Martin D Burke

List of Publications by Year
in descending order

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68 papers	8,157 citations	87888 38 h-index	95266 68 g-index
76 all docs	76 docs citations	76 times ranked	6690 citing authors

#	Article	IF	Citations
1	Iterations from the chemical cosmos. , 2022, 1, 11-12.		2
2	Automated iterative Csp3â€"C bond formation. Nature, 2022, 604, 92-97.	27.8	62
3	Digitizing Chemical Synthesis in 3D Printed Reactionware. Angewandte Chemie, 2022, 134, .	2.0	0
4	Digitizing Chemical Synthesis in 3D Printed Reactionware. Angewandte Chemie - International Edition, 2022, 61, .	13.8	18
5	Machine Learning May Sometimes Simply Capture Literature Popularity Trends: A Case Study of Heterocyclic Suzukiâ€"Miyaura Coupling. Journal of the American Chemical Society, 2022, 144, 4819-4827.	13.7	64
6	Using automated synthesis to understand the role of side chains on molecular charge transport. Nature Communications, 2022, 13, 2102.	12.8	12
7	Mitigation of SARS-CoV-2 transmission at a large public university. Nature Communications, 2022, 13, .	12.8	21
8	A small molecule redistributes iron in ferroportin-deficient mice and patient-derived primary macrophages. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	11
9	Targeting fungal membrane homeostasis with imidazopyrazoindoles impairs azole resistance and biofilm formation. Nature Communications, 2022, 13, .	12.8	21
10	Amphotericin B induces epithelial voltage responses in people with cystic fibrosis. Journal of Cystic Fibrosis, 2021, 20, 540-550.	0.7	5
11	Describing Antifungal Drug-Sterol Interactions Inside the Membrane: The Role of Dynamics. Biophysical Journal, 2021, 120, 191a.	0.5	0
12	Sterol Sponge Mechanism Is Conserved for Glycosylated Polyene Macrolides. ACS Central Science, 2021, 7, 781-791.	11.3	27
13	Well-Tolerated Amphotericin B Derivatives That Effectively Treat Visceral Leishmaniasis. ACS Infectious Diseases, 2021, 7, 2472-2482.	3.8	3
14	Transition between Nonresonant and Resonant Charge Transport in Molecular Junctions. Nano Letters, 2021, 21, 8340-8347.	9.1	12
15	Fungicidal amphotericin B sponges are assemblies of staggered asymmetric homodimers encasing large void volumes. Nature Structural and Molecular Biology, 2021, 28, 972-981.	8.2	10
16	A Computer Conquers Tactical Combinations. CheM, 2020, 6, 12-13.	11.7	2
17	A Mild Method for Making MIDA Boronates. Organic Letters, 2020, 22, 9408-9414.	4.6	15
18	Small Molecule Channels Harness Membrane Potential to Concentrate Potassium in trk1Î"trk2Î" Yeast. ACS Chemical Biology, 2020, 15, 1575-1580.	3.4	6

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19	Modular synthesis enables molecular ju-jitsu in the fight against antibiotic resistance. Nature, 2020, 586, 32-33.	27.8	3
20	Modular Syntheses of Phenanthroindolizidine Natural Products. Organic Letters, 2019, 21, 4201-4204.	4.6	16
21	Axial shielding of Pd(II) complexes enables perfect stereoretention in Suzuki-Miyaura cross-coupling of Csp3 boronic acids. Nature Communications, 2019, 10, 1263.	12.8	29
22	Small-molecule ion channels increase host defences in cystic fibrosis airway epithelia. Nature, 2019, 567, 405-408.	27.8	75
23	Solid-State NMR of highly 13C-enriched cholesterol in lipid bilayers. Methods, 2018, 138-139, 47-53.	3.8	10
24	The Molecular Industrial Revolution: Automated Synthesis of Small Molecules. Angewandte Chemie - International Edition, 2018, 57, 4192-4214.	13.8	150
25	Towards the generalized iterative synthesis of small molecules. Nature Reviews Chemistry, 2018, 2, .	30.2	94
26	Die molekulare industrielle Revolution: zur automatisierten Synthese organischer Verbindungen. Angewandte Chemie, 2018, 130, 4266-4288.	2.0	21
27	FAM210B is an erythropoietin target and regulates erythroid heme synthesis by controlling mitochondrial iron import and ferrochelatase activity. Journal of Biological Chemistry, 2018, 293, 19797-19811.	3.4	30
28	Peridinin Is an Exceptionally Potent and Membrane-Embedded Inhibitor of Bilayer Lipid Peroxidation. Journal of the American Chemical Society, 2018, 140, 15227-15240.	13.7	19
29	Restored iron transport by a small molecule promotes absorption and hemoglobinization in animals. Science, 2017, 356, 608-616.	12.6	112
30	The natural productome. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5564-5566.	7.1	22
31	MIDA boronates are hydrolysed fast and slow by two different mechanisms. Nature Chemistry, 2016, 8, 1067-1075.	13.6	93
32	Our Path to Less Toxic Amphotericins. Synlett, 2016, 27, 337-354.	1.8	9
33	Nontoxic antimicrobials that evade drug resistance. Nature Chemical Biology, 2015, 11, 481-487.	8.0	74
34	Synthesis of many different types of organic small molecules using one automated process. Science, 2015, 347, 1221-1226.	12.6	426
35	Restored Physiology in Protein-Deficient Yeast by a Small Molecule Channel. Journal of the American Chemical Society, 2015, 137, 10096-10099.	13.7	26
36	From Synthesis to Function via Iterative Assembly of <i>N</i>-Methyliminodiacetic Acid Boronate Building Blocks. Accounts of Chemical Research, 2015, 48, 2297-2307.	15.6	156

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37	C3-OH of Amphotericin B Plays an Important Role in Ion Conductance. Journal of the American Chemical Society, 2015, 137, 15102-15104.	13.7	16
38	Amphotericin forms an extramembranous and fungicidal sterol sponge. Nature Chemical Biology, 2014, 10, 400-406.	8.0	359
39	Synthesis of most polyene natural product motifs using just 12 building blocks and one coupling reaction. Nature Chemistry, 2014, 6, 484-491.	13.6	177
40	(1-Bromovinyl)-MIDA boronate: a readily accessible and highly versatile building block for small molecule synthesis. Tetrahedron, 2013, 69, 7732-7740.	1.9	33
41	C2â€²-OH of Amphotericin B Plays an Important Role in Binding the Primary Sterol of Human Cells but Not Yeast Cells. Journal of the American Chemical Society, 2013, 135, 8488-8491.	13.7	92
42	Amphotericin primarily kills yeast by simply binding ergosterol. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2234-2239.	7.1	467
43	Electronic tuning of site-selectivity. Nature Chemistry, 2012, 4, 996-1003.	13.6	47
44	A General Solution for the 2â€Pyridyl Problem. Angewandte Chemie - International Edition, 2012, 51, 2667-2672.	13.8	209
45	Pinene-Derived Iminodiacetic Acid (PIDA): A Powerful Ligand for Stereoselective Synthesis and Iterative Cross-Coupling of C(sp³) Boronate Building Blocks. Journal of the American Chemical Society, 2011, 133, 13774-13777.	13.7	160
46	Total Synthesis of Synechoxanthin through Iterative Crossâ€Coupling. Angewandte Chemie - International Edition, 2011, 50, 7862-7864.	13.8	86
47	Cover Picture: Total Synthesis of Synechoxanthin through Iterative Cross-Coupling (Angew. Chem.) Tj ETQq1 1 0.784314 rgBT /Overlock	13.8	0
48	(Z)-(2-Bromovinyl)-MIDA boronate: a readily accessible and highly versatile building block for small molecule synthesis. Tetrahedron, 2011, 67, 4333-4343.	1.9	44
49	Synthesis-enabled functional group deletions reveal key underpinnings of amphotericin B ion channel and antifungal activities. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6733-6738.	7.1	111
50	General Method for Synthesis of 2-Heterocyclic N-Methyliminodiacetic Acid Boronates. Organic Letters, 2010, 12, 2314-2317.	4.6	112
51	A Simple and General Platform for Generating Stereochemically Complex Polyene Frameworks by Iterative Crossâ€Coupling. Angewandte Chemie - International Edition, 2010, 49, 8860-8863.	13.8	115
52	Ethynyl MIDA boronate: a readily accessible and highly versatile building block for small molecule synthesis. Tetrahedron, 2010, 66, 4710-4718.	1.9	81
53	Stereoretentive Suzukiâ€"Miyaura Coupling of Haloallenes Enables Fully Stereocontrolled Access to (â€")-Peridinin. Journal of the American Chemical Society, 2010, 132, 6941-6943.	13.7	134
54	Flexible tetracycline synthesis yields promising antibiotics. Nature Chemical Biology, 2009, 5, 77-79.	8.0	4

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55	Vinyl MIDA boronate: a readily accessible and highly versatile building block for small molecule synthesis. Tetrahedron, 2009, 65, 3130-3138.	1.9	127
56	A General Solution for Unstable Boronic Acids: Slow-Release Cross-Coupling from Air-Stable MIDA Boronates. Journal of the American Chemical Society, 2009, 131, 6961-6963.	13.7	497
57	Iterative Cross-Couplng with MIDA Boronates: Towards a General Platform for Small Molecule Synthesis. Aldrichimica Acta, 2009, 42, 17-27.	4.0	143
58	Simple, Efficient, and Modular Syntheses of Polyene Natural Products via Iterative Cross-Coupling. Journal of the American Chemical Society, 2008, 130, 466-468.	13.7	269
59	Multistep Synthesis of Complex Boronic Acids from Simple MIDA Boronates. Journal of the American Chemical Society, 2008, 130, 14084-14085.	13.7	201
60	A Simple and Modular Strategy for Small Molecule Synthesis:Â Iterative Suzukiâˆ’Miyaura Coupling of B-Protected Haloboronic Acid Building Blocks. Journal of the American Chemical Society, 2007, 129, 6716-6717.	13.7	413
61	A Post-PKS Oxidation of the Amphotericin B Skeleton Predicted to be Critical for Channel Formation Is Not Required for Potent Antifungal Activity. Journal of the American Chemical Society, 2007, 129, 13804-13805.	13.7	86
62	A Planning Strategy for Diversity-Oriented Synthesis. Angewandte Chemie - International Edition, 2004, 43, 46-58.	13.8	1,370
63	A Synthesis Strategy Yielding Skeletally Diverse Small Molecules Combinatorially. Journal of the American Chemical Society, 2004, 126, 14095-14104.	13.7	178
64	Generating Diverse Skeletons of Small Molecules Combinatorially. Science, 2003, 302, 613-618.	12.6	371
65	Chemoenzymatic Route to Macrocyclic Hybrid Peptide/Polyketide-like Molecules. Journal of the American Chemical Society, 2003, 125, 7160-7161.	13.7	64
66	Teaching Target-Oriented and Diversity-Oriented Organic Synthesis at Harvard University. Chemistry and Biology, 2002, 9, 535-541.	6.0	36
67	Conformationally Restricted Hybrid Analogues of the Hormone 1Î±,25-Dihydroxyvitamin D3: Design, Synthesis, and Biological Evaluation. Bioorganic and Medicinal Chemistry, 2001, 9, 1691-1699.	3.0	9
68	Noncalcemic, Antiproliferative, Transcriptionally Active, 24-Fluorinated Hybrid Analogues of the Hormone 1Î±,25-Dihydroxyvitamin D₃. Synthesis and Preliminary Biological Evaluation. Journal of Medicinal Chemistry, 1998, 41, 3008-3014.	6.4	70