Susannah L Scott

List of Publications by Year
in descending order

118 papers	7,996 citations	50244 46 h-index	51562 86 g-index
123 all docs	123 docs citations	123 times ranked	8420 citing authors

#	Article	IF	Citations
1	Degradation Rates of Plastics in the Environment. ACS Sustainable Chemistry and Engineering, 2020, 8, 3494-3511.	3.2	1,463
2	Polyethylene upcycling to long-chain alkylaromatics by tandem hydrogenolysis/aromatization. Science, 2020, 370, 437-441.	6.0	378
3	Catalytic disassembly of an organosolv lignin via hydrogen transfer from supercritical methanol. Green Chemistry, 2010, 12, 1640.	4.6	306
4	Upcycling Single-Use Polyethylene into High-Quality Liquid Products. ACS Central Science, 2019, 5, 1795-1803.	5.3	283
5	A Cu₂₅ Nanocluster with Partial Cu(0) Character. Journal of the American Chemical Society, 2015, 137, 13319-13324.	6.6	234
6	Elucidating the Roles of Electric Fields in Catalysis: A Perspective. ACS Catalysis, 2018, 8, 5153-5174.	5.5	215
7	Abiotic methylation of mercury in the aquatic environment. Science of the Total Environment, 2006, 368, 126-137.	3.9	208
8	Recent progress in methane dehydroaromatization: From laboratory curiosities to promising technology. Journal of Energy Chemistry, 2013, 22, 1-20.	7.1	206
9	Toward Benchmarking in Catalysis Science: Best Practices, Challenges, and Opportunities. ACS Catalysis, 2016, 6, 2590-2602.	5.5	190
10	Phenomena Affecting Catalytic Reactions at Solidâ€“Liquid Interfaces. ACS Catalysis, 2016, 6, 8286-8307.	5.5	189
11	Acid-Functionalized SBA-15-Type Silica Catalysts for Carbohydrate Dehydration. ACS Catalysis, 2011, 1, 719-728.	5.5	184
12	A Matter of Life(time) and Death. ACS Catalysis, 2018, 8, 8597-8599.	5.5	162
13	An Organometallic Cu₂₀ Nanocluster: Synthesis, Characterization, Immobilization on Silica, and â€œClickâ€•Chemistry. Journal of the American Chemical Society, 2018, 140, 394-400.	6.6	136
14	Beyond Ordered Materials: Understanding Catalytic Sites on Amorphous Solids. ACS Catalysis, 2017, 7, 7543-7557.	5.5	134
15	Reduction of the Aqueous Mercuric Ion by Sulfite:Â UV Spectrum of HgSO3and Its Intramolecular Redox Reaction. Journal of Physical Chemistry A, 2000, 104, 1621-1626.	1.1	133
16	Mono- and Dinuclear Silica-Supported Titanium(IV) Complexes and the Effect of TiOTi Connectivity on Reactivity. Journal of the American Chemical Society, 1999, 121, 7201-7210.	6.6	123
17	Acid-Functionalized SBA-15-Type Periodic Mesoporous Organosilicas and Their Use in the Continuous Production of 5-Hydroxymethylfurfural. ACS Catalysis, 2012, 2, 1865-1876.	5.5	115
18	Tandem Catalytic Conversion of Glucose to 5-Hydroxymethylfurfural with an Immobilized Enzyme and a Solid Acid. ACS Catalysis, 2014, 4, 2165-2168.	5.5	102

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19	Ligand-Exchange-Induced Growth of an Atomically Precise Cu₂₉ Nanocluster from a Smaller Cluster. Chemistry of Materials, 2016, 28, 8385-8390.	3.2	101
20	Bifunctional Solid Catalysts for the Selective Conversion of Fructose to 5-Hydroxymethylfurfural. Topics in Catalysis, 2010, 53, 1185-1192.	1.3	96
21	A Pd-doped perovskite catalyst, BaCe1â^'xPdxO3â^'Î´BaCe1â^'xPdxO3â^'Î´, for CO oxidation. Journal of Catalysis, 2007, 249, 349-358.	3.1	91
22	A Kinetic Study of Ethylene and 1-Hexene Homo- and Copolymerization Catalyzed by a Silica-Supported Cr(IV) Complex:â€‰ Evidence for Propagation by a Migratory Insertion Mechanism. Journal of the American Chemical Society, 2000, 122, 8968-8976.	6.6	89
23	Synthesis and Characterization of Silica-Stabilized Chromium(IV) Alkylidene Complexes. Journal of the American Chemical Society, 1998, 120, 415-416.	6.6	87
24	Evidence for a chromasiloxane ring size effect in Phillips (Cr/SiO2) polymerization catalysts. Journal of Catalysis, 2009, 262, 44-56.	3.1	85
25	A Strong Support Effect in Selective Propane Dehydrogenation Catalyzed by Ga(i-Bu)₃ Grafted onto Î³-Alumina and Silica. ACS Catalysis, 2018, 8, 7566-7577.	5.5	79
26	Reactions of Tetraalkylchromium(IV) with Silica:Â Mechanism of Grafting and Characterization of Surface Organometallic Complexes. Organometallics, 1997, 16, 86-92.	1.1	77
27	Sulfite Stabilization and Reduction of the Aqueous Mercuric Ion:Â Kinetic Determination of Sequential Formation Constants. Journal of Physical Chemistry A, 2001, 105, 3190-3195.	1.1	74
28	Hexagonal YFe_{1â^'x}Pd_xO_{3â^'Î´}: Nonperovskite Host Compounds for Pd²⁺ and Their Catalytic Activity for CO Oxidation. Chemistry of Materials, 2008, 20, 6567-6576.	3.2	74
29	Sustainable Solvent Systems for Use in Tandem Carbohydrate Dehydration Hydrogenation. ACS Sustainable Chemistry and Engineering, 2013, 1, 554-560.	3.2	73
30	Irâ€“Re alloy as a highly active catalyst for the hydrogenolysis of glycerol to 1,3-propanediol. Catalysis Science and Technology, 2015, 5, 1540-1547.	2.1	71
31	Operando Solid-State NMR Observation of Solvent-Mediated Adsorption-Reaction of Carbohydrates in Zeolites. ACS Catalysis, 2017, 7, 3489-3500.	5.5	70
32	Computational Kinetic Discrimination of Ethylene Polymerization Mechanisms for the Phillips (Cr/SiO₂) Catalyst. ACS Catalysis, 2015, 5, 3360-3374.	5.5	69
33	Characterization of Silica-Supported Vanadium(V) Complexes Derived from Molecular Precursors and Their Ligand Exchange Reactions. Langmuir, 1997, 13, 1545-1551.	1.6	66
34	Mechanism of Initiation in the Phillips Ethylene Polymerization Catalyst: Redox Processes Leading to the Active Site. ACS Catalysis, 2015, 5, 5574-5583.	5.5	57
35	Stoichiometric and catalytic reactivity of organometallic fragments supported on inorganic oxides. Journal of Molecular Catalysis, 1994, 86, 5-22.	1.2	56
36	Spectroscopic and structural characterization of Cr(II)/SiO2 active site precursors in model Phillips polymerization catalysts. Journal of Catalysis, 2012, 293, 1-12.	3.1	56

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37	A Biomimetic Pathway for Vanadiumâ€Catalyzed Aerobic Oxidation of Alcohols: Evidence for a Baseâ€Assisted Dehydrogenation Mechanism. Chemistry - A European Journal, 2012, 18, 14981-14988.	1.7	53
38	Single atom catalysts on amorphous supports: A quenched disorder perspective. Journal of Chemical Physics, 2015, 142, 104708.	1.2	53
39	Operando MAS NMR Reaction Studies at High Temperatures and Pressures. Journal of Physical Chemistry C, 2018, 122, 8209-8215.	1.5	52
40	Spectroscopically Distinct Sites Present in Methyltrioxorhenium Grafted onto Silicaâ^'Alumina, and Their Abilities to Initiate Olefin Metathesis. Journal of the American Chemical Society, 2007, 129, 8912-8920.	6.6	50
41	Evidence for the Pairwise Disposition of Grafting Sites on Highly Dehydroxylated Silicas via Their Reactions with Ga(CH₃)₃. Journal of the American Chemical Society, 2011, 133, 4847-4855.	6.6	49
42	Direct, Selective Production of Aromatic Alcohols from Ethanol Using a Tailored Bifunctional Cobaltâ€“Hydroxyapatite Catalyst. ACS Catalysis, 2019, 9, 7204-7216.	5.5	49
43	Spontaneous Evolution of Silica-Supported Ti Amide Fragments to Imine and Imido Complexes. Organometallics, 2001, 20, 237-239.	1.1	48
44	Nature of â‰¡SiOCrO₂Cl and (â‰¡SiO)₂CrO₂Sites Prepared by Grafting CrO₂Cl₂onto Silica. Journal of Physical Chemistry C, 2008, 112, 6439-6449.	1.5	47
45	One-Electron-Redox Activation of the Reduced Phillips Polymerization Catalyst, via Alkylchromium(IV) Homolysis: A Computational Assessment. ACS Catalysis, 2016, 6, 6073-6085.	5.5	47
46	BaCe1-xPdxO3-Î´(0 â‰¤xâ‰¤ 0.1):Â Redox Controlled Ingress and Egress of Palladium in a Perovskite. Chemistry of Materials, 2007, 19, 1418-1426.	3.2	46
47	Rate-Enhancing Roles of Water Molecules in Methyltrioxorhenium-Catalyzed Olefin Epoxidation by Hydrogen Peroxide. Journal of the American Chemical Society, 2015, 137, 9604-9616.	6.6	42
48	Mapping reactivities of aromatic models with a lignin disassembly catalyst. Steps toward controlling product selectivity. Catalysis Science and Technology, 2016, 6, 2984-2994.	2.1	42
49	Methyltrioxorhenium Interactions with Lewis Acid Sites of an Amorphous Silicaâ^'Alumina. Organometallics, 2006, 25, 2157-2165.	1.1	41
50	Formation of Digallium Sites in the Reaction of Trimethylgallium with Silica. Organometallics, 2006, 25, 1891-1899.	1.1	41
51	The Burden of Disproof. ACS Catalysis, 2019, 9, 4706-4708.	5.5	38
52	Ligand Exchange-Mediated Activation and Stabilization of a Re-Based Olefin Metathesis Catalyst by Chlorinated Alumina. Journal of the American Chemical Society, 2016, 138, 12935-12947.	6.6	37
53	Coordination Chemistry on Surfaces: A New Method To Graft Rhenium(VII) Oxide on Highly Dehydroxylated Oxides. Journal of the American Chemical Society, 1994, 116, 12069-12070.	6.6	36
54	Mechanism of Initiation in the Phillips Ethylene Polymerization Catalyst: Ethylene Activation by Cr(II) and the Structure of the Resulting Active Site. ACS Catalysis, 2017, 7, 7442-7455.	5.5	34

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55	Chemical Upcycling of Polyethylene to Value-Added Î±,Ï‰-Divinyl-Functionalized Oligomers. ACS Sustainable Chemistry and Engineering, 2021, 9, 13926-13936.	3.2	34
56	Nano-Apples and Orange-Zymes. ACS Catalysis, 2020, 10, 14315-14317.	5.5	33
57	Phillips Cr/Silica Catalyst for Ethylene Polymerization. Advances in Polymer Science, 2013, , 135-202.	0.4	32
58	An X-ray Absorption Study of Two VOCl3-Modified Silicas:â€‰ Evidence for Chlorideâ^'Silica Interactions. Journal of Physical Chemistry B, 2005, 109, 5005-5011.	1.2	31
59	Highly dispersed clayâ€“polyolefin nanocomposites free of compatibilizers, via the in situ polymerization of Î±-olefins by clay-supported catalysts. Chemical Communications, 2008, , 4186.	2.2	31
60	Surface Organometallic Chemistry on Oxides: Reaction of CO with Bis(allyl)rhodium Grafted onto Silica, Titania, and Alumina. Inorganic Chemistry, 1994, 33, 2509-2517.	1.9	30
61	Reexamining the evidence for proton transfers in ethylene polymerization. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E4160-1.	3.3	29
62	An investigation of catalyst/cocatalyst/support interactions in silica-supported olefin polymerization catalysts based on Cp*TiMe3*. Topics in Catalysis, 2005, 34, 109-120.	1.3	28
63	Interactions Involving Lewis Acidic Aluminum Sites in Oxide-Supported Perrhenate Catalysts. Journal of Physical Chemistry C, 2011, 115, 9012-9024.	1.5	28
64	Selective Grafting of Ga(i-Bu)₃ on the Silanols of Mesoporous H-ZSM-5 by Surface Organometallic Chemistry. Journal of Physical Chemistry C, 2015, 119, 26611-26619.	1.5	27
65	Methylmercury artifact formation during solid-phase extraction of water samples using sulfhydryl cotton fiber adsorbent. Analytica Chimica Acta, 2004, 516, 171-177.	2.6	25
66	Site-averaged kinetics for catalysts on amorphous supports: an importance learning algorithm. Reaction Chemistry and Engineering, 2020, 5, 77-86.	1.9	25
67	A Tailored Microenvironment for Catalytic Biomass Conversion in Inorganicâ€“Organic Nanoreactors. Angewandte Chemie, 2013, 125, 10539-10541.	1.6	24
68	Enhanced Metathesis Activity and Stability of Methyltrioxorhenium on a Mostly Amorphous Alumina: Role of the Local Grafting Environment. Journal of the American Chemical Society, 2018, 140, 13854-13868.	6.6	24
69	Computational Support for Phillips Catalyst Initiation via Crâ€“C Bond Homolysis in a Chromacyclopentane Site. ACS Catalysis, 2018, 8, 1728-1733.	5.5	23
70	Unraveling the Dynamic Network in the Reactions of an Alkyl Aryl Ether Catalyzed by Ni/Î³-Al₂O₃ in 2-Propanol. Journal of the American Chemical Society, 2019, 141, 17370-17381.	6.6	23
71	Ligand Exchange and Oxidative Addition on a Silica-Supported Rhodium Complex,trans-[(â‹®SiO)Rh(PMe3)2(CO)]. Journal of the American Chemical Society, 1998, 120, 1883-1890.	6.6	22
72	Grafting metal complexes onto amorphous supports: from elementary steps to catalyst site populationsviakernel regression. Reaction Chemistry and Engineering, 2020, 5, 66-76.	1.9	22

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73	Modification of Silica Surfaces by Metallasiloxanes Containing Mo and Ti:Â Evidence for Concurrent Metal and Ligand Chemisorption. Chemistry of Materials, 2000, 12, 857-862.	3.2	21
74	Glucose Isomerization and Epimerization over Metalâ€Organic Frameworks with Singleâ€Site Active Centers. ChemCatChem, 2019, 11, 1903-1909.	1.8	21
75	Phosphonateâ€Modified UiOâ€66 BrÃ¸nsted Acid Catalyst and Its Use in Dehydraâ€Decyclization of 2â€Methyltetrahydrofuran to Pentadienes. Angewandte Chemie - International Edition, 2020, 59, 13260-13266.	7.2	21
76	Water-Catalyzed Activation of H₂O₂ by Methyltrioxorhenium: A Combined Computationalâ€“Experimental Study. Inorganic Chemistry, 2013, 52, 13904-13917.	1.9	20
77	Reassessment of the Electronic Structure of Cr(VI) Sites Supported on Amorphous Silica and Implications for Cr Coordination Number. Journal of Physical Chemistry C, 2018, 122, 4349-4358.	1.5	20
78	High temperature/pressure MAS-NMR for the study of dynamic processes in mixed phase systems. Magnetic Resonance Imaging, 2019, 56, 37-44.	1.0	20
79	Evidence for Entropically Controlled Interfacial Hydration in Mesoporous Organosilicas. Journal of the American Chemical Society, 2022, 144, 1766-1777.	6.6	20
80	Origin of the ZnCl2 Effect on CH3ReO3/Î³-Al2O3 in Olefin Metathesis. Topics in Catalysis, 2012, 55, 530-537.	1.3	19
81	Surface Organometallic Chemistry on Oxides:Â Reaction of Trimethylphosphine with Bis(allyl)rhodium Grafted onto Silica. Inorganic Chemistry, 1996, 35, 869-875.	1.9	18
82	Mechanism for CO oxidation catalyzed by Pd-substituted BaCeO3, and the local structure of the active sites. Journal of Catalysis, 2010, 273, 83-91.	3.1	18
83	La₄LiAuO₈ and La₂BaPdO₅: Comparing Two Highly Stable d⁸ Square-Planar Oxides. Inorganic Chemistry, 2010, 49, 4670-4680.	1.9	18
84	Superlative Scientific Writing. ACS Catalysis, 2017, 7, 2218-2219.	5.5	18
85	Synthesis and Characterization of â€œAtlas-Sphereâ€•Copper Nanoclusters: New Insights into the Reaction of Cu²⁺ with Thiols. Inorganic Chemistry, 2019, 58, 8739-8749.	1.9	17
86	P-Site Structural Diversity and Evolution in a Zeosil Catalyst. Journal of the American Chemical Society, 2021, 143, 1968-1983.	6.6	17
87	Nonhydrolytic Surface Synthesis of a Heterobimetallic Vâˆ’Ti Alkoxide Complex on Silica. Chemistry of Materials, 1998, 10, 620-625.	3.2	16
88	Kinetics and Mechanism of Nitrite Oxidation by HOBr/BrO- in Atmospheric Water and Comparison with Oxidation by HOCl/ClO-. Journal of Physical Chemistry A, 2002, 106, 11891-11896.	1.1	16
89	Amine Catalyzed Atomic Layer Deposition of (3-Mercaptopropyl)trimethoxysilane for the Production of Heterogeneous Sulfonic Acid Catalysts. Chemistry of Materials, 2013, 25, 3844-3851.	3.2	16
90	Structure-performance correlations of cross-linked boronic acid polymers as adsorbents for recovery of fructose from glucoseâ€“fructose mixtures. Green Chemistry, 2020, 22, 550-562.	4.6	16

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91	To Err is Human; To Reproduce Takes Time. ACS Catalysis, 2022, 12, 3644-3650.	5.5	16
92	Effect of silica type and grafting method on the reactivity of tetraneopentylchromium(IV) towards and on silica. Inorganica Chimica Acta, 2008, 361, 3315-3321.	1.2	15
93	Silica-supported rhodium hydrides stabilized by triisopropylphosphine. Journal of Molecular Catalysis A, 2003, 204-205, 457-463.	4.8	14
94	Pd²⁺/Pd⁰ Redox Cycling in Hexagonal YMn_{0.5}Fe_{0.5}O₃: Implications for Catalysis by PGM-Substituted Complex Oxides. Inorganic Chemistry, 2011, 50, 8073-8084.	1.9	14
95	Chromium Catalysts for Ethylene Polymerization and Oligomerization. Advances in Chemical Engineering, 2014, , 127-191.	0.5	13
96	Supramolecular approach to metal-support interactions: reactivity of silica-supported bis(allyl)rhodium(III) and the influence of surface hydroxyl groups. Journal of Molecular Catalysis A, 1996, 107, 263-271.	4.8	12
97	Tuning molecular adsorption in SBA-15-type periodic mesoporous organosilicas by systematic variation of their surface polarity. Chemical Science, 2020, 11, 3702-3712.	3.7	10
98	Kinetics and Mechanism of the Mercury(II)-Assisted Hydrolysis of Methyl Iodide. Inorganic Chemistry, 2005, 44, 2507-2512.	1.9	9
99	Quantitative Investigation of a Hybrid Zieglerâ€“Natta Catalyst Support Prepared by Grafting Di(n) Tj ETQq1 1 0.784314 rgBT /Overlo 4632-4639.	1.7	9
100	Do Mono-oxo Sites Exist in Silica-Supported Cr(VI) Materials? Reassessment of the Resonance Raman Spectra. Journal of Physical Chemistry C, 2018, 122, 17149-17160.	1.5	8
101	Two-step synthesis of Fe₂O₃and Co₃O₄nanoparticles: towards a general method for synthesizing nanocrystalline metal oxides with high surface area and thermal stability. RSC Advances, 2012, 2, 121-124.	1.7	7
102	Rapid extraction of quantitative kinetic information from variable-temperature reaction profiles. Chemical Engineering Journal, 2016, 303, 182-193.	6.6	7
103	Essential Elements of Collaboration: Understanding How Chemistry Graduate Students Experience Collaboration through International Research Visits. Journal of Chemical Education, 2018, 95, 749-757.	1.1	7
104	Bioinspired methane oxidation in a zeolite. Science, 2021, 373, 277-278.	6.0	7
105	Efficient, continuous N-Boc deprotection of amines using solid acid catalysts. Reaction Chemistry and Engineering, 2021, 6, 279-288.	1.9	6
106	Title is missing!. Transition Metal Chemistry, 2001, 26, 271-275.	0.7	5
107	First-Principles Approach to Extracting Chemical Information from X-ray Absorption Near-Edge Spectra of Ga-Containing Materials. Journal of Physical Chemistry C, 2021, 125, 27901-27908.	1.5	5
108	Clayâ€Catalyzed Cracking Leads to Suppressed Flammability in Clayâ€“Polyolefin Nanocomposites. Macromolecular Materials and Engineering, 2011, 296, 1075-1080.	1.7	4

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109	Phosphonateâ€Modified UiOâ€66 BrÃ¸nsted Acid Catalyst and Its Use in Dehydraâ€Decyclization of 2â€Methyltetrahydrofuran to Pentadienes. Angewandte Chemie, 2020, 132, 13362-13368.	1.6	4
110	Excellence versus Diversity? Not an Either/Or Choice. ACS Catalysis, 2020, 10, 7310-7311.	5.5	4
111	Modeling the Structural Heterogeneity of Vicinal Silanols and Its Effects on TiCl₄ Grafting onto Amorphous Silica. Chemistry of Materials, 2022, 34, 3920-3930.	3.2	4
112	X-ray Absorption Spectroscopy Investigation into the Origins of Heterogeneity in Silica-Supported Dioxomonomolybdates. Journal of Physical Chemistry C, 2021, 125, 23115-23125.	1.5	3
113	Solid-state Spectroscopic and Structural Investigation of cis-(CH3)2Au(O,Oâ€²-acac). Journal of Chemical Crystallography, 2009, 39, 173-177.	0.5	2
114	IR spectroscopic investigation of cis-(CH3)2Au(O,Oâ€²-acac) and cis-(CD3)2Au(O,Oâ€²-acac). Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2008, 71, 969-974.	2.0	1
115	CO Oxidation Catalyzed by Pd-doped BaCeO3: Coexistence of Langmuir-Hinshelwood and BaCeO3-mediated Mechanisms. Materials Research Society Symposia Proceedings, 2009, 1217, 1.	0.1	1
116	RÃ¼cktitelbild: Stabilization of Copper Catalysts for Liquid-Phase Reactions by Atomic Layer Deposition (Angew. Chem. 51/2013). Angewandte Chemie, 2013, 125, 14068-14068.	1.6	1
117	Reply to â€œComment on â€˜Kinetics and Mechanism of Nitrite Oxidation by HOBr/BrO-in Atmospheric Water and Comparison with Oxidation by HOCl/ClO-'Â†. Journal of Physical Chemistry A, 2004, 108, 10617-10618.	1.1	0
118	Innentitelbild: A Tailored Microenvironment for Catalytic Biomass Conversion in Inorganicâ€“Organic Nanoreactors (Angew. Chem. 39/2013). Angewandte Chemie, 2013, 125, 10314-10314.	1.6	0