temperature thermal stability. <i>New Journal of Chemistry</i> , 2017, 41, 7844-7848.	1.4	17
35	Azolidene Carbenes Derived from Biologically Relevant Molecules. 1Synthesis and Characterization of Iridium Complexes of Imidazolidene Ligands Based upon the Antifungal Drugs Econazole and Miconazole. <i>Inorganic Chemistry</i> , 1998, 37, 5412-5413.	1.9	15
36	Task-Specific Ionic Liquids for Separations of Petrochemical Relevance: Reactive Capture of CO ₂ Using Amine-Incorporating Ions. <i>ACS Symposium Series</i> , 2005, , 49-56.	0.5	15

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37	Synthesis, thermal stability, and computed bond dissociation energies of tetraarylphosphonium-based mesothermal ionic liquids bearing a quinoline ring system. <i>Tetrahedron Letters</i> , 2017, 58, 4628-4631.	0.7	14
38	Solubility of CO ₂ and N ₂ O in an Imidazolium-Based Lipidic Ionic Liquid. <i>Journal of Physical Chemistry B</i> , 2016, 120, 10524-10530.	1.2	13
39	Structure-based tuning of Tm in lipid-like ionic liquids. Insights from Tf ₂ N ⁺ salts of gene transfection agents. <i>Chemical Communications</i> , 2012, 48, 7522.	2.2	12
40	Click chemistry mediated synthesis of bio-inspired phosphonyl-functionalized ionic liquids. <i>Green Chemistry</i> , 2015, 17, 1259-1268.	4.6	12
41	Novel boronium salt exhibits substantial antibacterial activity when compared to a commercial quaternary ammonium disinfectant. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2021, 36, 127808.	1.0	12
42	Lipid-Inspired Ionic Liquids Containing Long-Chain Appendages: Novel Class of Biomaterials with Attractive Properties and Applications. <i>ACS Symposium Series</i> , 2012, , 199-216.	0.5	11
43	A simple and rapid route to novel tetra(4-thiaalkyl)ammonium bromides. <i>RSC Advances</i> , 2013, 3, 24612.	1.7	11
44	Thioether-functionalized picolinium ionic liquids: synthesis, physical properties and computational studies. <i>New Journal of Chemistry</i> , 2017, 41, 1625-1630.	1.4	11
45	A new building block for electroactive organic materials? Synthesis, cyclic voltammetry, single crystal X-ray structure, and DFT treatment of a unique boron-based viologen. <i>Chemical Communications</i> , 2011, 47, 9072.	2.2	9
46	Liquid-liquid equilibria of binary mixtures of a lipidic ionic liquid with hydrocarbons. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 2459-2467.	1.3	6
47	Acoustic levitation and infrared thermography: a sound approach to studying droplet evaporation. <i>Chemical Communications</i> , 2020, 56, 4224-4227.	2.2	6
48	From curiosities to commodities: ionic liquids begin the transition. <i>Chemical Communications</i> , 2003, , 1209-12.	2.2	6
49	Unusual Boronium Salt Shows Antifungal Activity Comparable to a Commercial Quaternary Ammonium Disinfectant. <i>ChemistrySelect</i> , 2022, 7, .	0.7	6
50	Degradation of Chitin Utilizing Acid Functionalized Ionic Liquids Technology. <i>ACS Symposium Series</i> , 2012, , 189-198.	0.5	5
51	Multi-ion ionic liquids and a direct, reproducible, diversity-oriented way to make them. <i>Chemical Communications</i> , 2015, 51, 15914-15916.	2.2	5
52	A co-crystal of 1,10-phenanthroline with boric acid: a novel aza-aromatic complex. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2013, 69, o1067-o1068.	0.2	3
53	Synthesis and Properties of Lipid-Inspired Ionic Liquids. , 2016, , 205-223.		3
54	Unorthodox crystalline drug salts via the reaction of amine-containing drugs with CO ₂ . <i>Chemical Communications</i> , 2019, 55, 13546-13549.	2.2	3

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55	Ionic liquids of superior thermal stability. Validation of PPh ₄ ⁺ as an organic cation of impressive thermodynamic durability. RSC Advances, 2020, 10, 20521-20528.	1.7	3
56	Commercially Available Salts as Building Blocks for New Ionic Liquids. ACS Symposium Series, 2003, , 100-107.	0.5	2
57	Fusion and Thermal Degradation Behavior of Symmetric Sulfur-Containing Quaternary Ammonium Bromides. Journal of Physical Chemistry B, 2016, 120, 1330-1335.	1.2	2
58	Understanding liquid-liquid equilibria in binary mixtures of hydrocarbons with a thermally robust perarylphosphonium-based ionic liquid. RSC Advances, 2021, 11, 31328-31338.	1.7	2