Sharon J Mitchell

List of Publications by Year
in descending order

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117 papers	8,988 citations	50170 46 h-index	42291 92 g-index
134 all docs	134 docs citations	134 times ranked	9015 citing authors

#	Article	IF	Citations
1	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO₂ Hydrogenation. Angewandte Chemie - International Edition, 2016, 55, 6261-6265.	7.2	769
2	Single-Atom Catalysts across the Periodic Table. Chemical Reviews, 2020, 120, 11703-11809.	23.0	690
3	A heterogeneous single-atom palladium catalyst surpassing homogeneous systems for Suzuki coupling. Nature Nanotechnology, 2018, 13, 702-707.	15.6	471
4	Scalable two-step annealing method for preparing ultra-high-density single-atom catalyst libraries. Nature Nanotechnology, 2022, 17, 174-181.	15.6	279
5	Mesopore quality determines the lifetime of hierarchically structured zeolite catalysts. Nature Communications, 2014, 5, .	5.8	270
6	The Multifaceted Reactivity of Singleâ€Atom Heterogeneous Catalysts. Angewandte Chemie - International Edition, 2018, 57, 15316-15329.	7.2	261
7	Stabilization of Single Metal Atoms on Graphitic Carbon Nitride. Advanced Functional Materials, 2017, 27, 1605785.	7.8	249
8	From powder to technical body: the undervalued science of catalyst scale up. Chemical Society Reviews, 2013, 42, 6094.	18.7	244
9	Visualization of hierarchically structured zeolite bodies from macro to nano length scales. Nature Chemistry, 2012, 4, 825-831.	6.6	234
10	Full Compositional Flexibility in the Preparation of Mesoporous MFI Zeolites by Desilication. Journal of Physical Chemistry C, 2011, 115, 14193-14203.	1.5	230
11	Structureâ€"performance descriptors and the role of Lewis acidity in the methanol-to-propylene process. Nature Chemistry, 2018, 10, 804-812.	6.6	221
12	Nanoscale engineering of catalytic materials for sustainable technologies. Nature Nanotechnology, 2021, 16, 129-139.	15.6	210
13	Structural analysis of hierarchically organized zeolites. Nature Communications, 2015, 6, 8633.	5.8	206
14	Design of Local Atomic Environments in Singleâ€Atom Electrocatalysts for Renewable Energy Conversions. Advanced Materials, 2021, 33, e2003075.	11.1	187
15	Selective ensembles in supported palladium sulfide nanoparticles for alkyne semi-hydrogenation. Nature Communications, 2018, 9, 2634.	5.8	180
16	Single atom catalysis: a decade of stunning progress and the promise for a bright future. Nature Communications, 2020, 11, 4302.	5.8	179
17	Enhanced Reduction of CO₂ to CO over Cuâ€"In Electrocatalysts: Catalyst Evolution Is the Key. ACS Catalysis, 2016, 6, 6265-6274.	5.5	170
18	Effects of Binders on the Performance of Shaped Hierarchical MFI Zeolites in Methanol-to-Hydrocarbons. ACS Catalysis, 2014, 4, 2409-2417.	5.5	163

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19	From the Lindlar Catalyst to Supported Ligandâ€Modified Palladium Nanoparticles: Selectivity Patterns and Accessibility Constraints in the Continuousâ€Flow Threeâ€Phase Hydrogenation of Acetylenic Compounds. Chemistry - A European Journal, 2014, 20, 5926-5937.	1.7	141
20	Single-atom heterogeneous catalysts based on distinct carbon nitride scaffolds. National Science Review, 2018, 5, 642-652.	4.6	132
21	Hierarchical FAUâ€•and LTAâ€Type Zeolites by Postâ€Synthetic Design: A New Generation of Highly Efficient Base Catalysts. Advanced Functional Materials, 2013, 23, 1923-1934.	7.8	125
22	Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity. Advanced Functional Materials, 2014, 24, 209-219.	7.8	108
23	Atomâ€byâ€Atom Resolution of Structureâ€"Function Relations over Lowâ€Nuclearity Metal Catalysts. Angewandte Chemie - International Edition, 2019, 58, 8724-8729.	7.2	108
24	Porosityâ€"Acidity Interplay in Hierarchical ZSMâ€5 Zeolites for Pyrolysis Oil Valorization to Aromatics. ChemSusChem, 2015, 8, 3283-3293.	3.6	105
25	Interdependence between porosity, acidity, and catalytic performance in hierarchical ZSM-5 zeolites prepared by post-synthetic modification. Journal of Catalysis, 2013, 308, 398-407.	3.1	99
26	Surface and Pore Structure Assessment of Hierarchical MFI Zeolites by Advanced Water and Argon Sorption Studies. Journal of Physical Chemistry C, 2012, 116, 18816-18823.	1.5	94
27	Expanding the Horizons of Hierarchical Zeolites: Beyond Laboratory Curiosity towards Industrial Realization. ChemCatChem, 2011, 3, 1731-1734.	1.8	84
28	Mesoporous zeolites as enzyme carriers: Synthesis, characterization, and application in biocatalysis. Catalysis Today, 2011, 168, 28-37.	2.2	84
29	Impact of Pore Connectivity on the Design of Longâ€Lived Zeolite Catalysts. Angewandte Chemie - International Edition, 2015, 54, 1591-1594.	7.2	84
30	Prospectives for bio-oil upgrading via esterification over zeolite catalysts. Catalysis Today, 2014, 235, 176-183.	2.2	83
31	Tailoring the framework composition of carbon nitride to improve the catalytic efficiency of the stabilised palladium atoms. Journal of Materials Chemistry A, 2017, 5, 16393-16403.	5.2	83
32	Semihydrogenation of Acetylene on Indium Oxide: Proposed Singleâ€Ensemble Catalysis. Angewandte Chemie - International Edition, 2017, 56, 10755-10760.	7.2	82
33	Deactivation mechanisms of tin-zeolites in biomass conversions. Green Chemistry, 2016, 18, 1249-1260.	4.6	80
34	Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO₂ Hydrogenation. Angewandte Chemie, 2016, 128, 6369-6373.	1.6	78
35	Atomically precise control in the design of low-nuclearity supported metal catalysts. Nature Reviews Materials, 2021, 6, 969-985.	23.3	78
36	Controlling the speciation and reactivity of carbon-supported gold nanostructures for catalysed acetylene hydrochlorination. Chemical Science, 2019, 10, 359-369.	3.7	76

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37	Hierarchical Zeolites by Desilication: Occurrence and Catalytic Impact of Recrystallization and Restructuring. Crystal Growth and Design, 2013, 13, 5025-5035.	1.4	74
38	Synergistic effects in silverâ€"indium electrocatalysts for carbon dioxide reduction. Journal of Catalysis, 2016, 343, 266-277.	3.1	73
39	Towards more efficient monodimensional zeolite catalysts: n-alkane hydro-isomerisation on hierarchical ZSM-22. Catalysis Science and Technology, 2011, 1, 1331.	2.1	72
40	Decoupling porosity and compositional effects on desilicated ZSM-5 zeolites for optimal alkylation performance. Catalysis Science and Technology, 2012, 2, 759.	2.1	64
41	Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion. Advanced Functional Materials, 2016, 26, 5621-5630.	7.8	61
42	Deoxygenation of bio-oil over solid base catalysts: From model to realistic feeds. Applied Catalysis B: Environmental, 2016, 184, 77-86.	10.8	59
43	Interfacial acidity in ligand-modified ruthenium nanoparticles boosts the hydrogenation of levulinic acid to gamma-valerolactone. Green Chemistry, 2017, 19, 2361-2370.	4.6	58
44	Role of Carbonaceous Supports and Potassium Promoter on Higher Alcohols Synthesis over Copperâ€"Iron Catalysts. ACS Catalysis, 2018, 8, 9604-9618.	5.5	58
45	Bifunctional Cu/H-ZSM-5 zeolite with hierarchical porosity for hydrocarbon abatement under cold-start conditions. Applied Catalysis B: Environmental, 2014, 154-155, 161-170.	10.8	54
46	Hydroxyapatite, an exceptional catalyst for the gas-phase deoxygenation of bio-oil by aldol condensation. Green Chemistry, 2014, 16, 4870-4874.	4.6	47
47	Design of a technical Mgâ€"Al mixed oxide catalyst for the continuous manufacture of glycerol carbonate. Journal of Materials Chemistry A, 2017, 5, 16200-16211.	5.2	46
48	Rediscovering zeolite mechanochemistry â€" A pathway beyond current synthesis and modification boundaries. Microporous and Mesoporous Materials, 2014, 194, 106-114.	2.2	45
49	Ligand ordering determines the catalytic response of hybrid palladium nanoparticles in hydrogenation. Catalysis Science and Technology, 2016, 6, 1621-1631.	2.1	45
50	Aluminum Redistribution during the Preparation of Hierarchical Zeolites by Desilication. Chemistry - A European Journal, 2015, 21, 14156-14164.	1.7	44
51	Unified Method for the Total Pore Volume and Pore Size Distribution of Hierarchical Zeolites from Argon Adsorption and Mercury Intrusion. Langmuir, 2015, 31, 1242-1247.	1.6	41
52	Design of Base Zeolite Catalysts by Alkali-Metal Grafting in Alcoholic Media. ACS Catalysis, 2015, 5, 5388-5396.	5.5	40
53	Mechanochemically Activated, Calcium Oxideâ€Based, Magnesium Oxideâ€Stabilized Carbon Dioxide Sorbents. ChemSusChem, 2016, 9, 2380-2390.	3.6	40
54	Engineering of ZSM-5 zeolite crystals for enhanced lifetime in the production of light olefins via 2-methyl-2-butene cracking. Catalysis Science and Technology, 2017, 7, 64-74.	2.1	40

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55	Tailoring Nitrogenâ€Doped Carbons as Hosts for Singleâ€Atom Catalysts. ChemCatChem, 2019, 11, 2812-2820.	1.8	40
56	Hierarchically Structured Zeolite Bodies: Assembling Microâ€, Mesoâ€, and Macroporosity Levels in Complex Materials with Enhanced Properties. Advanced Functional Materials, 2012, 22, 2509-2518.	7.8	38
57	Lanthanide compounds as catalysts for the one-step synthesis of vinyl chloride from ethylene. Journal of Catalysis, 2016, 344, 524-534.	3.1	38
58	Die facettenreiche ReaktivitÃt heterogener Einzelatomâ€Katalysatoren. Angewandte Chemie, 2018, 130, 15538-15552.	1.6	36
59	Carrierâ€Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semiâ€Hydrogenation. Angewandte Chemie - International Edition, 2020, 59, 19639-19644.	7.2	36
60	A synchrotron radiation study of the hydrothermal synthesis of layered double hydroxides from MgO and Al2O3 slurries. Green Chemistry, 2007, 9, 373.	4.6	35
61	Single atom catalysis. Catalysis Science and Technology, 2017, 7, 4248-4249.	2.1	34
62	Automated Image Analysis for Single-Atom Detection in Catalytic Materials by Transmission Electron Microscopy. Journal of the American Chemical Society, 2022, 144, 8018-8029.	6.6	33
63	Elucidation of radical- and oxygenate-driven paths in zeolite-catalysed conversion of methanol and methyl chloride to hydrocarbons. Nature Catalysis, 2022, 5, 605-614.	16.1	32
64	Tunability and Scalability of Single-Atom Catalysts Based on Carbon Nitride. ACS Sustainable Chemistry and Engineering, 2019, 7, 5223-5230.	3.2	31
65	Hierarchical Zeolites Overcome all Obstacles: Next Stop Industrial Implementation. Chimia, 2022, 67, 327.	0.3	29
66	Activation of Copper Species on Carbon Nitride for Enhanced Activity in the Arylation of Amines. ACS Catalysis, 2020, 10, 11069-11080.	5.5	29
67	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. Angewandte Chemie - International Edition, 2017, 56, 9791-9795.	7.2	27
68	Single-atom heterogeneous catalysts for sustainable organic synthesis. Trends in Chemistry, 2022, 4, 264-276.	4.4	27
69	The assessment of pore connectivity in hierarchical zeolites using positron annihilation lifetime spectroscopy: instrumental and morphological aspects. Physical Chemistry Chemical Physics, 2016, 18, 9211-9219.	1.3	26
70	Preparation of organic-functionalized mesoporous ZSM-5 zeolites by consecutive desilication and silanization. Materials Chemistry and Physics, 2011, 127, 278-284.	2.0	25
71	Ensemble Design in Nickel Phosphide Catalysts for Alkyne Semiâ€Hydrogenation. ChemCatChem, 2019, 11, 457-464.	1.8	25
72	Epitaxially Directed Iridium Nanostructures on Titanium Dioxide for the Selective Hydrodechlorination of Dichloromethane. ACS Catalysis, 2020, 10, 528-542.	5.5	24

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73	Perturbing the properties of layered double hydroxides by continuous coprecipitation with short residence time. Journal of Materials Chemistry, 2010, 20, 5878.	6.7	23
74	Structural analysis of IPC zeolites and related materials using positron annihilation spectroscopy and high-resolution argon adsorption. Physical Chemistry Chemical Physics, 2016, 18, 15269-15277.	1.3	21
75	Atomâ€byâ€Atom Resolution of Structureâ€“Function Relations over Lowâ€Nuclearity Metal Catalysts. Angewandte Chemie, 2019, 131, 8816-8821.	1.6	21
76	Advanced visualization strategies bridge the multidimensional complexity of technical catalysts. Current Opinion in Chemical Engineering, 2013, 2, 304-311.	3.8	20
77	Impact of carrier acidity on the conversion of syngas to higher alcohols over zeolite-supported copper-iron catalysts. Journal of Catalysis, 2019, 371, 116-125.	3.1	20
78	Structure Sensitivity and Evolution of Nickel-Bearing Nitrogen-Doped Carbons in the Electrochemical Reduction of CO₂. ACS Catalysis, 2020, 10, 3444-3454.	5.5	20
79	Comparative study of the synthesis of layered transition metal molybdates. Journal of Solid State Chemistry, 2010, 183, 198-207.	1.4	19
80	Structuring hybrid palladium nanoparticles in metallic monolithic reactors for continuous-flow three-phase alkyne hydrogenation. Reaction Chemistry and Engineering, 2016, 1, 454-462.	1.9	18
81	Visualising compositional heterogeneity during the scale up of multicomponent zeolite bodies. Materials Horizons, 2017, 4, 857-861.	6.4	18
82	Mapping the Birth and Evolution of Pores upon Thermal Activation of Layered Hydroxides. Chemistry of Materials, 2017, 29, 4052-4062.	3.2	18
83	Semihydrogenation of Acetylene on Indium Oxide: Proposed Singleâ€Ensemble Catalysis. Angewandte Chemie, 2017, 129, 10895-10900.	1.6	17
84	Selective Methane Oxybromination over Nanostructured Ceria Catalysts. ACS Catalysis, 2018, 8, 291-303.	5.5	17
85	Structuring zeolite bodies for enhanced heat-transfer properties. Microporous and Mesoporous Materials, 2015, 208, 196-202.	2.2	16
86	Insights into the Mechanism of Zeolite Detemplation by Positron Annihilation Lifetime Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 25451-25461.	1.5	16
87	Redispersion strategy for high-loading carbon-supported metal catalysts with controlled nuclearity. Journal of Materials Chemistry A, 2022, 10, 5953-5961.	5.2	16
88	Natural Wood-Based Catalytic Membrane Microreactors for Continuous Hydrogen Generation. ACS Applied Materials & Interfaces, 2022, 14, 8417-8426.	4.0	16
89	Elucidation of Metal Local Environments in Singleâ€Atom Catalysts Based on Carbon Nitrides. Small, 2022, 18, .	5.2	15
90	Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy. Small Methods, 2018, 2, 1800268.	4.6	13

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91	Elucidating the Distribution and Speciation of Boron and Cesium in BCsX Zeolite Catalysts for Styrene Production. ChemPhysChem, 2018, 19, 437-445.	1.0	12
92	An Activated TiCâ€“SiC Composite for Natural Gas Upgrading via Catalytic Oxyhalogenation. ChemCatChem, 2018, 10, 1282-1290.	1.8	11
93	Carrierâ€Induced Modification of Palladium Nanoparticles on Porous Boron Nitride for Alkyne Semiâ€Hydrogenation. Angewandte Chemie, 2020, 132, 19807-19812.	1.6	11
94	Impact of Heteroatom Speciation on the Activity and Stability of Carbonâ€Based Catalysts for Propane Dehydrogenation. ChemCatChem, 2021, 13, 2599-2608.	1.8	11
95	Precursor Nuclearity and Ligand Effects in Atomicallyâ€Dispersed Heterogeneous Iron Catalysts for Alkyne Semiâ€Hydrogenation. ChemCatChem, 2021, 13, 3247-3256.	1.8	11
96	Europium Oxybromide Catalysts for Efficient Bromine Looping in Natural Gas Valorization. Angewandte Chemie, 2017, 129, 9923-9927.	1.6	10
97	Nitrogenâ€Doped Carbons with Hierarchical Porosity via Chemical Blowing Towards Longâ€Lived Metalâ€Free Catalysts for Acetylene Hydrochlorination. ChemCatChem, 2020, 12, 1922-1925.	1.8	10
98	Assessing the environmental benefit of palladium-based single-atom heterogeneous catalysts for Sonogashira coupling. Green Chemistry, 2022, 24, 6879-6888.	4.6	10
99	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. ChemPhysChem, 2017, 18, 470-479.	1.0	9
100	The application of focused microwave irradiation coupled with freeze drying to investigate the reaction of MgO and Al2O3 slurries in the formation of layered double hydroxides. Green Chemistry, 2008, 10, 629.	4.6	8
101	Structure analysis of a BEC-type germanosilicate zeolite including the location of the flexible organic cations in the channels. CrystEngComm, 2015, 17, 4865-4870.	1.3	8
102	Aluminum Redistribution in ZSM-5 Zeolite upon Interaction with Gaseous Halogens and Hydrogen Halides and Implications in Catalysis. Journal of Physical Chemistry C, 2020, 124, 722-733.	1.5	8
103	Acidity Effects in Positron Annihilation Lifetime Spectroscopy of Zeolites. Journal of Physical Chemistry C, 2018, 122, 3443-3453.	1.5	6
104	Hierarchically Structured MnO₂â€Co/C Nanocomposites: Highly Efficient and Magnetically Recyclable Catalysts for the Aerobic Oxidation of Alcohols. ChemCatChem, 2015, 7, 2585-2589.	1.8	5
105	Substrate substitution effects in the Fries rearrangement of aryl esters over zeolite catalysts. Catalysis Science and Technology, 2020, 10, 4282-4292.	2.1	5
106	Carbonâ€Supported Bimetallic Rutheniumâ€Iridium Catalysts for Selective and Stable Hydrodebromination of Dibromomethane. ChemCatChem, 0, , .	1.8	5
107	From the Lindlar Catalyst to Supported Ligand-Modified Palladium Nanoparticles: Selectivity Patterns and Accessibility Constraints in the Continuous-Flow Three-Phase Hydrogenation of Acetylenic Compounds. Chemistry - A European Journal, 2014, 20, 5849-5849.	1.7	4
108	Hydrotalcite-Derived Mixed Oxides for the Synthesis of a Key Vitamin A Intermediate Reducing Waste. ACS Omega, 2018, 3, 15293-15301.	1.6	4

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109	Dual catalyst system for selective vinyl chloride production <i>via</i> ethene oxychlorination. Catalysis Science and Technology, 2020, 10, 560-575.	2.1	4
110	Design of hydrothermally-stable dawsonite-based sorbents in technical form for CO₂capture. Energy and Environmental Science, 2014, 7, 3640-3650.	15.6	3
111	Catalysts: Stabilization of Single Metal Atoms on Graphitic Carbon Nitride (Adv. Funct. Mater. 8/2017). Advanced Functional Materials, 2017, 27, .	7.8	2
112	Positron Annihilation Spectroscopy: Shedding New Light on Nanostructured Catalysts with Positron Annihilation Spectroscopy (Small Methods 12/2018). Small Methods, 2018, 2, 1800060.	4.6	1
113	Zeolites: Superior Mass Transfer Properties of Technical Zeolite Bodies with Hierarchical Porosity (Adv. Funct. Mater. 2/2014). Advanced Functional Materials, 2014, 24, 174-174.	7.8	0
114	RÃ¼cktitelbild: Impact of Pore Connectivity on the Design of Long-Lived Zeolite Catalysts (Angew. Chem.) Tj ETQq0 0 0 rgBT /Overlock	1.6	0
115	Titelbild: Indium Oxide as a Superior Catalyst for Methanol Synthesis by CO₂ Hydrogenation (Angew. Chem. 21/2016). Angewandte Chemie, 2016, 128, 6215-6215.	1.6	0
116	Hierarchical Structures: Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion (Adv. Funct. Mater. 31/2016). Advanced Functional Materials, 2016, 26, 5768-5768.	7.8	0
117	Pore Topology Effects in Positron Annihilation Spectroscopy of Zeolites. ChemPhysChem, 2017, 18, 428-428.	1.0	0