Jason E Hein

List of Publications by Year
in descending order

72 papers	4,925 citations	172207 29 h-index	91712 69 g-index
91 all docs	91 docs citations	91 times ranked	6652 citing authors

#	Article	IF	Citations
1	Quantitative and convenient real-time reaction monitoring using stopped-flow benchtop NMR. Reaction Chemistry and Engineering, 2022, 7, 1061-1072.	1.9	10
2	Ligand-Accelerated Catalysis in Scandium(III)-Catalyzed Asymmetric Spiroannulation Reactions. ACS Catalysis, 2022, 12, 3524-3533.	5.5	1
3	An Adaptive Autoâ€Synthesizer using Online PAT Feedback to Flexibly Perform a Multistep Reaction. Chemistry Methods, 2022, 2, .	1.8	13
4	Flexible automation accelerates materials discovery. Nature Materials, 2022, 21, 722-726.	13.3	33
5	Ring walking as a regioselectivity control element in Pd-catalyzed C-N cross-coupling. Nature Communications, 2022, 13, .	5.8	11
6	Augmented Titration Setup for Future Teaching Laboratories. Journal of Chemical Education, 2021, 98, 876-881.	1.1	5
7	Automated solubility screening platform using computer vision. IScience, 2021, 24, 102176.	1.9	31
8	Two Fusarium copper radical oxidases with high activity on aryl alcohols. Biotechnology for Biofuels, 2021, 14, 138.	6.2	12
9	Real-Time Monitoring of Solidâ€"Liquid Slurries: Optimized Synthesis of Tetrabenazine. Journal of Organic Chemistry, 2021, 86, 14069-14078.	1.7	11
10	Olympus: a benchmarking framework for noisy optimization and experiment planning. Machine Learning: Science and Technology, 2021, 2, 035021.	2.4	31
11	Data-science driven autonomous process optimization. Communications Chemistry, 2021, 4, .	2.0	94
12	Mechanistic Investigation of Castagnoliâ€"Cushman Multicomponent Reactions Leading to a Three-Component Synthesis of Dihydroisoquinolones. Journal of Organic Chemistry, 2021, 86, 11599-11607.	1.7	19
13	Conversion of dilute CO₂ to cyclic carbonates at sub-atmospheric pressures by a simple indium catalyst. Catalysis Science and Technology, 2021, 11, 2119-2129.	2.1	22
14	Automated Experimentation Powers Data Science in Chemistry. Accounts of Chemical Research, 2021, 54, 546-555.	7.6	52
15	A survey of substrate specificity among Auxiliary Activity Family 5 copper radical oxidasesï»¿Â. Cellular and Molecular Life Sciences, 2021, 78, 8187-8208.	2.4	15
16	Automation isn't automatic. Chemical Science, 2021, 12, 15473-15490.	3.7	44
17	Halide-Accelerated Acyl Fluoride Formation Using Sulfuryl Fluoride. Organic Letters, 2020, 22, 6682-6686.	2.4	26
18	Online High-Performance Liquid Chromatography Analysis of Buchwaldâ€"Hartwig Aminations from within an Inert Environment. ACS Catalysis, 2020, 10, 13236-13244.	5.5	10

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19	Exploration of continuousâ€flow benchtop NMR acquisition parameters and considerations for reaction monitoring. Magnetic Resonance in Chemistry, 2020, 58, 1234-1248.	1.1	14
20	Self-driving laboratory for accelerated discovery of thin-film materials. Science Advances, 2020, 6, eaaz8867.	4.7	306
21	Development of a telescoped synthesis of 4-(1<i>H</i>)-cyanoimidazole core accelerated by orthogonal reaction monitoring. Reaction Chemistry and Engineering, 2020, 5, 1421-1428.	1.9	2
22	Determination of biocatalytic parameters of a copper radical oxidase using real-time reaction progress monitoring. Organic and Biomolecular Chemistry, 2020, 18, 2076-2084.	1.5	17
23	ChemOS: An orchestration software to democratize autonomous discovery. PLoS ONE, 2020, 15, e0229862.	1.1	77
24	Automated solubility and crystallization analysis of non-UV active compounds: integration of evaporative light scattering detection (ELSD) and robotic sampling. Reaction Chemistry and Engineering, 2019, 4, 1674-1681.	1.9	10
25	Development of an automated kinetic profiling system with online HPLC for reaction optimization. Reaction Chemistry and Engineering, 2019, 4, 1555-1558.	1.9	29
26	Using an Automated Monitoring Platform for Investigations of Biphasic Reactions. ACS Catalysis, 2019, 9, 11484-11491.	5.5	27
27	Efficient and Selective Iron-Complex-Catalyzed Hydroboration of Aldehydes. ACS Catalysis, 2018, 8, 1076-1081.	5.5	71
28	The mechanism of the reaction between an aziridine and carbon dioxide with no added catalyst. Journal of Physical Organic Chemistry, 2018, 31, e3735.	0.9	14
29	One-Pot 1,1-Dihydrofluoroalkylation of Amines Using Sulfuryl Fluoride. Journal of the American Chemical Society, 2018, 140, 16464-16468.	6.6	69
30	Dinitrogen functionalization at a ditantalum center. Balancing N₂ displacement and N₂ functionalization in the reaction of coordinated N₂ with CS₂. Dalton Transactions, 2018, 47, 7983-7991.	1.6	5
31	A Revised Mechanism for the Kinugasa Reaction. Journal of the American Chemical Society, 2018, 140, 9167-9173.	6.6	43
32	Catalyst Activation, Chemoselectivity, and Reaction Rate Controlled by the Counterion in the Cu(I)-Catalyzed Cycloaddition between Azide and Terminal or 1-Iodoalkynes. ACS Catalysis, 2018, 8, 7889-7897.	5.5	27
33	ChemOS: Orchestrating autonomous experimentation. Science Robotics, 2018, 3, .	9.9	113
34	Automated reaction progress monitoring of heterogeneous reactions: crystallization-induced stereoselectivity in amine-catalyzed aldol reactions. Reaction Chemistry and Engineering, 2017, 2, 226-231.	1.9	23
35	Copper-Catalyzed Hydrogen/Iodine Exchange in Terminal and 1-Iodoalkynes. ACS Catalysis, 2017, 7, 2505-2510.	5.5	21
36	Synthesis of Benzodihydrofurans by Asymmetric Câˆ'H Insertion Reactions of Donor/Donor Rhodium Carbenes. Chemistry - A European Journal, 2017, 23, 11843-11855.	1.7	43

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37	Reaction Progress Kinetics Analysis of 1,3-Disiloxanediols as Hydrogen-Bonding Catalysts. Journal of Organic Chemistry, 2017, 82, 6738-6747.	1.7	40
38	The More, The Better: Simultaneous In Situ Reaction Monitoring Provides Rapid Mechanistic and Kinetic Insight. Topics in Catalysis, 2017, 60, 594-608.	1.3	30
39	Real-time HPLC-MS reaction progress monitoring using an automated analytical platform. Reaction Chemistry and Engineering, 2017, 2, 309-314.	1.9	57
40	Catalyst-Controlled Nitrene Transfer by Tuning Metal:Ligand Ratios: Insight into the Mechanisms of Chemoselectivity. Organometallics, 2017, 36, 1649-1661.	1.1	51
41	Computational and experimental characterization of a pyrrolidinium-based ionic liquid for electrolyte applications. Journal of Chemical Physics, 2017, 147, 161731.	1.2	20
42	Synthesis of Î²-Ketosulfonamides Derived from Amino Acids and Their Conversion to Î²-Keto-Î±,Î±-difluorosulfonamides via Electrophilic Fluorination. Journal of Organic Chemistry, 2017, 82, 11157-11165.	1.7	5
43	Hands-On Data Analysis: Using 3D Printing To Visualize Reaction Progress Surfaces. Journal of Chemical Education, 2017, 94, 1367-1371.	1.1	22
44	Mechanism of a No-Metal-Added Heterocycloisomerization of Alkynylcyclopropylhydrazones: Synthesis of Cycloheptane-Fused Aminopyrroles Facilitated by Copper Salts at Trace Loadings. Journal of the American Chemical Society, 2017, 139, 10569-10577.	6.6	13
45	Reevaluating the Stability and Prevalence of Conglomerates: Implications for Preferential Crystallization. Crystal Growth and Design, 2016, 16, 6055-6059.	1.4	29
46	Synthesis of Esters by in Situ Formation and Trapping of Diazoalkanes. Journal of Organic Chemistry, 2016, 81, 5278-5284.	1.7	19
47	Measuring and Suppressing the Oxidative Damage to DNA During Cu(I)-Catalyzed Azideâ€"Alkyne Cycloaddition. Bioconjugate Chemistry, 2016, 27, 698-704.	1.8	62
48	Quantum Dot/Liquid Crystal Nanocomposites in Photonic Devices. Photonics, 2015, 2, 855-864.	0.9	25
49	Tandem Reaction Progress Analysis as a Means for Dissecting Catalytic Reactions: Application to the Aza-Piancatelli Rearrangement. ACS Catalysis, 2015, 5, 4579-4585.	5.5	38
50	Cascade rearrangement of furylcarbinols with hydroxylamines: practical access to densely functionalized cyclopentane derivatives. Organic and Biomolecular Chemistry, 2015, 13, 8465-8469.	1.5	30
51	Application of Continuous Preferential Crystallization to Efficiently Access Enantiopure Chemicals. Organic Process Research and Development, 2015, 19, 1809-1819.	1.3	64
52	Crystal structure of (S)-5,7-diphenyl-4,7-dihydrotetrazolo[1,5-a]pyrimidine. Acta Crystallographica Section E: Crystallographic Communications, 2015, 71, o220-o221.	0.2	3
53	Crystal structure of 5,7-diphenyl-4,7-dihydrotetrazolo[1,5-a]pyrimidine. Acta Crystallographica Section E: Crystallographic Communications, 2015, 71, o192-o192.	0.2	0
54	Covalent, sequence-specific attachment of long DNA molecules to a surface using DNA-templated click chemistry. Chemical Communications, 2014, 50, 8131-8133.	2.2	11

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55	Oxidative Esterification of Aldehydes Using Mesoionic 1,2,3-Triazolyl Carbene Organocatalysts. Organic Letters, 2014, 16, 3676-3679.	2.4	61
56	Importance of Off-Cycle Species in the Acid-Catalyzed Aza-Piancatelli Rearrangement. Journal of Organic Chemistry, 2013, 78, 12784-12789.	1.7	36
57	Resolution of Omeprazole Using Coupled Preferential Crystallization: Efficient Separation of a Nonracemizable Conglomerate Salt under Near-Equilibrium Conditions. Organic Process Research and Development, 2013, 17, 946-950.	1.3	23
58	Halogen Exchange (Halex) Reaction of 5â€Iodoâ€1,2,3â€triazoles: Synthesis and Applications of 5â€Fluorotriazoles. Angewandte Chemie - International Edition, 2012, 51, 11791-11794.	7.2	87
59	Chemical and Physical Models for the Emergence of Biological Homochirality. Topics in Current Chemistry, 2012, 333, 83-108.	4.0	26
60	On the Origin of Single Chirality of Amino Acids and Sugars in Biogenesis. Accounts of Chemical Research, 2012, 45, 2045-2054.	7.6	163
61	Pasteurâ€™s Tweezers Revisited: On the Mechanism of Attrition-Enhanced Deracemization and Resolution of Chiral Conglomerate Solids. Journal of the American Chemical Society, 2012, 134, 12629-12636.	6.6	130
62	Enamine Carboxylates as Stereodetermining Intermediates in Prolinate Catalysis. Organic Letters, 2011, 13, 5644-5647.	2.4	53
63	Kinetic Profiling of Prolinate-Catalyzed Î±-Amination of Aldehydes. Organic Letters, 2011, 13, 4300-4303.	2.4	32
64	A route to enantiopure RNA precursors from nearly racemic starting materials. Nature Chemistry, 2011, 3, 704-706.	6.6	97
65	Copper-catalyzed azideâ€“alkyne cycloaddition (CuAAC) and beyond: new reactivity of copper(i) acetylides. Chemical Society Reviews, 2010, 39, 1302.	18.7	1,806
66	Copper(I)â€Catalyzed Cycloaddition of Organic Azides and 1â€Iodoalkynes. Angewandte Chemie - International Edition, 2009, 48, 8018-8021.	7.2	412
67	Recyclable supports for stereoselective 1,3-dipolar cycloadditions: application of a fluorous oxazolidinone chiral auxiliary. Tetrahedron: Asymmetry, 2005, 16, 2341-2347.	1.8	19
68	Stereoselective Conjugate Radical Additions:â€‰ Application of a Fluorous Oxazolidinone Chiral Auxiliary for Efficient Tin Removal. Organic Letters, 2005, 7, 2755-2758.	2.4	32
69	Practical Synthesis of Fluorous Oxazolidinone Chiral Auxiliaries from Î±-Amino Acids. Journal of Organic Chemistry, 2005, 70, 9940-9946.	1.7	24
70	Asymmetric Aldol Reactions Using a Fluorous Oxazolidinone Chiral Auxiliary.. ChemInform, 2003, 34, no.	0.1	0
71	Asymmetric Aldol ReactionsUsing a Fluorous Oxazolidinone Chiral Auxiliary. Synlett, 2003, 2003, 0635-0638.	1.0	0
72	A robust new tool for online solution-phase sampling of crystallizations. Reaction Chemistry and Engineering, 0, , .	1.9	7