

James H Davis

List of Publications by Year in descending order

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66
papers

8,411
citations

197514

25
h-index

113702

59
g-index

68
all docs

68
docs citations

68
times ranked

7394
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.	14.6	2,097
2	Energy applications of ionic liquids. <i>Energy and Environmental Science</i> , 2014, 7, 232-250.	32.2	1,500
3	Novel Brønsted Acidic Ionic Liquids and Their Use as Dual Solvent Catalysts. <i>Journal of the American Chemical Society</i> , 2002, 124, 5962-5963.	14.6	1,155
4	Task-Specific Ionic Liquids. <i>Chemistry Letters</i> , 2004, 33, 1072-1077.	1.4	997
5	The third evolution of ionic liquids: active pharmaceutical ingredients. <i>New Journal of Chemistry</i> , 2007, 31, 1429.	2.7	777
6	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.	7.0	153
7	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.	4.2	148
8	Novel organic ionic liquids (OILs) incorporating cations derived from the antifungal drug miconazole. <i>Tetrahedron Letters</i> , 1998, 39, 8955-8958.	1.4	115
9	Simultaneous membrane transport of two active pharmaceutical ingredients by charge assisted hydrogen bond complex formation. <i>Chemical Science</i> , 2014, 5, 3449.	7.8	111
10	Ionic liquids of superior thermal stability. <i>Chemical Communications</i> , 2013, 49, 7590.	4.2	96
11	Impact of water on CO ₂ capture by amino acid ionic liquids. <i>Environmental Chemistry Letters</i> , 2014, 12, 201-208.	16.6	85
12	Supported Ionic Liquid Membranes and Facilitated Ionic Liquid Membranes. <i>ACS Symposium Series</i> , 2002, , 69-87.	1.0	84
13	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.	14.7	78
14	Structure and dynamics of the drug-bound bacterial transporter EmrE in lipid bilayers. <i>Nature Communications</i> , 2021, 12, 172.	13.2	44
15	Making good on a promise: ionic liquids with genuinely high degrees of thermal stability. <i>Chemical Communications</i> , 2018, 54, 5019-5031.	4.2	42
16	Enhanced stabilization of the Tobacco mosaic virus using protic ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 10119.	2.9	41
17	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.	2.9	40
18	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.	4.2	39

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19	Building a bridge between aprotic and protic ionic liquids. RSC Advances, 2013, 3, 337-340.	3.7	39
20	Stable Cycling of Lithium Batteries Using Novel Boronium-Cation-Based Ionic Liquid Electrolytes. Chemistry of Materials, 2010, 22, 1038-1045.	7.0	38
21	Synthesis of New Lipid-Inspired Ionic Liquids by Thiol-Ene Chemistry: Profound Solvent Effect on Reaction Pathway. Chemistry - A European Journal, 2014, 20, 7576-7580.	3.9	34
22	Do ion tethered functional groups affect IL solvent properties? The case of sulfoxides and sulfones. Chemical Communications, 2006, , 646.	4.2	32
23	Lipidic ionic liquid stationary phases for the separation of aliphatic hydrocarbons by comprehensive two-dimensional gas chromatography. Journal of Chromatography A, 2017, 1481, 127-136.	3.8	27
24	Ethane and Ethylene Solubility in an Imidazolium-Based Lipidic Ionic Liquid. Industrial & Engineering Chemistry Research, 2015, 54, 5165-5171.	3.8	25
25	Thermally stable bis(trifluoromethylsulfonyl)imide salts and their mixtures. New Journal of Chemistry, 2016, 40, 7157-7161.	2.7	25
26	Thermally robust: triarylsulfonium ionic liquids stable in air for 90 days at 300 Å°C. RSC Advances, 2017, 7, 7623-7630.	3.7	24
27	Synthesis and thermophysical properties of ionic liquids: cyclopropyl moieties versus olefins as Tm-reducing elements in lipid-inspired ionic liquids. Tetrahedron Letters, 2013, 54, 12-14.	1.4	22
28	Ultra-high thermal stability perarylated ionic liquids as gas chromatographic stationary phases for the selective separation of polyaromatic hydrocarbons and polychlorinated biphenyls. Journal of Chromatography A, 2019, 1604, 460466.	3.8	22
29	Functionalized ionic liquids with highly polar polyhydroxylated appendages and their rapid synthesis via thiol-ene click chemistry. Tetrahedron Letters, 2011, 52, 5173-5175.	1.4	21
30	The Effect of the Sulfur Position on the Melting Points of Lipidic 1-Methyl-3-Thiaalkylimidazolium Ionic Liquids. Journal of Physical Chemistry B, 2014, 118, 10232-10239.	2.7	21
31	The effect of structural modifications on the thermal stability, melting points and ion interactions for a series of tetraaryl-phosphonium-based mesothermal ionic liquids. Physical Chemistry Chemical Physics, 2017, 19, 31560-31571.	2.9	21
32	Working Salts: Syntheses and Uses of Ionic Liquids Containing Functionalized Ions. ACS Symposium Series, 2002, , 247-258.	1.0	18
33	An evaluation of anion suitability for use in ionic liquids with long-term, high-temperature thermal stability. New Journal of Chemistry, 2017, 41, 7844-7848.	2.7	17
34	Direct Air Capture of CO ₂ via Ionic Liquids Derived from "Waste" Amino Acids. ACS Sustainable Chemistry and Engineering, 2022, 10, 11885-11890.	6.9	17
35	Task-Specific Ionic Liquids for Separations of Petrochemical Relevance: Reactive Capture of CO ₂ Using Amine-Incorporating Ions. ACS Symposium Series, 2005, , 49-56.	1.0	16
36	Azolidene Carbenes Derived from Biologically Relevant Molecules.1Synthesis and Characterization of Iridium Complexes of Imidazolidene Ligands Based upon the Antifungal Drugs Econazole and Miconazole. Inorganic Chemistry, 1998, 37, 5412-5413.	4.2	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.	1.4	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.	2.7	13
39	Structure-based tuning of T _m in lipid-like ionic liquids. Insights from Tf ₂ N ⁺ salts of gene transfection agents. <i>Chemical Communications</i> , 2012, 48, 7522.	4.2	12
40	Click chemistry mediated synthesis of bio-inspired phosphonyl-functionalized ionic liquids. <i>Green Chemistry</i> , 2015, 17, 1259-1268.	9.3	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.	2.4	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.	1.0	11
43	A simple and rapid route to novel tetra(4-thiaalkyl)ammonium bromides. <i>RSC Advances</i> , 2013, 3, 24612.	3.7	11
44	Thioether-functionalized picolinium ionic liquids: synthesis, physical properties and computational studies. <i>New Journal of Chemistry</i> , 2017, 41, 1625-1630.	2.7	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.	4.2	9
46	Acoustic levitation and infrared thermography: a sound approach to studying droplet evaporation. <i>Chemical Communications</i> , 2020, 56, 4224-4227.	4.2	7
47	Multi-ion ionic liquids and a direct, reproducible, diversity-oriented way to make them. <i>Chemical Communications</i> , 2015, 51, 15914-15916.	4.2	6
48	Liquid-liquid equilibria of binary mixtures of a lipidic ionic liquid with hydrocarbons. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 2459-2467.	2.9	6
49	Unusual Boronium Salt Shows Antifungal Activity Comparable to a Commercial Quaternary Ammonium Disinfectant. <i>ChemistrySelect</i> , 2022, 7, .	1.7	6
50	Degradation of Chitin Utilizing Acid Functionalized Ionic Liquids Technology. <i>ACS Symposium Series</i> , 2012, , 189-198.	1.0	5
51	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
52	Synthesis and Properties of Lipid-Inspired Ionic Liquids. , 2016, , 205-223.		3
53	Unorthodox crystalline drug salts <i>via</i> the reaction of amine-containing drugs with CO ₂ . <i>Chemical Communications</i> , 2019, 55, 13546-13549.	4.2	3
54	Ionic liquids of superior thermal stability. Validation of PPh ₄ ⁺ as an organic cation of impressive thermodynamic durability. <i>RSC Advances</i> , 2020, 10, 20521-20528.	3.7	3

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55	Understanding liquid-liquid equilibria in binary mixtures of hydrocarbons with a thermally robust perarylphosphonium-based ionic liquid. <i>RSC Advances</i> , 2021, 11, 31328-31338.	3.7	3
56	Cyclopropane as an Unsaturation Effect Isostere Lowering the Melting Points in Lipid-like Ionic Liquids. <i>Journal of Physical Chemistry B</i> , 2023, 127, 1429-1442.	2.7	3
57	Commercially Available Salts as Building Blocks for New Ionic Liquids. <i>ACS Symposium Series</i> , 2003, , 100-107.	1.0	2
58	Fusion and Thermal Degradation Behavior of Symmetric Sulfur-Containing Quaternary Ammonium Bromides. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1330-1335.	2.7	2
59	Charge neutralization of the active site glutamates does not limit substrate binding and transport by small multidrug resistance transporter EmrE. <i>Journal of Biological Chemistry</i> , 2023, 299, 102805.	3.5	1
60	Ionic Liquids with Benzenesulfonate Anions: Nonfluorinated, Thermally Stable Anion Options. , 2023, 1, 690-695.		1
61	Physical and Electrochemical Analysis of <i>N</i> -Alkylpyrrolidinium-Substituted Boronium Ionic Liquids. <i>Inorganic Chemistry</i> , 2023, 62, 18280-18289.	4.2	1
62	Physical and Electrochemical Analysis of Novel Boronium Cation-Based Ionic Liquids. <i>ECS Transactions</i> , 2022, 109, 123-134.	0.6	0
63	Physical and Electrochemical Analysis of Novel Boronium Cation-Based Ionic Liquids. <i>ECS Meeting Abstracts</i> , 2022, MA2022-02, 2104-2104.	0.0	0
64	(Invited) 20 Years of CO ₂ Capture By Ionic Liquids, Molecular Liquids, and Liquids in-between. <i>ECS Meeting Abstracts</i> , 2022, MA2022-02, 2062-2062.	0.0	0
65	Synthesis and Characterization of Neoteric Boronium Ionic Liquids. <i>ECS Meeting Abstracts</i> , 2023, MA2023-02, 2721-2721.	0.0	0
66	Electrochemical Approach for Studying Local Dynamic Heterogeneity of Ionic Liquids Applied to Neoteric Boroniums. <i>ECS Meeting Abstracts</i> , 2023, MA2023-02, 2722-2722.	0.0	0