Jay A Labinger

List of Publications by Year
in descending order

99 papers	9,590 citations	50244 46 h-index	36008 97 g-index
104 all docs	104 docs citations	104 times ranked	7008 citing authors

#	Article	IF	Citations
1	Understanding and exploiting Câ€“H bond activation. Nature, 2002, 417, 507-514.	13.7	2,502
2	Mechanism of Glucose Isomerization Using a Solid Lewis Acid Catalyst in Water. Angewandte Chemie - International Edition, 2010, 49, 8954-8957.	7.2	612
3	Homogeneous Oxidation of Alkanes by Electrophilic Late Transition Metals. Angewandte Chemie - International Edition, 1998, 37, 2180-2192.	7.2	548
4	Selective alkane oxidation: hot and cold approaches to a hot problem. Journal of Molecular Catalysis A, 2004, 220, 27-35.	4.8	294
5	Mechanistic Studies of the Ethylene Trimerization Reaction with Chromiumâ^'Diphosphine Catalysts:Â Experimental Evidence for a Mechanism Involving Metallacyclic Intermediates. Journal of the American Chemical Society, 2004, 126, 1304-1305.	6.6	289
6	Exploring the Mechanism of Aqueous Câ^'H Activation by Pt(II) through Model Chemistry:Â Evidence for the Intermediacy of Alkylhydridoplatinum(IV) and Alkane Ïƒ-Adducts. Journal of the American Chemical Society, 1996, 118, 5961-5976.	6.6	284
7	Câ^'H Bond Activation by Cationic Platinum(II) Complexes:Â Ligand Electronic and Steric Effects. Journal of the American Chemical Society, 2002, 124, 1378-1399.	6.6	257
8	Mechanistic Investigation of Benzene Câ^'H Activation at a Cationic Platinum(II) Center:Â Direct Observation of a Platinum(II) Benzene Adduct. Journal of the American Chemical Society, 2000, 122, 10846-10855.	6.6	229
9	Câ^'H Activation at Cationic Platinum(II) Centers. Journal of the American Chemical Society, 1997, 119, 848-849.	6.6	224
10	Platinum-Catalyzed Câ€“H Functionalization. Chemical Reviews, 2017, 117, 8483-8496.	23.0	201
11	Mechanistic Studies of Olefin and Alkyne Trimerization with Chromium Catalysts:â€‰ Deuterium Labeling and Studies of Regiochemistry Using a Model Chromacyclopentane Complex. Journal of the American Chemical Society, 2007, 129, 14281-14295.	6.6	174
12	Reductive Coupling of Carbon Monoxide in a Rhenium Carbonyl Complex with Pendant Lewis Acids. Journal of the American Chemical Society, 2008, 130, 11874-11875.	6.6	140
13	Structural and Mechanistic Investigations of the Oxidation of Dimethylplatinum(II) Complexes by Dioxygen. Inorganic Chemistry, 2002, 41, 3608-3619.	1.9	135
14	Mechanism and stereochemistry for nucleophilic attack at carbon of platinum(IV) alkyls: model reactions for hydrocarbon oxidation with aqueous platinum chlorides. Journal of the American Chemical Society, 1993, 115, 3004-3005.	6.6	130
15	Homogeneous syngas conversion. Coordination Chemistry Reviews, 2011, 255, 881-898.	9.5	130
16	Tutorial on Oxidative Addition. Organometallics, 2015, 34, 4784-4795.	1.1	128
17	Mechanistic studies on the oxidative coupling of methane. The Journal of Physical Chemistry, 1987, 91, 2682-2684.	2.9	126
18	Intramolecular and intermolecular C-H activation at a cationic PtII center. Inorganica Chimica Acta, 1998, 270, 467-478.	1.2	125

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19	Homogeneous CO Hydrogenation: Dihydrogen Activation Involves a Frustrated Lewis Pair Instead of a Platinum Complex. Journal of the American Chemical Society, 2010, 132, 3301-3303.	6.6	119
20	Oxidative coupling of methane: An inherent limit to selectivity?. Catalysis Letters, 1988, 1, 371-375.	1.4	112
21	Oxidation of hydrocarbons by aqueous platinum salts: mechanism and selectivity. Organometallics, 1993, 12, 895-905.	1.1	109
22	Kinetics and Mechanism of Methane, Methanol, and Dimethyl Ether Câ^'H Activation with Electrophilic Platinum Complexes. Journal of the American Chemical Society, 2006, 128, 2005-2016.	6.6	95
23	Route to Renewable PET: Reaction Pathways and Energetics of Dielsâ€"Alder and Dehydrative Aromatization Reactions Between Ethylene and Biomass-Derived Furans Catalyzed by Lewis Acid Molecular Sieves. ACS Catalysis, 2015, 5, 5904-5913.	5.5	92
24	Homogeneous CO Hydrogenation: Ligand Effects on the Lewis Acid-Assisted Reductive Coupling of Carbon Monoxide. Organometallics, 2010, 29, 4499-4516.	1.1	88
25	Kinetic and Thermodynamic Preferences in Aryl vs Benzylic Câ^'H Bond Activation with Cationic Pt(II) Complexes. Journal of the American Chemical Society, 2004, 126, 15034-15035.	6.6	83
26	Arene Câ^'H Bond Activation and Arene Oxidative Coupling by Cationic Palladium(II) Complexes. Organometallics, 2003, 22, 3884-3890.	1.1	81
27	Mechanism of Reductive Elimination of Methyl Iodide from a Novel Gold(III)â^'Monomethyl Complex. Organometallics, 2010, 29, 4090-4096.	1.1	74
28	Spectral Studies of a Cr(PNP)â€"MAO System for Selective Ethylene Trimerization Catalysis: Searching for the Active Species. ACS Catalysis, 2013, 3, 2582-2585.	5.5	74
29	Oxidation of Dimethylplatinum(II) Complexes with Dioxygen. Organometallics, 1998, 17, 4530-4531.	1.1	72
30	Selective hydroxylation of methyl groups by platinum salts in aqueous medium. Direct conversion of ethanol to ethylene glycol. Journal of the American Chemical Society, 1990, 112, 5628-5629.	6.6	67
31	The role of alkane coordination in C H bond cleavage at a Pt(II) center. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6915-6920.	3.3	67
32	Oxidative addition to iridium(I). Free-radical process. Journal of the American Chemical Society, 1972, 94, 4043-4044.	6.6	65
33	Upgrading Light Hydrocarbons via Tandem Catalysis: A Dual Homogeneous Ta/Ir System for Alkane/Alkene Coupling. Journal of the American Chemical Society, 2013, 135, 10302-10305.	6.6	61
34	Hydrogen Tunneling in Protonolysis of Platinum(II) and Palladium(II) Methyl Complexes: Mechanistic Implications. Journal of the American Chemical Society, 2008, 130, 17654-17655.	6.6	57
35	Oxidation of Zeise's Salt by [PtCl6]2-: A Mechanistic Model for Hydrocarbon Oxidation. Organometallics, 1994, 13, 755-756.	1.1	56
36	Approaches to homogeneous reduction of carbon monoxide: reaction of niobium hydrides with coordinated carbon monoxide. Journal of the American Chemical Society, 1978, 100, 3254-3255.	6.6	54

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37	Câ^'H Bond Activation by Dicationic Platinum(II) Complexes. Organometallics, 2007, 26, 294-301.	1.1	53
38	Highly Selective Olefin Trimerization Catalysis by a Borane-Activated Titanium Trimethyl Complex. Organometallics, 2013, 32, 6899-6902.	1.1	53
39	Hydridic character of early transition metal hydride complexes. Journal of Organometallic Chemistry, 1978, 155, C25-C28.	0.8	51
40	Protonolysis of Platinum(II) and Palladium(II) Methyl Complexes: A Combined Experimental and Theoretical Investigation. Organometallics, 2010, 29, 4354-4359.	1.1	51
41	Amphoteric ligands. 3. Reactions of alkylmetal carbonyls with (aluminoamino)phosphine ligands. Structure of (.eta.-C5H5)(CO)Fe(CMeOAlEt2NCMe3PPh2). Organometallics, 1983, 2, 733-740.	1.1	49
42	Cï£¿H Bond Activation by [{(Diimine)Pd(Î¼â€Œ OH)}₂]²⁺ Dimers: Mechanismâ€Guided Catalytic Improvement. Angewandte Chemie - International Edition, 2008, 47, 9941-9943.	7.2	49
43	A simplified model for catalyzed isobutane autoxidation: implications for the mechanism of catalysis by halogenated porphyrin complexes. Catalysis Letters, 1994, 26, 95-99.	1.4	48
44	A New Catalyst for the Selective Oxidation of Butane and Propane This work was funded by BP.. Angewandte Chemie - International Edition, 2002, 41, 858.	7.2	48
45	Catalytic Alcoholysis of Tetramethylsilane via Pt-Mediated Câ^'H Bond Activation. Journal of the American Chemical Society, 2003, 125, 6366-6367.	6.6	47
46	Oxidative Aromatization of Olefins with Dioxygen Catalyzed by Palladium Trifluoroacetate. Journal of Organic Chemistry, 2008, 73, 8654-8657.	1.7	47
47	Electrocatalytic functionalization of alkanes using aqueous platinum salts. Journal of Molecular Catalysis, 1994, 87, L11-L15.	1.2	46
48	A substrate-versatile catalyst for the selective oxidation of light alkanes I. Reactivity. Journal of Catalysis, 2003, 218, 42-53.	3.1	45
49	Mechanistic studies on the Shilov system: A retrospective. Journal of Organometallic Chemistry, 2015, 793, 47-53.	0.8	44
50	Transformations of Group 7 Carbonyl Complexes: Possible Intermediates in a Homogeneous Syngas Conversion Scheme. Organometallics, 2009, 28, 6218-6227.	1.1	43
51	Nickel-Exchanged Zincosilicate Catalysts for the Oligomerization of Propylene. ACS Catalysis, 2014, 4, 4189-4195.	5.5	42
52	Amphoteric ligands. 1. Facile acyl formation and crystal structure of a novel complex containing an .eta.2(C,O)-acylphosphonium ligand. Journal of the American Chemical Society, 1982, 104, 6856-6858.	6.6	39
53	Intramolecular Câ^'H Activation of a Bisphenolate(benzene)-Ligated Titanium Dibenzyl Complex. Competing Pathways Involving Î±-Hydrogen Abstraction and ïƒ-Bond Metathesis. Organometallics, 2010, 29, 5026-5032.	1.1	37
54	Heterobimetallic Complexes of Rhenium and Zinc: Potential Catalysts for Homogeneous Syngas Conversion. Organometallics, 2011, 30, 2690-2700.	1.1	37

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55	Approaches to homogenous reduction of carbon monoxide. 2. Reactions of bis(.eta.5-cyclopentadienyl)trihydridoniobium with metal carbonyls: selective reduction of carbon monoxide to ethane. Journal of the American Chemical Society, 1980, 102, 3652-3653.	6.6	35
56	A Versatile Ligand Platform that Supports Lewis Acid Promoted Migratory Insertion. Angewandte Chemie - International Edition, 2012, 51, 8268-8271.	7.2	34
57	Tin Silsesquioxanes as Models for the â€œOpenâ€•Site in Tinâ€Containing Zeolite Beta. ChemCatChem, 2016, 8, 121-124.	1.8	34
58	Science as Culture: A View from the Petri Dish. Social Studies of Science, 1995, 25, 285-306.	1.5	32
59	A substrate-versatile catalyst for the selective oxidation of light alkanes II. Catalyst characterization. Journal of Catalysis, 2003, 218, 54-66.	3.1	32
60	Amphoteric ligands. 4. Reactions of HMn(CO)5 with (aluminoamino)phosphine ligands. Structure of (OC)3Mn[CHOAlMe2N(CMe3)PPh2][PPh2N(CMe3)Al(HCH2)Me]. Organometallics, 1983, 2, 1325-1332.	1.1	31
61	Competitive Oxidation and Protonation of Aqueous Monomethylplatinum(II) Complexes:â€‰ A Comparison of Oxidants. Organometallics, 2007, 26, 167-172.	1.1	31
62	Bond-stretch isomerism: a case study of a quiet controversy. Comptes Rendus Chimie, 2002, 5, 235-244.	0.2	29
63	Amphoteric ligands. 2. Formation and structure of a novel carbon-hydrogen-bond-containing product from hydridomanganese pentacarbonyl and an amphoteric ligand. Journal of the American Chemical Society, 1982, 104, 6858-6859.	6.6	28
64	Scope and Mechanism of Homogeneous Tantalum/Iridium Tandem Catalytic Alkane/Alkene Upgrading using Sacrificial Hydrogen Acceptors. Organometallics, 2014, 33, 3353-3365.	1.1	28
65	Intra- and Intermolecular Câ€“H Activation by Bis(phenolate)pyridineiridium(III) Complexes. Organometallics, 2011, 30, 6751-6765.	1.1	27
66	Upgrading Light Hydrocarbons: A Tandem Catalytic System for Alkane/Alkene Coupling. Topics in Catalysis, 2015, 58, 494-501.	1.3	27
67	A Thermodynamic Analysis of Rhenium(I)â€“Formyl Câ€“H Bond Formation via Base-Assisted Heterolytic H₂ Cleavage in the Secondary Coordination Sphere. Organometallics, 2013, 32, 5530-5545.	1.1	24
68	Selective Methylative Homologation: An Alternate Route to Alkane Upgrading. Journal of the American Chemical Society, 2008, 130, 11988-11995.	6.6	23
69	Enhanced Productivity of a Supported Olefin Trimerization Catalyst. ACS Catalysis, 2016, 6, 19-22.	5.5	23
70	Isotopic labelling in ethylene oligomerization: addressing the issue of 1-octene vs. 1-hexene selectivity. Dalton Transactions, 2019, 48, 40-44.	1.6	21
71	Câ^'H Activation by Platinum(II):Â What Do Gas-Phase Studies Tell Us about the Solution-Phase Mechanism?. Organometallics, 2006, 25, 805-808.	1.1	18
72	Approaches to homogeneously catalyzed CO hydrogenation: AÂpersonal retrospective. Journal of Organometallic Chemistry, 2017, 847, 4-12.	0.8	16

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73	Oxidation of Organometallic Platinum and Palladium Complexes Obtained from Câ^'H Activation. Organometallics, 2010, 29, 789-794.	1.1	15
74	Large Kinetic Isotope Effects for the Protonolysis of Metalâ€"Methyl Complexes Are Not Reliable Mechanistic Indicators. Organometallics, 2011, 30, 4374-4378.	1.1	15
75	Oxidative coupling of methane: the role of solid state chemistry. Journal of the Chemical Society Chemical Communications, 1987, , 543.	2.0	14
76	Controversy in Chemistry: What Counts as Evidence?â€"Two Studies in Molecular Structure. Angewandte Chemie - International Edition, 2004, 43, 2612-2619.	7.2	14
77	Reactions of Indene and Indoles with Platinum Methyl Cations:Â Indene Câ^'H Activation, Indole Ï€ versus Nitrogen Lone-Pair Coordination. Organometallics, 2007, 26, 281-287.	1.1	14
78	Selective Oxidation of sp3 Câ^'H Bonds in Water Catalyzed by a Glycinateâ^'Platinum(II) Complex. Organometallics, 2009, 28, 4899-4901.	1.1	14
79	Guanidine-Functionalized Rhenium Cyclopentadienyl Carbonyl Complexes: Synthesis and Cooperative Activation of Hâ€"H and Oâ€"H Bonds. Organometallics, 2014, 33, 4107-4117.	1.1	12
80	Heteropolyacid-based catalysts for selective alkane oxidation: mechanism of formation of maleic anhydride from propane. Catalysis Today, 2003, 81, 189-195.	2.2	10
81	Alkane Functionalization via Electrophilic Activation. Catalysis By Metal Complexes, 2012, , 17-71.	0.6	10
82	Cosupported Tandem Catalysts for Production of Linear Low-Density Polyethylene from an Ethylene-Only Feed. ACS Catalysis, 2016, 6, 6581-6584.	5.5	10
83	Comment on â€œSelective anaerobic oxidation of methane enables direct synthesis of methanolâ€. Science, 2018, 359, .	6.0	9
84	Kinetics and Mechanism of Indene Câ€"H Bond Activation by [(COD)Ir(Î¼₂-OH)]₂. Organometallics, 2013, 32, 3322-3326.	1.1	8
85	Mechanistic Studies on Selective Trimerization of Linear Î±-Olefins over a Supported Titanium Catalyst. ACS Catalysis, 2017, 7, 4922-4926.	5.5	8
86	Is there a difference between surface and bulk oxidation levels in partially reduced metal oxide catalysts? Evidence from methane oxidative coupling kinetics. Catalysis Letters, 1990, 4, 245-249.	1.4	7
87	Improved One-Pot Synthesis of Mixed Methylâ^'Aryl Platinum(II) Diimine Complexes. Organometallics, 2006, 25, 1055-1058.	1.1	6
88	Organometallic methane activation: Functionalization by aqueous platinum complexes. Studies in Surface Science and Catalysis, 1994, 81, 515-520.	1.5	5
89	Selective Hydroxylation of Hydrocarbons by Platinum Salts in Aqueous Media. Advances in Chemistry Series, 1992, , 221-232.	0.6	4
90	Câ€"H Bond Activation with Neutral Platinum Methyl Complexes. ACS Symposium Series, 2004, , 319-333.	0.5	4

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91	Câ€“H activation of benzene with Cpâ^—Ru(CO)2CH3. Journal of Organometallic Chemistry, 2008, 693, 2700-2702.	0.8	4
92	Elusive active site in focus. Nature, 2016, 536, 280-281.	13.7	4
93	Controversy in Chemistry: How Do You Prove a Negative??The Cases of Phlogiston and Cold Fusion. Angewandte Chemie - International Edition, 2005, 44, 1916-1922.	7.2	3
94	Kontroversen in der Chemie: Wie beweist man ein Negativum? - Die FÃlle Phlogiston und Kalte Fusion. Angewandte Chemie, 2005, 117, 1950-1956.	1.6	2
95	SCIENCE AND CULTURE: Two-Dimensional Science. Science, 2005, 310, 1770-1771.	6.0	2
96	Alfred Werner's Role in the mid-20th Century Flourishing of American Inorganic Chemistry. Chimia, 2014, 68, 292.	0.3	1
97	John E. Bercaw: A joint appreciation. Polyhedron, 2020, 177, 114307.	1.0	1
98	Selective Alkane Oxidation: Hot and Cold Approaches to a Hot Problem. ChemInform, 2005, 36, no.	0.1	0
99	Organized Skepticism, NaÃ¯ve Methodism, and Other -ISMS. Foundations of Chemistry, 2006, 8, 97-110.	0.4	0