

Matthew S Sigman

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/5146617/matthew-s-sigman-publications-by-year.pdf>

Version: 2024-04-26

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

232
papers

18,888
citations

76
h-index

131
g-index

254
ext. papers

21,386
ext. citations

13.2
avg, IF

7.5
L-index

#	Paper	IF	Citations
232	A Comprehensive Discovery Platform for Organophosphorus Ligands for Catalysis.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	9
231	Mechanistically Guided Workflow for Relating Complex Reactive Site Topologies to Catalyst Performance in C-H Functionalization Reactions.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	1
230	Predicting relative efficiency of amide bond formation using multivariate linear regression.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2118451119 ^{11.5}	11.5	0
229	Cobalt-electrocatalytic HAT for functionalization of unsaturated C=C bonds. <i>Nature</i> , 2022 , 605, 687-695	50.4	7
228	Stereoconvergent and -divergent Synthesis of Tetrasubstituted Alkenes by Nickel-Catalyzed Cross-Couplings. <i>Journal of the American Chemical Society</i> , 2021 , 143, 19078-19090	16.4	5
227	A Data-Driven Approach to the Development and Understanding of Chiroptical Sensors for Alcohols with Remote Stereocenters. <i>Journal of the American Chemical Society</i> , 2021 , 143, 19187-19198 ^{16.4}	16.4	3
226	The Evolution of Data-Driven Modeling in Organic Chemistry. <i>ACS Central Science</i> , 2021 , 7, 1622-1637	16.8	14
225	Univariate classification of phosphine ligation state and reactivity in cross-coupling catalysis. <i>Science</i> , 2021 , 374, 301-308	33.3	16
224	Development of High Energy Density Diaminocyclopropenium-Phenothiazine Hybrid Catholytes for Non-Aqueous Redox Flow Batteries. <i>Angewandte Chemie</i> , 2021 , 133, 27245	3.6	0
223	Rate Profiling the Impact of Remote Functional Groups on the Redox-Relay Heck Reaction. <i>Organic Letters</i> , 2021 , 23, 2505-2509	6.2	6
222	Linear Regression Model Development for Analysis of Asymmetric Copper-Bisoxazoline Catalysis. <i>ACS Catalysis</i> , 2021 , 11, 3916-3922	13.1	11
221	-Ammonium Ylide Mediators for Electrochemical C-H Oxidation. <i>Journal of the American Chemical Society</i> , 2021 , 143, 7859-7867	16.4	17
220	Analyzing mechanisms in Co(i) redox catalysis using a pattern recognition platform. <i>Chemical Science</i> , 2021 , 12, 4771-4778	9.4	8
219	Carbon Atom Insertion into Pyrroles and Indoles Promoted by Chlorodiazirines. <i>Journal of the American Chemical Society</i> , 2021 , 143, 11337-11344	16.4	18
218	Data Science Meets Physical Organic Chemistry. <i>Accounts of Chemical Research</i> , 2021 ,	24.3	12
217	Data-science driven autonomous process optimization. <i>Communications Chemistry</i> , 2021 , 4,	6.3	19
216	Simultaneously Enhancing the Redox Potential and Stability of Multi-Redox Organic Catholytes by Incorporating Cyclopropenium Substituents. <i>Journal of the American Chemical Society</i> , 2021 , 143, 13450-13459 ^{16.4}	16.4	6

215	Mechanistic Guidance Leads to Enhanced Site-Selectivity in C _H Oxidation Reactions Catalyzed by Ruthenium bis(Bipyridine) Complexes. <i>ACS Catalysis</i> , 2021 , 11, 10479-10486	13.1	6
214	Interrogation of 2,2SBipyrimidines as Low-Potential Two-Electron Electrolytes. <i>Journal of the American Chemical Society</i> , 2021 , 143, 992-1004	16.4	9
213	Nickel-catalyzed asymmetric reductive cross-coupling of β -chloroesters with (hetero)aryl iodides. <i>Chemical Science</i> , 2021 , 12, 7758-7762	9.4	17
212	Electrochemical Ruthenium-Catalyzed C-H Hydroxylation of Amine Derivatives in Aqueous Acid. <i>Organic Letters</i> , 2020 , 22, 7060-7063	6.2	8
211	Development and Mechanistic Interrogation of Interrupted Chain-Walking in the Enantioselective Relay Heck Reaction. <i>Journal of the American Chemical Society</i> , 2020 , 142, 10516-10525	16.4	22
210	Enantioselective Intramolecular Allylic Substitution via Synergistic Palladium/Chiral Phosphoric Acid Catalysis: Insight into Stereinduction through Statistical Modeling. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 14647-14655	16.4	10
209	Enantioselective Intramolecular Allylic Substitution via Synergistic Palladium/Chiral Phosphoric Acid Catalysis: Insight into Stereinduction through Statistical Modeling. <i>Angewandte Chemie</i> , 2020 , 132, 14755-14763	3.6	2
208	Molecular-level insight in supported olefin metathesis catalysts by combining surface organometallic chemistry, high throughput experimentation, and data analysis. <i>Chemical Science</i> , 2020 , 11, 6717-6723	9.4	12
207	Enantioselective Allenoate-Claisen Rearrangement Using Chiral Phosphate Catalysts. <i>Journal of the American Chemical Society</i> , 2020 , 142, 6390-6399	16.4	28
206	Strategies for remote enantiocontrol in chiral gold(iii) complexes applied to catalytic enantioselective β -Diels-Alder reactions. <i>Chemical Science</i> , 2020 , 11, 6450-6456	9.4	21
205	Transition State Force Field for the Asymmetric Redox-Relay Heck Reaction. <i>Journal of the American Chemical Society</i> , 2020 , 142, 9700-9707	16.4	9
204	Enantioselective Synthesis of Alkyl Allyl Ethers via Palladium-Catalyzed Redox-Relay Heck Alkenylation of α -Alkyl Enol Ethers. <i>Israel Journal of Chemistry</i> , 2020 , 60, 452-460	3.4	7
203	Integrating Electrochemical and Statistical Analysis Tools for Molecular Design and Mechanistic Understanding. <i>Accounts of Chemical Research</i> , 2020 , 53, 289-299	24.3	18
202	Mechanistic Studies Inform Design of Improved Ti(salen) Catalysts for Enantioselective [3 + 2] Cycloaddition. <i>Journal of the American Chemical Society</i> , 2020 , 142, 18471-18482	16.4	14
201	Organic Chemistry: A Call to Action for Diversity and Inclusion. <i>Organometallics</i> , 2020 , 39, 2931-2936	3.8	1
200	Connecting and Analyzing Enantioselective Bifunctional Hydrogen Bond Donor Catalysis Using Data Science Tools. <i>Journal of the American Chemical Society</i> , 2020 , 142, 16382-16391	16.4	14
199	Catalytic Enantioselective Synthesis of Difluorinated Alkyl Bromides. <i>Journal of the American Chemical Society</i> , 2020 , 142, 14831-14837	16.4	26
198	Enantioselective Synthesis of β -Functionalized Cyclopentenones and β -Functionalized Cycloheptenones Utilizing a Redox-Relay Heck Strategy. <i>Advanced Synthesis and Catalysis</i> , 2020 , 362, 326-330	5.6	10

197	Mechanism-Based Design of a High-Potential Catholyte Enables a 3.2 V All-Organic Nonaqueous Redox Flow Battery. <i>Journal of the American Chemical Society</i> , 2019 , 141, 15301-15306	16.4	58
196	Site-selective acylation of natural products with BINOL-derived phosphoric acids. <i>ACS Catalysis</i> , 2019 , 9, 9794-9799	13.1	16
195	Rapid chemiexcitation of phenoxy-dioxetane luminophores yields ultrasensitive chemiluminescence assays. <i>Chemical Science</i> , 2019 , 10, 1380-1385	9.4	37
194	Enantioselective Markovnikov Addition of Carbamates to Allylic Alcohols for the Construction of Secondary and Tertiary Amines. <i>Journal of the American Chemical Society</i> , 2019 , 141, 8708-8711	16.4	20
193	Palladium-catalyzed enantioselective alkenylation of alkenylbenzene derivatives. <i>Chemical Science</i> , 2019 , 10, 7246-7250	9.4	11
192	Palladium-Catalyzed Enantioselective Alkenylation of Enolactams Using a Relay Heck Strategy. <i>Chemistry - A European Journal</i> , 2019 , 25, 10823-10827	4.8	13
191	Noncovalent Interactions Drive the Efficiency of Molybdenum Imido Alkylidene Catalysts for Olefin Metathesis. <i>Journal of the American Chemical Society</i> , 2019 , 141, 10788-10800	16.4	14
190	Developing a Predictive Solubility Model for Monomeric and Oligomeric Cyclopropenium-Based Flow Battery Catholytes. <i>Journal of the American Chemical Society</i> , 2019 , 141, 10171-10176	16.4	32
189	Enantioselective N-Alkylation of Indoles via an Intermolecular Aza-Wacker-Type Reaction. <i>Journal of the American Chemical Society</i> , 2019 , 141, 8670-8674	16.4	26
188	A synthetic chemist's guide to electroanalytical tools for studying reaction mechanisms. <i>Chemical Science</i> , 2019 , 10, 6404-6422	9.4	136
187	Disparate Catalytic Scaffolds for Atroposelective Cyclodehydration. <i>Journal of the American Chemical Society</i> , 2019 , 141, 6698-6705	16.4	72
186	Holistic prediction of enantioselectivity in asymmetric catalysis. <i>Nature</i> , 2019 , 571, 343-348	50.4	89
185	Enantioselective construction of remote tertiary carbon-fluorine bonds. <i>Nature Chemistry</i> , 2019 , 11, 710-716	17.16	42
184	A Physical Organic Approach to Tuning Reagents for Selective and Stable Methionine Bioconjugation. <i>Journal of the American Chemical Society</i> , 2019 , 141, 12657-12662	16.4	33
183	Predictive Multivariate Linear Regression Analysis Guides Successful Catalytic Enantioselective Minisci Reactions of Diazines. <i>Journal of the American Chemical Society</i> , 2019 , 141, 19178-19185	16.4	37
182	Mechanistic Studies into the Oxidative Addition of Co(I) Complexes: Combining Electroanalytical Techniques with Parameterization. <i>Journal of the American Chemical Society</i> , 2019 , 141, 18877-18889	16.4	26
181	Mechanistic Study of Ruthenium-Catalyzed C-H Hydroxylation Reveals an Unexpected Pathway for Catalyst Arrest. <i>Journal of the American Chemical Society</i> , 2019 , 141, 972-980	16.4	13
180	Catalytic Carbonyl-Olefin Metathesis of Aliphatic Ketones: Iron(III) Homo-Dimers as Lewis Acidic Superelectrophiles. <i>Journal of the American Chemical Society</i> , 2019 , 141, 1690-1700	16.4	44

179	Investigating the Role of Ligand Electronics on Stabilizing Electrocatalytically Relevant Low-Valent Co(I) Intermediates. <i>Journal of the American Chemical Society</i> , 2019 , 141, 1382-1392	16.4	40
178	A Cancer-Selective Zinc Ionophore Inspired by the Natural Product Naamidine A. <i>ACS Chemical Biology</i> , 2019 , 14, 106-117	4.9	7
177	Conformational Dynamics in Asymmetric Catalysis: Is Catalyst Flexibility a Design Element?. <i>Synthesis</i> , 2019 , 51, 1021-1036	2.9	42
176	Enantioselective C2-Alkylation of Indoles through a Redox-Relay Heck Reaction of 2-Indole Triflates. <i>Chemistry - A European Journal</i> , 2019 , 25, 512-515	4.8	12
175	Formation of Chiral Allylic Ethers via an Enantioselective Palladium-Catalyzed Alkenylation of Acyclic Enol Ethers. <i>Journal of the American Chemical Society</i> , 2018 , 140, 5895-5898	16.4	30
174	Enantioselective Synthesis of N,S-Acetals by an Oxidative Pummerer-Type Transformation using Phase-Transfer Catalysis. <i>Angewandte Chemie</i> , 2018 , 130, 598-602	3.6	6
173	High-Performance Oligomeric Catholytes for Effective Macromolecular Separation in Nonaqueous Redox Flow Batteries. <i>ACS Central Science</i> , 2018 , 4, 189-196	16.8	82
172	Predictive and mechanistic multivariate linear regression models for reaction development. <i>Chemical Science</i> , 2018 , 9, 2398-2412	9.4	159
171	Parameterization and Analysis of Peptide-Based Catalysts for the Atroposelective Bromination of 3-Arylquinazolin-4(3H)-ones. <i>Journal of the American Chemical Society</i> , 2018 , 140, 868-871	16.4	38
170	Enantioselective fluorination of homoallylic alcohols enabled by the tuning of non-covalent interactions. <i>Chemical Science</i> , 2018 , 9, 7153-7158	9.4	18
169	Combining traditional 2D and modern physical organic-derived descriptors to predict enhanced enantioselectivity for the key aza-Michael conjugate addition in the synthesis of Prexasertib (letermovir). <i>Chemical Science</i> , 2018 , 9, 6922-6927	9.4	16
168	Palladium-Catalyzed Enantioselective Relay Heck Arylation of Enelactams: Accessing β -Unsaturated γ -Lactams. <i>Journal of the American Chemical Society</i> , 2018 , 140, 6527-6530	16.4	48
167	Enantioselective Synthesis of N,S-Acetals by an Oxidative Pummerer-Type Transformation using Phase-Transfer Catalysis. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 589-593	16.4	25
166	Bioinspired design of a hybrid bifunctional enzymatic/organic electrocatalyst for site selective alcohol oxidation. <i>Chemical Communications</i> , 2018 , 54, 491-494	5.8	13
165	Quantifying Structural Effects of Amino Acid Ligands in Pd(II)-Catalyzed Enantioselective C β Functionalization Reactions. <i>Organometallics</i> , 2018 , 37, 203-210	3.8	27
164	Comparing quantitative prediction methods for the discovery of small-molecule chiral catalysts. <i>Nature Reviews Chemistry</i> , 2018 , 2, 290-305	34.6	72
163	Enantiodivergent Pd-catalyzed C-C bond formation enabled through ligand parameterization. <i>Science</i> , 2018 , 362, 670-674	33.3	80
162	Physical Organic Approach to Persistent, Cyclable, Low-Potential Electrolytes for Flow Battery Applications. <i>Journal of the American Chemical Society</i> , 2017 , 139, 2924-2927	16.4	118

161	Substrate Channeling in an Artificial Metabolon: A Molecular Dynamics Blueprint for an Experimental Peptide Bridge. <i>ACS Catalysis</i> , 2017 , 7, 2486-2493	13.1	33
160	The development and mechanistic investigation of a palladium-catalyzed 1,3-arylfuorination of chromenes. <i>Chemical Science</i> , 2017 , 8, 2890-2897	9.4	54
159	Nickel-Catalyzed Enantioselective Reductive Cross-Coupling of Styrenyl Aziridines. <i>Journal of the American Chemical Society</i> , 2017 , 139, 5688-5691	16.4	148
158	Enantioselective Heck-Matsuda Arylations through Chiral Anion Phase-Transfer of Aryl Diazonium Salts. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 5806-5811	16.4	45
157	Uncovering Subtle Ligand Effects of Phosphines Using Gold(I) Catalysis. <i>ACS Catalysis</i> , 2017 , 7, 3973-3978	13.1	55
156	Palladium-Catalyzed Enantioselective Redox-Relay Heck Alkynylation of Alkenols To Access Propargylic Stereocenters. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 6651-6654	16.4	48
155	Palladium-Catalyzed Enantioselective Redox-Relay Heck Alkynylation of Alkenols To Access Propargylic Stereocenters. <i>Angewandte Chemie</i> , 2017 , 129, 6751-6754	3.6	21
154	Developing Comprehensive Computational Parameter Sets To Describe the Performance of Pyridine-Oxazoline and Related Ligands. <i>ACS Catalysis</i> , 2017 , 7, 4144-4151	13.1	51
153	Parametrization of Non-covalent Interactions for Transition State Interrogation Applied to Asymmetric Catalysis. <i>Journal of the American Chemical Society</i> , 2017 , 139, 6803-6806	16.4	69
152	Enantioselective Heck-Matsuda Arylations through Chiral Anion Phase-Transfer of Aryl Diazonium Salts. <i>Angewandte Chemie</i> , 2017 , 129, 5900-5905	3.6	10
151	A Role for Pd(IV) in Catalytic Enantioselective C-H Functionalization with Monoprotected Amino Acid Ligands under Mild Conditions. <i>Journal of the American Chemical Society</i> , 2017 , 139, 9238-9245	16.4	38
150	Exploiting non-covalent interactions for catalyst design. <i>Nature</i> , 2017 , 543, 637-646	50.4	423
149	Pursuit of Noncovalent Interactions for Strategic Site-Selective Catalysis. <i>Accounts of Chemical Research</i> , 2017 , 50, 609-615	24.3	147
148	Palladium-Catalyzed Enantioselective Heck Alkenylation of Trisubstituted Allylic Alkenols: A Redox-Relay Strategy to Construct Vicinal Stereocenters. <i>Chemical Science</i> , 2017 , 8, 2277-2282	9.4	24
147	Quantitative Modeling of Bis(pyridine)silver(I) Permanganate Oxidation of Hydantoin Derivatives: Guidelines for Predicting the Site of Oxidation in Complex Substrates. <i>Journal of the American Chemical Society</i> , 2017 , 139, 15539-15547	16.4	16
146	Multidimensional Correlations in Asymmetric Catalysis through Parameterization of Uncatalyzed Transition States. <i>Angewandte Chemie</i> , 2017 , 129, 14268-14272	3.6	7
145	Polymer-immobilized, hybrid multi-catalyst architecture for enhanced electrochemical oxidation of glycerol. <i>Chemical Communications</i> , 2017 , 53, 10310-10313	5.8	23
144	Parameterization of Acyclic Diaminocarbene Ligands Applied to a Gold(I)-Catalyzed Enantioselective Tandem Rearrangement/Cyclization. <i>Journal of the American Chemical Society</i> , 2017 , 139, 12943-12946	16.4	57

143	Multidimensional Correlations in Asymmetric Catalysis through Parameterization of Uncatalyzed Transition States. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 14080-14084	16.4	23
142	Inverting Conventional Chemoselectivity in Pd-Catalyzed Amine Arylations with Multiply Halogenated Pyridines. <i>Journal of the American Chemical Society</i> , 2017 , 139, 10613-10616	16.4	32
141	Exploiting and Understanding the Selectivity of Ru-N-Heterocyclic Carbene Metathesis Catalysts for the Ethenolysis of Cyclic Olefins to β -Dienes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 13117-13125	16.4	49
140	Mechanistic Investigations of the Pd(0)-Catalyzed Enantioselective 1,1-Diarylation of Benzyl Acrylates. <i>Journal of the American Chemical Society</i> , 2017 , 139, 12688-12695	16.4	69
139	Ruthenium-Catalyzed C-H Hydroxylation in Aqueous Acid Enables Selective Functionalization of Amine Derivatives. <i>Journal of the American Chemical Society</i> , 2017 , 139, 9503-9506	16.4	57
138	Palladium-Catalyzed Enantioselective Redox-Relay Heck Arylation of 1,1-Disubstituted Homoallylic Alcohols. <i>Journal of the American Chemical Society</i> , 2016 , 138, 11461-4	16.4	78
137	Development and Analysis of a Pd(0)-Catalyzed Enantioselective 1,1-Diarylation of Acrylates Enabled by Chiral Anion Phase Transfer. <i>Journal of the American Chemical Society</i> , 2016 , 138, 15877-15880	16.4	90
136	Palladium-Catalyzed Enantioselective Intermolecular Coupling of Phenols and Allylic Alcohols. <i>Journal of the American Chemical Society</i> , 2016 , 138, 15881-15884	16.4	31
135	Developing a Modern Approach To Account for Steric Effects in Hammett-Type Correlations. <i>Journal of the American Chemical Society</i> , 2016 , 138, 13424-13430	16.4	64
134	Enantioselective Palladium-Catalyzed Alkenylation of Trisubstituted Alkenols To Form Allylic Quaternary Centers. <i>Journal of the American Chemical Society</i> , 2016 , 138, 14226-14229	16.4	69
133	Substrate channelling as an approach to cascade reactions. <i>Nature Chemistry</i> , 2016 , 8, 299-309	17.6	399
132	Enantiodivergent Fluorination of Allylic Alcohols: Data Set Design Reveals Structural Interplay between Achiral Directing Group and Chiral Anion. <i>Journal of the American Chemical Society</i> , 2016 , 138, 3863-75	16.4	89
131	Palladium-Catalyzed 1,3-Difunctionalization Using Terminal Alkenes with Alkenyl Nonaflates and Aryl Boronic Acids. <i>Organic Letters</i> , 2016 , 18, 1792-5	6.2	15
130	Parameterization of phosphine ligands reveals mechanistic pathways and predicts reaction outcomes. <i>Nature Chemistry</i> , 2016 , 8, 610-7	17.6	132
129	The Development of Multidimensional Analysis Tools for Asymmetric Catalysis and Beyond. <i>Accounts of Chemical Research</i> , 2016 , 49, 1292-301	24.3	198
128	Mechanism and Selectivity in the Pd-Catalyzed Difunctionalization of Isoprene. <i>Journal of Organic Chemistry</i> , 2016 , 81, 7604-7611	4.2	10
127	Relative reactivity of alkenyl alcohols in the palladium-catalyzed redox-relay Heck reaction. <i>Tetrahedron</i> , 2015 , 71, 6513-6518	2.4	23
126	Using IR vibrations to quantitatively describe and predict site-selectivity in multivariate Rh-catalyzed C-H functionalization. <i>Chemical Science</i> , 2015 , 6, 3057-3062	9.4	40

125	Palladium-catalyzed enantioselective Heck alkenylation of acyclic alkenols using a redox-relay strategy. <i>Journal of the American Chemical Society</i> , 2015 , 137, 3462-5	16.4	111
124	TEMPO-Modified Linear Poly(ethylenimine) for Immobilization-Enhanced Electrocatalytic Oxidation of Alcohols. <i>ACS Catalysis</i> , 2015 , 5, 5519-5524	13.1	47
123	Enantioselective Dehydrogenative Heck Arylations of Trisubstituted Alkenes with Indoles to Construct Quaternary Stereocenters. <i>Journal of the American Chemical Society</i> , 2015 , 137, 15668-71	16.4	121
122	Development and Investigation of a Site Selective Palladium-Catalyzed 1,4-Difunctionalization of Isoprene using Pyridine-Oxazoline Ligands. <i>Chemical Science</i> , 2015 , 6, 1355-1361	9.4	54
121	Alkenyl carbonyl derivatives in enantioselective redox relay Heck reactions: accessing β -unsaturated systems. <i>Journal of the American Chemical Society</i> , 2015 , 137, 7290-3	16.4	90
120	Quantitatively analyzing metathesis catalyst activity and structural features in silica-supported tungsten imido-alkylidene complexes. <i>Journal of the American Chemical Society</i> , 2015 , 137, 6699-704	16.4	66
119	Predicting Electrocatalytic Properties: Modeling Structure-Activity Relationships of Nitroxyl Radicals. <i>Journal of the American Chemical Society</i> , 2015 , 137, 16179-86	16.4	75
118	Organic chemistry. A data-intensive approach to mechanistic elucidation applied to chiral anion catalysis. <i>Science</i> , 2015 , 347, 737-43	33.3	148
117	Synthesis of highly functionalized tri- and tetrasubstituted alkenes via Pd-catalyzed 1,2-hydrovinylation of terminal 1,3-dienes. <i>Journal of the American Chemical Society</i> , 2015 , 137, 608-11	16.4	70
116	Interrogating selectivity in catalysis using molecular vibrations. <i>Nature</i> , 2014 , 507, 210-4	50.4	91
115	Enantioselective construction of remote quaternary stereocentres. <i>Nature</i> , 2014 , 508, 340-4	50.4	323
114	Pd(Quinox)-Catalyzed Allylic Relay Suzuki Reactions of Secondary Homostyrenyl Tosylates via Alkene-Assisted Oxidative Addition. <i>Chemical Science</i> , 2014 , 5, 2336-2339	9.4	23
113	Investigating the nature of palladium chain-walking in the enantioselective redox-relay Heck reaction of alkenyl alcohols. <i>Journal of Organic Chemistry</i> , 2014 , 79, 11841-50	4.2	81
112	Hybrid enzymatic and organic electrocatalytic cascade for the complete oxidation of glycerol. <i>Journal of the American Chemical Society</i> , 2014 , 136, 15917-20	16.4	84
111	Designer substrate library for quantitative, predictive modeling of reaction performance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 14698-703	11.5	47
110	Mechanism, reactivity, and selectivity in palladium-catalyzed redox-relay Heck arylations of alkenyl alcohols. <i>Journal of the American Chemical Society</i> , 2014 , 136, 1960-7	16.4	161
109	A palladium-catalyzed three-component-coupling strategy for the differential vicinal diarylation of terminal 1,3-dienes. <i>Organic Letters</i> , 2014 , 16, 4666-9	6.2	99
108	Wacker Oxidation, The 2014 , 75-414		26

107	Analyzing site selectivity in Rh ₂ (esp) ₂ -catalyzed intermolecular C-H amination reactions. <i>Journal of the American Chemical Society</i> , 2014 , 136, 5783-9	16.4	119
106	The small molecule C-6 is selectively cytotoxic against breast cancer cells and its biological action is characterized by mitochondrial defects and endoplasmic reticulum stress. <i>Breast Cancer Research</i> , 2014 , 16, 472	8.3	11
105	The strategic generation and interception of palladium-hydrides for use in alkene functionalization reactions. <i>Pure and Applied Chemistry</i> , 2014 , 86, 395-408	2.1	26
104	Transition-metal-catalyzed laboratory-scale carbon-carbon bond-forming reactions of ethylene. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 11206-20	16.4	70
103	Pd(0)-catalyzed 1,1-diarylation of ethylene and allylic carbonates. <i>Organic Letters</i> , 2013 , 15, 5008-11	6.2	75
102	Linear Free Energy Relationships (LFERs) in Asymmetric Catalysis 2013 , 363-370		12
101	Palladium-catalyzed 1,4-difunctionalization of butadiene to form skipped polyenes. <i>Journal of the American Chemical Society</i> , 2013 , 135, 4167-70	16.4	119
100	Prediction of catalyst and substrate performance in the enantioselective propargylation of aliphatic ketones by a multidimensional model of steric effects. <i>Journal of the American Chemical Society</i> , 2013 , 135, 2482-5	16.4	62
99	Wacker-type oxidation of internal alkenes using Pd(Quinox) and TBHP. <i>Journal of Organic Chemistry</i> , 2013 , 78, 1682-6	4.2	55
98	Distinctive meta-directing group effect for iridium-catalyzed 1,1-diarylalkene enantioselective hydrogenation. <i>Organic Letters</i> , 2013 , 15, 646-9	6.2	38
97	Using physical organic parameters to correlate asymmetric catalyst performance. <i>Journal of Organic Chemistry</i> , 2013 , 78, 2813-8	4.2	68
96	Enantioselective redox-relay oxidative heck arylations of acyclic alkenyl alcohols using boronic acids. <i>Journal of the American Chemical Society</i> , 2013 , 135, 6830-3	16.4	199
95	The palladium-catalyzed anti-Markovnikov hydroalkylation of allylic alcohol derivatives. <i>Organic Letters</i> , 2013 , 15, 92-5	6.2	13
94	Development of a screen to identify selective small molecules active against patient-derived metastatic and chemoresistant breast cancer cells. <i>Breast Cancer Research</i> , 2013 , 15, R58	8.3	13
93	Bergangsmetallkatalysierte C-C-Kupplungen mit Ethylen im Labormaßstab. <i>Angewandte Chemie</i> , 2013 , 125, 11414-11429	3.6	20
92	Enantioselective Heck arylations of acyclic alkenyl alcohols using a redox-relay strategy. <i>Science</i> , 2012 , 338, 1455-8	33.3	334
91	Synthesis and Preliminary Biological Study of Bisindolylmethanes Accessed by an Acid-Catalyzed Hydroarylation of Vinylindoles. <i>Tetrahedron</i> , 2012 , 68, 5203-5208	2.4	58
90	Palladium(II)-catalyzed enantio- and diastereoselective synthesis of pyrrolidine derivatives. <i>Organic Letters</i> , 2012 , 14, 4074-7	6.2	78

89	Multidimensional steric parameters in the analysis of asymmetric catalytic reactions. <i>Nature Chemistry</i> , 2012 , 4, 366-74	17.6	176
88	Palladium-catalyzed 1,1-difunctionalization of ethylene. <i>Journal of the American Chemical Society</i> , 2012 , 134, 11372-5	16.4	86
87	Imparting catalyst control upon classical palladium-catalyzed alkenyl C-H bond functionalization reactions. <i>Accounts of Chemical Research</i> , 2012 , 45, 874-84	24.3	166
86	Zebrafish screen identifies novel compound with selective toxicity against leukemia. <i>Blood</i> , 2012 , 119, 5621-31	2.2	116
85	Palladium-catalyzed allylic cross-coupling reactions of primary and secondary homoallylic electrophiles. <i>Journal of the American Chemical Society</i> , 2012 , 134, 11408-11	16.4	73
84	On the mechanism of the palladium-catalyzed tert-butylhydroperoxide-mediated Wacker-type oxidation of alkenes using quinoline-2-oxazoline ligands. <i>Journal of the American Chemical Society</i> , 2011 , 133, 8317-25	16.4	91
83	Advances in transition metal (Pd, Ni, Fe)-catalyzed cross-coupling reactions using alkyl-organometallics as reaction partners. <i>Chemical Reviews</i> , 2011 , 111, 1417-92	68.1	1611
82	Palladium-catalyzed hydrofunctionalization of vinyl phenol derivatives with heteroaromatics. <i>Organic Letters</i> , 2011 , 13, 2774-7	6.2	51
81	Applications of ortho-quinone methide intermediates in catalysis and asymmetric synthesis. <i>Journal of Organic Chemistry</i> , 2011 , 76, 9210-5	4.2	270
80	A palladium-catalyzed three-component cross-coupling of conjugated dienes or terminal alkenes with vinyl triflates and boronic acids. <i>Journal of the American Chemical Society</i> , 2011 , 133, 5784-7	16.4	194
79	Catalyst-controlled Wacker-type oxidation of homoallylic alcohols in the absence of protecting groups. <i>Journal of Organic Chemistry</i> , 2011 , 76, 3609-13	4.2	33
78	Three-dimensional correlation of steric and electronic free energy relationships guides asymmetric propargylation. <i>Science</i> , 2011 , 333, 1875-8	33.3	152
77	Operationally simple and highly (E)-styrenyl-selective Heck reactions of electronically nonbiased olefins. <i>Journal of the American Chemical Society</i> , 2011 , 133, 9692-5	16.4	119
76	Anti-Markovnikov hydroalkylation of allylic amine derivatives via a palladium-catalyzed reductive cross-coupling reaction. <i>Journal of the American Chemical Society</i> , 2011 , 133, 11454-7	16.4	36
75	Asymmetric palladium-catalyzed hydroarylation of styrenes and dienes. <i>Tetrahedron</i> , 2011 , 67, 4435-4444	4.4	70
74	Predicting and optimizing asymmetric catalyst performance using the principles of experimental design and steric parameters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 2179-83	11.5	72
73	Peroxide-Mediated Wacker Oxidations for Organic Synthesis. <i>Aldrichimica Acta</i> , 2011 , 44, 55-62	9	15
72	A highly selective and general palladium catalyst for the oxidative Heck reaction of electronically nonbiased olefins. <i>Journal of the American Chemical Society</i> , 2010 , 132, 13981-3	16.4	121

71	Evaluation of catalyst acidity and substrate electronic effects in a hydrogen bond-catalyzed enantioselective reaction. <i>Journal of Organic Chemistry</i> , 2010 , 75, 7194-201	4.2	55
70	Advancing the mechanistic understanding of an enantioselective palladium-catalyzed alkene difunctionalization reaction. <i>Journal of the American Chemical Society</i> , 2010 , 132, 17471-82	16.4	140
69	Linear free-energy relationship analysis of a catalytic desymmetrization reaction of a diarylmethane-bis(phenol). <i>Organic Letters</i> , 2010 , 12, 2794-7	6.2	50
68	Pd(II)-catalyzed oxidative 1,1-diarylation of terminal olefins. <i>Organic Letters</i> , 2010 , 12, 2848-51	6.2	71
67	Synthesis and preliminary biological studies of 3-substituted indoles accessed by a palladium-catalyzed enantioselective alkene difunctionalization reaction. <i>Journal of the American Chemical Society</i> , 2010 , 132, 7870-1	16.4	204
66	Experimental and computational study of a direct O ₂ -coupled Wacker oxidation: water dependence in the absence of Cu salts. <i>Journal of the American Chemical Society</i> , 2010 , 132, 11872-4	16.4	55
65	Palladium-catalyzed hydroarylation of 1,3-dienes with boronic esters via reductive formation of pi-allyl palladium intermediates under oxidative conditions. <i>Journal of the American Chemical Society</i> , 2010 , 132, 10209-11	16.4	88
64	A Drug Screen in Zebrafish Identifies a New Therapeutic Agent Active in Acute Lymphoblastic Leukemia. <i>Blood</i> , 2010 , 116, 2129-2129	2.2	
63	Palladium-catalyzed oxidative intermolecular difunctionalization of terminal alkenes with organostannanes and molecular oxygen. <i>Angewandte Chemie - International Edition</i> , 2009 , 48, 3146-9	16.4	155
62	A new approach to carbon-carbon bond formation: Development of aerobic Pd-catalyzed reductive coupling reactions of organometallic reagents and styrenes. <i>Tetrahedron</i> , 2009 , 65, 5074-5083	2.4	21
61	Synthesis of amine functionalized oxazolines with applications in asymmetric catalysis. <i>Tetrahedron</i> , 2009 , 65, 3110-3119	2.4	14
60	A general and efficient catalyst system for a Wacker-type oxidation using TBHP as the terminal oxidant: application to classically challenging substrates. <i>Journal of the American Chemical Society</i> , 2009 , 131, 6076-7	16.4	101
59	Examination of the role of Taft-type steric parameters in asymmetric catalysis. <i>Journal of Organic Chemistry</i> , 2009 , 74, 7633-43	4.2	76
58	Palladium-catalyzed hydroalkylation of styrenes with organozinc reagents to form carbon-carbon sp ³ -sp ³ bonds under oxidative conditions. <i>Journal of the American Chemical Society</i> , 2009 , 131, 18042-3	16.4	43
57	Palladium-catalyzed enantioselective addition of two distinct nucleophiles across alkenes capable of quinone methide formation. <i>Journal of the American Chemical Society</i> , 2009 , 131, 17074-5	16.4	135
56	Mechanistic approaches to palladium-catalyzed alkene difunctionalization reactions. <i>Organic and Biomolecular Chemistry</i> , 2008 , 6, 4083-8	3.9	355
55	Quantitatively correlating the effect of ligand-substituent size in asymmetric catalysis using linear free energy relationships. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 771-4	16.4	80
54	Coupling Pd-Catalyzed Alcohol Oxidation to Olefin Functionalization: Hydrohalogenation/Hydroalkoxylation of Styrenes. <i>Organometallics</i> , 2007 , 26, 5680-5686	3.8	38

53	Palladium-catalyzed reductive coupling of styrenes and organostannanes under aerobic conditions. <i>Journal of the American Chemical Society</i> , 2007 , 129, 14193-5	16.4	89
52	Recent progress in Wacker oxidations: moving toward molecular oxygen as the sole oxidant. <i>Inorganic Chemistry</i> , 2007 , 46, 1903-9	5.1	192
51	Palladium(II)-catalyzed enantioselective aerobic dialkoxylation of 2-propenyl phenols: a pronounced effect of copper additives on enantioselectivity. <i>Journal of the American Chemical Society</i> , 2007 , 129, 3076-7	16.4	208
50	Systematically probing the effect of catalyst acidity in a hydrogen-bond-catalyzed enantioselective reaction. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 4748-50	16.4	96
49	Design and synthesis of modular oxazoline ligands for the enantioselective chromium-catalyzed addition of allyl bromide to ketones. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2752-3	16.4	102
48	Mechanistic questions about the reaction of molecular oxygen with palladium in oxidase catalysis. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 6612-5	16.4	187
47	Molecular Oxygen Binding and Activation: Oxidation Catalysis 2006 , 159-186		10
46	Development of a general Pd(II)-catalyzed intermolecular hydroalkoxylation reaction of vinylphenols by using a sacrificial alcohol as the hydride source. <i>Organic Letters</i> , 2006 , 8, 5557-60	6.2	41
45	Ligand-modulated palladium-catalyzed aerobic alcohol oxidations. <i>Accounts of Chemical Research</i> , 2006 , 39, 221-9	24.3	521
44	Palladium(II)-catalyzed aerobic hydroalkoxylation of styrenes containing a phenol. <i>Journal of the American Chemical Society</i> , 2006 , 128, 2794-5	16.4	83
43	Metal-mediated and -catalyzed Oxidations Using N-Heterocyclic Carbene Ligands 2006 , 103-118		4
42	Palladium(II)-catalyzed aerobic dialkoxylation of styrenes: a profound influence of an o-phenol. <i>Journal of the American Chemical Society</i> , 2006 , 128, 1460-1	16.4	94
41	Discovery of a practical direct O ₂ -coupled Wacker oxidation with Pd[(-)-sparteine]Cl ₂ . <i>Organic Letters</i> , 2006 , 8, 4117-20	6.2	100
40	Pd(II)-catalyzed conversion of styrene derivatives to acetals: impact of (-)-sparteine on regioselectivity. <i>Organic Letters</i> , 2006 , 8, 1121-4	6.2	41
39	Steric effects in the aerobic oxidation of pi-allylnickel(II) complexes with N-heterocyclic carbenes. <i>Inorganic Chemistry</i> , 2006 , 45, 8430-41	5.1	52
38	Discovery of and mechanistic insight into a ligand-modulated palladium-catalyzed Wacker oxidation of styrenes using TBHP. <i>Journal of the American Chemical Society</i> , 2005 , 127, 2796-7	16.4	133
37	Using mechanistic and computational studies to explain ligand effects in the palladium-catalyzed aerobic oxidation of alcohols. <i>Journal of the American Chemical Society</i> , 2005 , 127, 8499-507	16.4	113
36	Origin of enantioselection in chiral alcohol oxidation catalyzed by Pd[(-)-sparteine]Cl ₂ . <i>Journal of the American Chemical Society</i> , 2005 , 127, 14817-24	16.4	54

35	Stereochemical diversity in chiral ligand design: discovery and optimization of catalysts for the enantioselective addition of allylic halides to aldehydes. <i>Organic Letters</i> , 2005 , 7, 1837-9	6.2	73
34	Development and comparison of the substrate scope of Pd-catalysts for the aerobic oxidation of alcohols. <i>Journal of Organic Chemistry</i> , 2005 , 70, 3343-52	4.2	154
33	Oxygen-induced ligand dehydrogenation of a planar bis- μ -chloronickel(II) dimer featuring an NHC ligand. <i>Inorganic Chemistry</i> , 2005 , 44, 3774-6	5.1	108
32	Design of hydrogen bond catalysts based on a modular oxazoline template: application to an enantioselective hetero Diels-Alder reaction. <i>Organic Letters</i> , 2005 , 7, 5473-5	6.2	90
31	Intermolecular reductive coupling of hindered N-aryl imines towards the modular synthesis of chiral N-heterocyclic carbenes. <i>Tetrahedron</i> , 2005 , 61, 6418-6424	2.4	19
30	Elucidating the significance of beta-hydride elimination and the dynamic role of acid/base chemistry in a palladium-catalyzed aerobic oxidation of alcohols. <i>Journal of the American Chemical Society</i> , 2004 , 126, 9724-34	16.4	209
29	The renaissance of palladium(II)-catalyzed oxidation chemistry. <i>Organic and Biomolecular Chemistry</i> , 2004 , 2, 2551-4	3.9	114
28	A well-defined complex for palladium-catalyzed aerobic oxidation of alcohols: design, synthesis, and mechanistic considerations. <i>Angewandte Chemie - International Edition</i> , 2003 , 42, 3810-3	16.4	261
27	Palladium catalysts for aerobic oxidative kinetic resolution of secondary alcohols based on mechanistic insight. <i>Organic Letters</i> , 2003 , 5, 63-5	6.2	150
26	Diastereoselective synthesis of piperazines by manganese-mediated reductive cyclization. <i>Organic Letters</i> , 2003 , 5, 1591-4	6.2	37
25	Mechanistic investigations of the palladium-catalyzed aerobic oxidative kinetic resolution of secondary alcohols using (-)-sparteine. <i>Journal of the American Chemical Society</i> , 2003 , 125, 7005-13	16.4	102
24	Palladium-catalyzed aerobic oxidative kinetic resolution of alcohols with an achiral exogenous base. <i>Journal of Organic Chemistry</i> , 2003 , 68, 7535-7	4.2	62
23	Scope of enantioselective palladium(II)-catalyzed aerobic alcohol oxidations with (-)-sparteine. <i>Journal of Organic Chemistry</i> , 2003 , 68, 4600-3	4.2	70
22	Unusual reactivity of molecular oxygen with pi-allylnickel(N-heterocyclic carbene) chloride complexes. <i>Journal of the American Chemical Society</i> , 2003 , 125, 872-3	16.4	77
21	Modular synthesis of amine-functionalized oxazolines. <i>Organic Letters</i> , 2002 , 4, 3399-401	6.2	59
20	Dual role of (-)-sparteine in the palladium-catalyzed aerobic oxidative kinetic resolution of secondary alcohols. <i>Journal of the American Chemical Society</i> , 2002 , 124, 8202-3	16.4	103
19	Catalytic enantioselective oxidations using molecular oxygen. <i>Current Opinion in Drug Discovery & Development</i> , 2002 , 5, 860-9		2
18	Palladium-catalyzed enantioselective oxidations of alcohols using molecular oxygen. <i>Journal of the American Chemical Society</i> , 2001 , 123, 7475-6	16.4	294

17	A General Catalyst for the Asymmetric Strecker Reaction This work was supported by the NIH (GM-43214). A postdoctoral fellowship to M.S.S. (NIH), and a predoctoral fellowship to P.V. sponsored by Alfred Bader are gratefully acknowledged. <i>Angewandte Chemie - International Edition</i> , 2000 , 39, 1279-1281	16.4	388
16	Schiff Base Catalysts for the Asymmetric Strecker Reaction Identified and Optimized from Parallel Synthetic Libraries. <i>Journal of the American Chemical Society</i> , 1998 , 120, 4901-4902	16.4	775
15	Cobalt-Catalyzed Cyclotrimerization of Alkynes in Aqueous Solution. <i>Journal of the American Chemical Society</i> , 1998 , 120, 5130-5131	16.4	70
14	Enantioselective Addition of Hydrogen Cyanide to Imines Catalyzed by a Chiral (Salen)Al(III) Complex. <i>Journal of the American Chemical Society</i> , 1998 , 120, 5315-5316	16.4	270
13	Catalytic Iron-Mediated [4 + 1] Cycloaddition of Diallenes with Carbon Monoxide. <i>Journal of the American Chemical Society</i> , 1996 , 118, 11783-11788	16.4	62
12	Low-Temperature Study of the Iron-Mediated [4 + 1] Cyclization of Allenyl Ketones with Carbon Monoxide. <i>Organometallics</i> , 1996 , 15, 2829-2832	3.8	24
11	Photophysics of 2SDeoxyuridine (dU) Nucleosides Covalently Substituted with Either 1-Pyrenyl or 1-Pyrenoyl: Observation of Pyrene-to-Nucleoside Charge-Transfer Emission in 5-(1-Pyrenyl)-dU. <i>Journal of the American Chemical Society</i> , 1995 , 117, 9119-9128	16.4	100
10	The First Iron-Mediated Catalytic Carbon-Nitrogen Bond Formation: [4 + 1] Cycloaddition of Allenyl Imines and Carbon Monoxide. <i>Journal of Organic Chemistry</i> , 1994 , 59, 7488-7491	4.2	43
9	Catalytic iron-mediated carbon-oxygen and carbon-carbon bond formation in [4 + 1] assembly of alkylidenebutenolides. <i>Journal of the American Chemical Society</i> , 1993 , 115, 7545-7546	16.4	57
8	Addition of primary amines to conjugated allenyl aldehydes and ketones. <i>Tetrahedron Letters</i> , 1993 , 34, 5367-5368	2	5
7	Organometallic nonlinear optical polymers. 3. Copolymerization of bridged bis(ferrocenyl) and bis(cyanoacetate) monomers via the Knoevenagel condensation. <i>Macromolecules</i> , 1992 , 25, 6055-6058	5.5	41
6	Data-science driven autonomous process optimization		4
5	Development and Molecular Understanding of a Pd-Catalyzed Cyanation of Aryl Boronic Acids Enabled by High-Throughput Experimentation and Data Analysis. <i>Helvetica Chimica Acta</i> , e2100200	2	3
4	Experimental Protocols for Studying Organic Non-aqueous Redox Flow Batteries. <i>ACS Energy Letters</i> , 3932-3943	20.1	2
3	A Comprehensive Discovery Platform for Organophosphorus Ligands for Catalysis		4
2	A Comprehensive Discovery Platform for Organophosphorus Ligands for Catalysis		6
1	Design and Application of a Screening Set for Monophosphine Ligands in Metal Catalysis		4