

Massimiliano Delferro

List of Publications by Year in descending order

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107
papers

5,833
citations

66343

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79698

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125
all docs

125
docs citations

125
times ranked

5863
citing authors

#	ARTICLE	IF	CITATIONS
1	Grafted nickel-promoter catalysts for dry reforming of methane identified through high-throughput experimentation. <i>Applied Catalysis A: General</i> , 2022, 629, 118379.	4.3	15
2	MOF-enabled confinement and related effects for chemical catalyst presentation and utilization. <i>Chemical Society Reviews</i> , 2022, 51, 1045-1097.	38.1	148
3	Ethylene polymerization with a crystallographically well-defined metal-organic framework supported catalyst. <i>Catalysis Science and Technology</i> , 2022, 12, 1619-1627.	4.1	6
4	Size-Controlled Nanoparticles Embedded in a Mesoporous Architecture Leading to Efficient and Selective Hydrogenolysis of Polyolefins. <i>Journal of the American Chemical Society</i> , 2022, 144, 5323-5334.	13.7	60
5	Tale of Three Molecular Nitrides: Mononuclear Vanadium (V) and (IV) Nitrides As Well As a Mixed-Valence Trivanadium Nitride Having a V_3N_4 Double-Diamond Core. <i>Journal of the American Chemical Society</i> , 2022, 144, 10201-10219.	13.7	3
6	Integrated Experimental and Computational K-Edge X-ray Absorption Near-Edge Structure Analysis of Vanadium Catalysts. <i>Journal of Physical Chemistry C</i> , 2022, 126, 11949-11962.	3.1	7
7	Transient Catenation in a Zirconium-Based Metal-Organic Framework and Its Effect on Mechanical Stability and Sorption Properties. <i>Journal of the American Chemical Society</i> , 2021, 143, 1503-1512.	13.7	28
8	Catalytic CO Oxidation on $MgAl_2O_4$ -Supported Iridium Single Atoms: Ligand Configuration and Site Geometry. <i>Journal of Physical Chemistry C</i> , 2021, 125, 11380-11390.	3.1	13
9	Photocatalytic Transfer Hydrogenation in Water: Insight into Mechanism and Catalyst Speciation. <i>Organometallics</i> , 2021, 40, 1482-1491.	2.3	6
10	Catalytic carbon-carbon bond cleavage and carbon-element bond formation give new life for polyolefins as biodegradable surfactants. <i>CheM</i> , 2021, 7, 1347-1362.	11.7	50
11	Synthetic Lubricants Derived from Plastic Waste and their Tribological Performance. <i>ChemSusChem</i> , 2021, 14, 4181-4189.	6.8	25
12	Computational Investigation of the Role of Active Site Heterogeneity for a Supported Organovanadium(III) Hydrogenation Catalyst. <i>ACS Catalysis</i> , 2021, 11, 7257-7269.	11.2	16
13	Revealing the Configuration and Conformation of Surface Organometallic Catalysts with DNP-Enhanced NMR. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13433-13442.	3.1	11
14	Phosphorus-Atom Transfer from Phosphaethynolate to an Alkylidyne. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24411-24417.	13.8	4
15	Scalable Synthesis of $Pt/SrTiO_3$ Hydrogenolysis Catalysts in Pursuit of Manufacturing-Relevant Waste Plastic Solutions. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 58691-58700.	8.0	19
16	Promoter Effects on Catalyst Selectivity and Stability for Propylene Partial Oxidation to Acrolein. <i>Catalysis Letters</i> , 2020, 150, 826-836.	2.6	1
17	Role of Boron in Enhancing the Catalytic Performance of Supported Platinum Catalysts for the Nonoxidative Dehydrogenation of <i>n</i> -Butane. <i>ACS Catalysis</i> , 2020, 10, 1500-1510.	11.2	21
18	Catalytic upcycling of high-density polyethylene via a processive mechanism. <i>Nature Catalysis</i> , 2020, 3, 893-901.	34.4	262

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19	Electrochemical Investigation of Low-Valent Multiply M ⁿ -M Bonded Group VI Dimers: A Standard Chemical Reduction Leads to an Unexpected Product. <i>Organometallics</i> , 2020, 39, 4430-4436.	2.3	6
20	Isomerization and Selective Hydrogenation of Propyne: Screening of Metal-Organic Frameworks Modified by Atomic Layer Deposition. <i>Journal of the American Chemical Society</i> , 2020, 142, 20380-20389.	13.7	15
21	Nontraditional Catalyst Supports in Surface Organometallic Chemistry. <i>ACS Catalysis</i> , 2020, 10, 11822-11840.	11.2	94
22	Metal-Organic Framework Nodes as a Supporting Platform for Tailoring the Activity of Metal Catalysts. <i>ACS Catalysis</i> , 2020, 10, 11556-11566.	11.2	52
23	Influence of spin state and electron configuration on the active site and mechanism for catalytic hydrogenation on metal cation catalysts supported on NU-1000: insights from experiments and microkinetic modeling. <i>Catalysis Science and Technology</i> , 2020, 10, 3594-3602.	4.1	14
24	Atomic layer deposition of HfO ₂ films using carbon-free tetrakis(tetrahydroborato)hafnium and water. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	2.1	7
25	Mechanistic Insights into C-H Borylation of Arenes with Organoiridium Catalysts Embedded in a Microporous Metal-Organic Framework. <i>Organometallics</i> , 2020, 39, 1123-1133.	2.3	20
26	Iridium-Doped Nanosized Zn-Al Layered Double Hydroxides as Efficient Water Oxidation Catalysts. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 32736-32745.	8.0	24
27	Activation of Low-Valent, Multiply M-M Bonded Group VI Dimers toward Catalytic Olefin Metathesis via Surface Organometallic Chemistry. <i>Organometallics</i> , 2020, 39, 1035-1045.	2.3	8
28	Organometallic Chemistry at Various Length Scales: More Than Just Metal-Carbon Bonds Bring Chemists Together. <i>Organometallics</i> , 2020, 39, 881-882.	2.3	0
29	Mechanistic Aspects of a Surface Organovanadium(III) Catalyst for Hydrocarbon Hydrogenation and Dehydrogenation. <i>ACS Catalysis</i> , 2019, 9, 11055-11066.	11.2	17
30	Upcycling Single-Use Polyethylene into High-Quality Liquid Products. <i>ACS Central Science</i> , 2019, 5, 1795-1803.	11.3	283
31	Deoxydehydration of Biomass-Derived Polyols with a Reusable Unsupported Rhenium Nanoparticles Catalyst. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 11438-11447.	6.7	26
32	Enhanced Activity of Heterogeneous Pd(II) Catalysts on Acid-Functionalized Metal-Organic Frameworks. <i>ACS Catalysis</i> , 2019, 9, 5383-5390.	11.2	77
33	Electrophilic Organoiridium(III) Pincer Complexes on Sulfated Zirconia for Hydrocarbon Activation and Functionalization. <i>Journal of the American Chemical Society</i> , 2019, 141, 6325-6337.	13.7	38
34	Exploring the Alcohol Stability of Bis(phosphine) Cobalt Dialkyl Precatalysts in Asymmetric Alkene Hydrogenation. <i>Organometallics</i> , 2019, 38, 149-156.	2.3	26
35	Catalytic Applications of Vanadium: A Mechanistic Perspective. <i>Chemical Reviews</i> , 2019, 119, 2128-2191.	47.7	323
36	Chemoselective Hydrogenation with Supported Organoplatinum(IV) Catalyst on Zn(II)-Modified Silica. <i>Journal of the American Chemical Society</i> , 2018, 140, 3940-3951.	13.7	56

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37	A molecular cross-linking approach for hybrid metal oxides. <i>Nature Materials</i> , 2018, 17, 341-348.	27.5	90
38	Cationic Pyridylamido Adsorbate on Brønsted Acidic Sulfated Zirconia: A Molecular Supported Organohafnium Catalyst for Olefin Homo- and Co-Polymerization. <i>ACS Catalysis</i> , 2018, 8, 4893-4901.	11.2	21
39	Evidence for Redox Mechanisms in Organometallic Chemisorption and Reactivity on Sulfated Metal Oxides. <i>Journal of the American Chemical Society</i> , 2018, 140, 6308-6316.	13.7	34
40	High-Performance Heterocyclic Friction Modifiers for Boundary Lubrication. <i>Tribology Letters</i> , 2018, 66, 1.	2.6	14
41	Effect of Redox "Non-Innocent" Linker on the Catalytic Activity of Copper-Catecholate-Decorated Metal-Organic Frameworks. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 635-641.	8.0	52
42	Synthesis of Supported Pd ⁰ Nanoparticles from a Single-Site Pd ²⁺ Surface Complex by Alkene Reduction. <i>Chemistry of Materials</i> , 2018, 30, 1032-1044.	6.7	17
43	Synergistic effects in Fe nanoparticles doped with ppm levels of (Pd + Ni). A new catalyst for sustainable nitro group reductions. <i>Green Chemistry</i> , 2018, 20, 130-135.	9.0	63
44	Nuclearity effects in supported, single-site Fe(ⁱⁱ) hydrogenation pre-catalysts. <i>Dalton Transactions</i> , 2018, 47, 10842-10846.	3.3	9
45	Atomically Precise Strategy to a PtZn Alloy Nanocluster Catalyst for the Deep Dehydrogenation of <i>n</i> -Butane to 1,3-Butadiene. <i>ACS Catalysis</i> , 2018, 8, 10058-10063.	11.2	67
46	Well-Defined Rhodium-Gallium Catalytic Sites in a Metal-Organic Framework: Promoter-Controlled Selectivity in Alkyne Semihydrogenation to <i>E</i> -Alkenes. <i>Journal of the American Chemical Society</i> , 2018, 140, 15309-15318.	13.7	88
47	Zirconium Modification Promotes Catalytic Activity of a Single-Site Cobalt Heterogeneous Catalyst for Propane Dehydrogenation. <i>ACS Omega</i> , 2018, 3, 11117-11127.	3.5	43
48	How Close Is Too Close? Polymerization Behavior and Monomer-Dependent Reorganization of a Bimetallic Salphen Organotitanium Catalyst. <i>Organometallics</i> , 2018, 37, 2429-2436.	2.3	16
49	Development of activity-descriptor relationships for supported metal ion hydrogenation catalysts on silica. <i>Polyhedron</i> , 2018, 152, 73-83.	2.2	11
50	Surface Organometallic Chemistry of Supported Iridium(III) as a Probe for Organotransition Metal-Support Interactions in C-H Activation. <i>ACS Catalysis</i> , 2018, 8, 5363-5373.	11.2	29
51	Catalytic chemoselective functionalization of methane in a metal-organic framework. <i>Nature Catalysis</i> , 2018, 1, 356-362.	34.4	153
52	Structural motifs in heteroleptic copper and cadmium selenites. <i>Inorganica Chimica Acta</i> , 2018, 470, 206-212.	2.4	3
53	Rapid, Mild, and Selective Ketone and Aldehyde Hydroboration/Reduction Mediated by a Simple Lanthanide Catalyst. <i>ACS Catalysis</i> , 2017, 7, 1244-1247.	11.2	115
54	Alkyl-Cyclens as Effective Sulfur- and Phosphorus-Free Friction Modifiers for Boundary Lubrication. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 9118-9125.	8.0	54

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55	Stabilizing Single-Atom and Small-Domain Platinum via Combining Organometallic Chemisorption and Atomic Layer Deposition. <i>Organometallics</i> , 2017, 36, 818-828.	2.3	34
56	Investigation of Shear-Thinning Behavior on Film Thickness and Friction Coefficient of Polyalphaolefin Base Fluids With Varying Olefin Copolymer Content. <i>Journal of Tribology</i> , 2017, 139, .	1.9	5
57	Isolated, well-defined organovanadium(^{III}) on silica: single-site catalyst for hydrogenation of alkenes and alkynes. <i>Chemical Communications</i> , 2017, 53, 7325-7328.	4.1	26
58	Efficient catalytic greenhouse gas-free hydrogen and aldehyde formation from aqueous alcohol solutions. <i>Energy and Environmental Science</i> , 2017, 10, 1558-1562.	30.8	23
59	Second-generation hexavalent molybdenum oxo-amidinate precursors for atomic layer deposition. <i>Dalton Transactions</i> , 2017, 46, 1172-1178.	3.3	17
60	Supported Aluminum Catalysts for Olefin Hydrogenation. <i>ACS Catalysis</i> , 2017, 7, 689-694.	11.2	25
61	Supported Single-Site Ti(IV) on a Metal-Organic Framework for the Hydroboration of Carbonyl Compounds. <i>Organometallics</i> , 2017, 36, 3921-3930.	2.3	50
62	Distinctive Stereochemically Linked Cooperative Effects in Bimetallic Titanium Olefin Polymerization Catalysts. <i>Organometallics</i> , 2017, 36, 4403-4421.	2.3	30
63	Metal and Counteranion Nuclearity Effects in Organoscandium-Catalyzed Isoprene Polymerization and Copolymerization. <i>ACS Catalysis</i> , 2017, 7, 5214-5219.	11.2	23
64	Hydrolytic cleavage of both CS ₂ carbon-sulfur bonds by multinuclear Pd(II) complexes at room temperature. <i>Nature Chemistry</i> , 2017, 9, 188-193.	13.6	57
65	Single-Face/All-cis Arene Hydrogenation by a Supported Single-Site d ⁰ Organozirconium Catalyst. <i>Angewandte Chemie</i> , 2016, 128, 5349-5353.	2.0	17
66	Single-Face/All-cis Arene Hydrogenation by a Supported Single-Site d ⁰ Organozirconium Catalyst. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 5263-5267.	13.8	54
67	A Neutrally Charged Trimethylmanganese(III) Complex: Synthesis, Characterization, and Disproportionation Chemistry. <i>Organometallics</i> , 2016, 35, 2683-2688.	2.3	8
68	Benzo[1,2,3]thiadiazole (isoBT): Synthesis, Structural Analysis, and Implementation in Semiconducting Polymers. <i>Chemistry of Materials</i> , 2016, 28, 6390-6400.	6.7	40
69	Reactivity of a Carbon-Supported Single-Site Molybdenum Dioxo Catalyst for Biodiesel Synthesis. <i>ACS Catalysis</i> , 2016, 6, 6762-6769.	11.2	53
70	Silver(I) Bis(pyrazolyl)methane Complexes and Their Implementation as Precursors for Metallic Silver Deposition. <i>European Journal of Inorganic Chemistry</i> , 2016, 2016, 2626-2633.	2.0	12
71	Direct Synthesis of Low-Coordinate Pd Catalysts Supported on SiO ₂ via Surface Organometallic Chemistry. <i>ACS Catalysis</i> , 2016, 6, 8380-8388.	11.2	21
72	Oil-Soluble Silver-Organic Molecule for in Situ Deposition of Lubricious Metallic Silver at High Temperatures. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 13637-13645.	8.0	18

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73	Volatile Hexavalent Oxo-amidinate Complexes: Molybdenum and Tungsten Precursors for Atomic Layer Deposition. <i>Chemistry of Materials</i> , 2016, 28, 1907-1919.	6.7	45
74	Lubrication in Desert Environments: Oil-Soluble Organo-Silver Molecules Designed for In-Situ Deposition of Metallic Silver at High Temperatures. , 2016, , .		0
75	Single-Site Organozirconium Catalyst Embedded in a Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2015, 137, 15680-15683.	13.7	103
76	Pyridylamido Bi-Hafnium Olefin Polymerization Catalysis: Conformationally Supported Hf-Hf Enchainment Cooperativity. <i>ACS Catalysis</i> , 2015, 5, 5272-5282.	11.2	43
77	Investigations into Apopinene as a Biorenewable Monomer for Ring-Opening Metathesis Polymerization. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 1278-1281.	6.7	26
78	Benzene Selectivity in Competitive Arene Hydrogenation: Effects of Single-Site Catalyst-Acidic Oxide Surface Binding Geometry. <i>Journal of the American Chemical Society</i> , 2015, 137, 6770-6780.	13.7	76
79	Ligand-Unsymmetrical Phenoxyiminato Dinickel Catalyst for High Molecular Weight Long-Chain Branched Polyethylenes. <i>ACS Macro Letters</i> , 2015, 4, 1297-1301.	4.8	24
80	Gas-Phase Dimerization of Ethylene under Mild Conditions Catalyzed by MOF Materials Containing (bpy)Ni ^{II} Complexes. <i>ACS Catalysis</i> , 2015, 5, 6713-6718.	11.2	127
81	Supported Single-Site Organometallic Catalysts for the Synthesis of High-Performance Polyolefins. <i>Catalysis Letters</i> , 2015, 145, 3-14.	2.6	159
82	Atom-efficient regioselective 1,2-dearomatization of functionalized pyridines by an earth-abundant organolanthanide catalyst. <i>Nature Chemistry</i> , 2014, 6, 1100-1107.	13.6	184
83	Ni(II) Phenoxyiminato Olefin Polymerization Catalysis: Striking Coordinative Modulation of Hyperbranched Polymer Microstructure and Stability by a Proximate Sulfonyl Group. <i>ACS Catalysis</i> , 2014, 4, 999-1003.	11.2	91
84	Synthesis and Characterization of Silver(I) Pyrazolylmethylpyridine Complexes and Their Implementation as Metallic Silver Thin Film Precursors. <i>Inorganic Chemistry</i> , 2014, 53, 4629-4638.	4.0	16
85	Multinuclear Group 4 Catalysis: Olefin Polymerization Pathways Modified by Strong Metal-Metal Cooperative Effects. <i>Accounts of Chemical Research</i> , 2014, 47, 2545-2557.	15.6	210
86	Very Large Cooperative Effects in Heterobimetallic Titanium-Chromium Catalysts for Ethylene Polymerization/Copolymerization. <i>Journal of the American Chemical Society</i> , 2014, 136, 10460-10469.	13.7	105
87	Silver-Organic Oil Additive for High-Temperature Applications. <i>Tribology Letters</i> , 2013, 52, 261-269.	2.6	17
88	Surface structural-chemical characterization of a single-site d ⁰ heterogeneous arene hydrogenation catalyst having 100% active sites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 413-418.	7.1	87
89	Carbostannolysis Mediated by Bis(pentamethylcyclopentadienyl)lanthanide Catalysts. Utility in Accessing Organotin Synthons. <i>Organometallics</i> , 2013, 32, 1317-1327.	2.3	22
90	Synthesis, Characterization, and Heterobimetallic Cooperation in a Titanium-Chromium Catalyst for Highly Branched Polyethylenes. <i>Journal of the American Chemical Society</i> , 2013, 135, 8830-8833.	13.7	91

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91	Temperature-Dependent Fluorescence of Cu ₅ Metal Clusters: A Molecular Thermometer. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 9662-9665.	13.8	87
92	Suppression of \hat{I}^2 -Hydride Chain Transfer in Nickel(II)-Catalyzed Ethylene Polymerization via Weak Fluorocarbon Ligand-Product Interactions. <i>Organometallics</i> , 2012, 31, 3773-3789.	2.3	124
93	Ligand Steric and Fluoroalkyl Substituent Effects on Enchainment Cooperativity and Stability in Bimetallic Nickel(II) Polymerization Catalysts. <i>Chemistry - A European Journal</i> , 2012, 18, 10715-10732.	3.3	110
94	Multinuclear Olefin Polymerization Catalysts. <i>Chemical Reviews</i> , 2011, 111, 2450-2485.	47.7	524
95	Synthesis, Structural Characterization, and Magnetic Properties of the Heteroleptic Dinuclear Nickel Selenite Complex $[Ni(TMEDA)SeO_3]_2$. <i>European Journal of Inorganic Chemistry</i> , 2011, 2011, 3327-3333.	2.0	4
96	Coordination properties of the multifunctional S,N,S zwitterionic ligand EtNHC(S)Ph ₂ PNPPh ₂ C(S)NEt. <i>Coordination Chemistry Reviews</i> , 2010, 254, 753-764.	18.8	6
97	Self-assembly of polyoxoselenitopalladate nanostars $[Pd_{15}(\hat{I}^{1/3}SeO_3)_{10}(\hat{I}^{1/3}O)_{10}Na]_9$ and their supramolecular pairing in the solid state. <i>Dalton Transactions</i> , 2010, 39, 4479.	3.3	46
98	Ethylene Polymerization Characteristics of an Electron-Deficient Nickel(II) Phenoxyiminato Catalyst Modulated by Non-Innocent Intramolecular Hydrogen Bonding. <i>Organometallics</i> , 2010, 29, 5040-5049.	2.3	40
99	Tetraaquabis($\hat{I}^{1/2}$ -2,7-bis[(2,6-diisopropylphenyl)iminomethyl]naphthalene-1,8-diolato)di($\hat{I}^{1/3}$ -hydroxido-di($\hat{I}^{1/2}$ -hydroxido-bis(trimethylammonium)ethyl)phosphonate)nickel(II) complex. <i>Section E: Structure Reports Online</i> , 2010, 66, m257-m257.	0.2	3
100	Synthesis, structural characterisation and solution chemistry of ruthenium(III) triazole-thiadiazine complexes. <i>Dalton Transactions</i> , 2009, , 3766.	3.3	11
101	Oxidative Addition of Iodomethane to Charge-Tuned Rhodium(I) Complexes. <i>Organometallics</i> , 2009, 28, 2062-2071.	2.3	7
102	Bimetallic Effects for Enhanced Polar Comonomer Enchainment Selectivity in Catalytic Ethylene Polymerization. <i>Journal of the American Chemical Society</i> , 2009, 131, 5902-5919.	13.7	109
103	Reactivity of the zwitterionic ligand EtNHC(S)Ph ₂ PNPPh ₂ C(S)NEt towards $[Ru_3(CO)_{12}]$. Sulfur transfer and ligand fragmentation leading to the methideylamide $[-N(Et)-CH(R)-]^{1/3}$ -bridging moiety. <i>Dalton Transactions</i> , 2009, , 544-549.	3.3	5
104	A Study on the Coordinative Versatility of the Zwitterionic S,N,S Ligand EtNHC(S)Ph ₂ PNPPh ₂ C(S)NEt in Its Anionic, Neutral and Cationic Forms - Determination of Absolute pKa Values in CH ₂ Cl ₂ of RhI Complexes. <i>European Journal of Inorganic Chemistry</i> , 2008, 2008, 2302-2312.	2.0	11
105	Neutral Bimetallic Nickel(II) Phenoxyiminato Catalysts for Highly Branched Polyethylenes and Ethylene-Norbornene Copolymerizations. <i>Organometallics</i> , 2008, 27, 2166-2168.	2.3	109
106	P-Atom Transfer from Phosphaethynolate to an Alkylidyne.. <i>Angewandte Chemie</i> , 0, , .	2.0	1
107	Lithium-Ion Battery Materials as Tunable, \hat{I}^{∞} Redox Non-Innocent-Catalyst Supports. <i>ACS Catalysis</i> , 0, , 7233-7242.	11.2	6