Massimiliano Delferro

List of Publications by Year
in descending order

107 papers	5,833 citations	66343 42 h-index	79698 73 g-index
125 all docs	125 docs citations	125 times ranked	5863 citing authors

#	Article	IF	Citations
1	Multinuclear Olefin Polymerization Catalysts. Chemical Reviews, 2011, 111, 2450-2485.	47.7	524
2	Catalytic Applications of Vanadium: A Mechanistic Perspective. Chemical Reviews, 2019, 119, 2128-2191.	47.7	323
3	Upcycling Single-Use Polyethylene into High-Quality Liquid Products. ACS Central Science, 2019, 5, 1795-1803.	11.3	283
4	Catalytic upcycling of high-density polyethylene via a processive mechanism. Nature Catalysis, 2020, 3, 893-901.	34.4	262
5	Multinuclear Group 4 Catalysis: Olefin Polymerization Pathways Modified by Strong Metalâ€“Metal Cooperative Effects. Accounts of Chemical Research, 2014, 47, 2545-2557.	15.6	210
6	Atom-efficient regioselective 1,2-dearomatization of functionalized pyridines by an earth-abundant organolanthanide catalyst. Nature Chemistry, 2014, 6, 1100-1107.	13.6	184
7	Supported Single-Site Organometallic Catalysts for the Synthesis of High-Performance Polyolefins. Catalysis Letters, 2015, 145, 3-14.	2.6	159
8	Catalytic chemoselective functionalization of methane in a metalâ˜’organic framework. Nature Catalysis, 2018, 1, 356-362.	34.4	153
9	MOF-enabled confinement and related effects for chemical catalyst presentation and utilization. Chemical Society Reviews, 2022, 51, 1045-1097.	38.1	148
10	Gas-Phase Dimerization of Ethylene under Mild Conditions Catalyzed by MOF Materials Containing (bpy)Ni^{II} Complexes. ACS Catalysis, 2015, 5, 6713-6718.	11.2	127
11	Suppression of Î²-Hydride Chain Transfer in Nickel(II)-Catalyzed Ethylene Polymerization via Weak Fluorocarbon Ligandâ€“Product Interactions. Organometallics, 2012, 31, 3773-3789.	2.3	124
12	Rapid, Mild, and Selective Ketone and Aldehyde Hydroboration/Reduction Mediated by a Simple Lanthanide Catalyst. ACS Catalysis, 2017, 7, 1244-1247.	11.2	115
13	Ligand Steric and Fluoroalkyl Substituent Effects on Enchainment Cooperativity and Stability in Bimetallic Nickel(II) Polymerization Catalysts. Chemistry - A European Journal, 2012, 18, 10715-10732.	3.3	110
14	Neutral Bimetallic Nickel(II) Phenoxyiminato Catalysts for Highly Branched Polyethylenes and Ethyleneâ˜’Norbornene Copolymerizations. Organometallics, 2008, 27, 2166-2168.	2.3	109
15	Bimetallic Effects for Enhanced Polar Comonomer Enchainment Selectivity in Catalytic Ethylene Polymerization. Journal of the American Chemical Society, 2009, 131, 5902-5919.	13.7	109
16	Very Large Cooperative Effects in Heterobimetallic Titanium-Chromium Catalysts for Ethylene Polymerization/Copolymerization. Journal of the American Chemical Society, 2014, 136, 10460-10469.	13.7	105
17	Single-Site Organozirconium Catalyst Embedded in a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2015, 137, 15680-15683.	13.7	103
18	Nontraditional Catalyst Supports in Surface Organometallic Chemistry. ACS Catalysis, 2020, 10, 11822-11840.	11.2	94

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19	Synthesis, Characterization, and Heterobimetallic Cooperation in a Titaniumâ€“Chromium Catalyst for Highly Branched Polyethylenes. Journal of the American Chemical Society, 2013, 135, 8830-8833.	13.7	91
20	Ni(II) Phenoxyiminato Olefin Polymerization Catalysis: Striking Coordinative Modulation of Hyperbranched Polymer Microstructure and Stability by a Proximate Sulfonyl Group. ACS Catalysis, 2014, 4, 999-1003.	11.2	91
21	A molecular cross-linking approach for hybrid metal oxides. Nature Materials, 2018, 17, 341-348.	27.5	90
22	Well-Defined Rhodiumâ€“Gallium Catalytic Sites in a Metalâ€“Organic Framework: Promoter-Controlled Selectivity in Alkyne Semihydrogenation to E-Alkenes. Journal of the American Chemical Society, 2018, 140, 15309-15318.	13.7	88
23	Temperatureâ€Dependent Fluorescence of Cu₅ Metal Clusters: A Molecular Thermometer. Angewandte Chemie - International Edition, 2012, 51, 9662-9665.	13.8	87
24	Surface structural-chemical characterization of a single-site d ⁰ heterogeneous arene hydrogenation catalyst having 100% active sites. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 413-418.	7.1	87
25	Enhanced Activity of Heterogeneous Pd(II) Catalysts on Acid-Functionalized Metalâ€“Organic Frameworks. ACS Catalysis, 2019, 9, 5383-5390.	11.2	77
26	Benzene Selectivity in Competitive Arene Hydrogenation: Effects of Single-Site CatalystÂ·Â·Â·Acidic Oxide Surface Binding Geometry. Journal of the American Chemical Society, 2015, 137, 6770-6780.	13.7	76
27	Atomically Precise Strategy to a PtZn Alloy Nanocluster Catalyst for the Deep Dehydrogenation of n-Butane to 1,3-Butadiene. ACS Catalysis, 2018, 8, 10058-10063.	11.2	67
28	Synergistic effects in Fe nanoparticles doped with ppm levels of (Pd + Ni). A new catalyst for sustainable nitro group reductions. Green Chemistry, 2018, 20, 130-135.	9.0	63
29	Size-Controlled Nanoparticles Embedded in a Mesoporous Architecture Leading to Efficient and Selective Hydrogenolysis of Polyolefins. Journal of the American Chemical Society, 2022, 144, 5323-5334.	13.7	60
30	Hydrolytic cleavage of both CS2 carbonâ€“sulfur bonds by multinuclear Pd(II) complexes at room temperature. Nature Chemistry, 2017, 9, 188-193.	13.6	57
31	Chemoselective Hydrogenation with Supported Organoplatinum(IV) Catalyst on Zn(II)-Modified Silica. Journal of the American Chemical Society, 2018, 140, 3940-3951.	13.7	56
32	Singleâ€Face/Allâ€cis Arene Hydrogenation by a Supported Singleâ€Site d⁰ Organozirconium Catalyst. Angewandte Chemie - International Edition, 2016, 55, 5263-5267.	13.8	54
33	Alkyl-Cyclens as Effective Sulfur- and Phosphorus-Free Friction Modifiers for Boundary Lubrication. ACS Applied Materials & Interfaces, 2017, 9, 9118-9125.	8.0	54
34	Reactivity of a Carbon-Supported Single-Site Molybdenum Dioxo Catalyst for Biodiesel Synthesis. ACS Catalysis, 2016, 6, 6762-6769.	11.2	53
35	Effect of Redox â€œNon-Innocentâ€•Linker on the Catalytic Activity of Copper-Catecholate-Decorated Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2018, 10, 635-641.	8.0	52
36	Metalâ€“Organic Framework Nodes as a Supporting Platform for Tailoring the Activity of Metal Catalysts. ACS Catalysis, 2020, 10, 11556-11566.	11.2	52

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37	Supported Single-Site Ti(IV) on a Metalâ€“Organic Framework for the Hydroboration of Carbonyl Compounds. Organometallics, 2017, 36, 3921-3930.	2.3	50
38	Catalytic carbon-carbon bond cleavage and carbon-element bond formation give new life for polyolefins as biodegradable surfactants. CheM, 2021, 7, 1347-1362.	11.7	50
39	Self-assembly of polyoxoselenitopalladate nanostars [Pd15(Î¼3-SeO3)10(Î¼3-O)10Na]9â^' and their supramolecular pairing in the solid state. Dalton Transactions, 2010, 39, 4479.	3.3	46
40	Volatile Hexavalent Oxo-amidinate Complexes: Molybdenum and Tungsten Precursors for Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 1907-1919.	6.7	45
41	Pyridylamido Bi-Hafnium Olefin Polymerization Catalysis: Conformationally Supported HfÂ·Â·Â·Hf Enchainment Cooperativity. ACS Catalysis, 2015, 5, 5272-5282.	11.2	43
42	Zirconium Modification Promotes Catalytic Activity of a Single-Site Cobalt Heterogeneous Catalyst for Propane Dehydrogenation. ACS Omega, 2018, 3, 11117-11127.	3.5	43
43	Ethylene Polymerization Characteristics of an Electron-Deficient Nickel(II) Phenoxyiminato Catalyst Modulated by Non-Innocent Intramolecular Hydrogen Bonding. Organometallics, 2010, 29, 5040-5049.	2.3	40
44	Benzo[d][1,2,3]thiadiazole (isoBT): Synthesis, Structural Analysis, and Implementation in Semiconducting Polymers. Chemistry of Materials, 2016, 28, 6390-6400.	6.7	40
45	Electrophilic Organoiridium(III) Pincer Complexes on Sulfated Zirconia for Hydrocarbon Activation and Functionalization. Journal of the American Chemical Society, 2019, 141, 6325-6337.	13.7	38
46	Stabilizing Single-Atom and Small-Domain Platinum via Combining Organometallic Chemisorption and Atomic Layer Deposition. Organometallics, 2017, 36, 818-828.	2.3	34
47	Evidence for Redox Mechanisms in Organometallic Chemisorption and Reactivity on Sulfated Metal Oxides. Journal of the American Chemical Society, 2018, 140, 6308-6316.	13.7	34
48	Distinctive Stereochemically Linked Cooperative Effects in Bimetallic Titanium Olefin Polymerization Catalysts. Organometallics, 2017, 36, 4403-4421.	2.3	30
49	Surface Organometallic Chemistry of Supported Iridium(III) as a Probe for Organotransition Metalâ€“Support Interactions in Câ€“H Activation. ACS Catalysis, 2018, 8, 5363-5373.	11.2	29
50	Transient Catenation in a Zirconium-Based Metalâ€“Organic Framework and Its Effect on Mechanical Stability and Sorption Properties. Journal of the American Chemical Society, 2021, 143, 1503-1512.	13.7	28
51	Investigations into Apopinene as a Biorenewable Monomer for Ring-Opening Metathesis Polymerization. ACS Sustainable Chemistry and Engineering, 2015, 3, 1278-1281.	6.7	26
52	Isolated, well-defined organovanadium(<scp>iii</scp>) on silica: single-site catalyst for hydrogenation of alkenes and alkynes. Chemical Communications, 2017, 53, 7325-7328.	4.1	26
53	Deoxydehydration of Biomass-Derived Polyols with a Reusable Unsupported Rhenium Nanoparticles Catalyst. ACS Sustainable Chemistry and Engineering, 2019, 7, 11438-11447.	6.7	26
54	Exploring the Alcohol Stability of Bis(phosphine) Cobalt Dialkyl Precatalysts in Asymmetric Alkene Hydrogenation. Organometallics, 2019, 38, 149-156.	2.3	26

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55	Supported Aluminum Catalysts for Olefin Hydrogenation. ACS Catalysis, 2017, 7, 689-694.	11.2	25
56	Synthetic Lubricants Derived from Plastic Waste and their Tribological Performance. ChemSusChem, 2021, 14, 4181-4189.	6.8	25
57	Ligand-Unsymmetrical Phenoxyiminato Dinickel Catalyst for High Molecular Weight Long-Chain Branched Polyethylenes. ACS Macro Letters, 2015, 4, 1297-1301.	4.8	24
58	Iridium-Doped Nanosized Znâ€“Al Layered Double Hydroxides as Efficient Water Oxidation Catalysts. ACS Applied Materials & Interfaces, 2020, 12, 32736-32745.	8.0	24
59	Efficient catalytic greenhouse gas-free hydrogen and aldehyde formation from aqueous alcohol solutions. Energy and Environmental Science, 2017, 10, 1558-1562.	30.8	23
60	Metal and Counteranion Nuclearity Effects in Organoscandium-Catalyzed Isoprene Polymerization and Copolymerization. ACS Catalysis, 2017, 7, 5214-5219.	11.2	23
61	Carbostannolysis Mediated by Bis(pentamethylcyclopentadienyl)lanthanide Catalysts. Utility in Accessing Organotin Synthons. Organometallics, 2013, 32, 1317-1327.	2.3	22
62	Direct Synthesis of Low-Coordinate Pd Catalysts Supported on SiO₂ via Surface Organometallic Chemistry. ACS Catalysis, 2016, 6, 8380-8388.	11.2	21
63	Cationic Pyridylamido Adsorbate on BrÃ¸nsted Acidic Sulfated Zirconia: A Molecular Supported Organohafnium Catalyst for Olefin Homo- and Co-Polymerization. ACS Catalysis, 2018, 8, 4893-4901.	11.2	21
64	Role of Boron in Enhancing the Catalytic Performance of Supported Platinum Catalysts for the Nonoxidative Dehydrogenation ofn-Butane. ACS Catalysis, 2020, 10, 1500-1510.	11.2	21
65	Mechanistic Insights into Câ€“H Borylation of Arenes with Organoiridium Catalysts Embedded in a Microporous Metalâ€“Organic Framework. Organometallics, 2020, 39, 1123-1133.	2.3	20
66	Scalable Synthesis of Pt/SrTiO₃ Hydrogenolysis Catalysts in Pursuit of Manufacturing-Relevant Waste Plastic Solutions. ACS Applied Materials & Interfaces, 2021, 13, 58691-58700.	8.0	19
67	Oil-Soluble Silverâ€“Organic Molecule for in Situ Deposition of Lubricious Metallic Silver at High Temperatures. ACS Applied Materials & Interfaces, 2016, 8, 13637-13645.	8.0	18
68	Silver-Organic Oil Additive for High-Temperature Applications. Tribology Letters, 2013, 52, 261-269.	2.6	17
69	Singleâ€Face/Allâ€cis Arene Hydrogenation by a Supported Singleâ€Site d⁰ Organozirconium Catalyst. Angewandte Chemie, 2016, 128, 5349-5353.	2.0	17
70	Second-generation hexavalent molybdenum oxo-amidinate precursors for atomic layer deposition. Dalton Transactions, 2017, 46, 1172-1178.	3.3	17
71	Synthesis of Supported Pd⁰ Nanoparticles from a Single-Site Pd²⁺ Surface Complex by Alkene Reduction. Chemistry of Materials, 2018, 30, 1032-1044.	6.7	17
72	Mechanistic Aspects of a Surface Organovanadium(III) Catalyst for Hydrocarbon Hydrogenation and Dehydrogenation. ACS Catalysis, 2019, 9, 11055-11066.	11.2	17

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73	Synthesis and Characterization of Silver(I) Pyrazolylmethylpyridine Complexes and Their Implementation as Metallic Silver Thin Film Precursors. Inorganic Chemistry, 2014, 53, 4629-4638.	4.0	16
74	How Close Is Too Close? Polymerization Behavior and Monomer-Dependent Reorganization of a Bimetallic Salphen Organotitanium Catalyst. Organometallics, 2018, 37, 2429-2436.	2.3	16
75	Computational Investigation of the Role of Active Site Heterogeneity for a Supported Organovanadium(III) Hydrogenation Catalyst. ACS Catalysis, 2021, 11, 7257-7269.	11.2	16
76	Isomerization and Selective Hydrogenation of Propyne: Screening of Metalâ€“Organic Frameworks Modified by Atomic Layer Deposition. Journal of the American Chemical Society, 2020, 142, 20380-20389.	13.7	15
77	Grafted nickel-promoter catalysts for dry reforming of methane identified through high-throughput experimentation. Applied Catalysis A: General, 2022, 629, 118379.	4.3	15
78	High-Performance Heterocyclic Friction Modifiers for Boundary Lubrication. Tribology Letters, 2018, 66, 1.	2.6	14
79	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. Catalysis Science and Technology, 2020, 10, 3594-3602.	4.1	14
80	Catalytic CO Oxidation on MgAl₂O₄-Supported Iridium Single Atoms: Ligand Configuration and Site Geometry. Journal of Physical Chemistry C, 2021, 125, 11380-11390.	3.1	13
81	Silver(I) Bis(pyrazolyl)methane Complexes and Their Implementation as Precursors for Metallic Silver Deposition. European Journal of Inorganic Chemistry, 2016, 2016, 2626-2633.	2.0	12
82	A Study on the Coordinative Versatility of the Zwitterionic S,N,S Ligand EtNHC(S)ÂPh2P=NPPh2C(S)NEt in Its Anionic, Neutral and Cationic Forms â€“ Determination of Absolute pKa Values in CH2Cl2 of RhI Complexes. European Journal of Inorganic Chemistry, 2008, 2008, 2302-2312.	2.0	11
83	Synthesis, structural characterisation and solution chemistry of ruthenium(III) triazole-thiadiazine complexes. Dalton Transactions, 2009, , 3766.	3.3	11
84	Development of activityâ€“descriptor relationships for supported metal ion hydrogenation catalysts on silica. Polyhedron, 2018, 152, 73-83.	2.2	11
85	Revealing the Configuration and Conformation of Surface Organometallic Catalysts with DNP-Enhanced NMR. Journal of Physical Chemistry C, 2021, 125, 13433-13442.	3.1	11
86	Nuclearity effects in supported, single-site Fe(<scp>ii</scp>) hydrogenation pre-catalysts. Dalton Transactions, 2018, 47, 10842-10846.	3.3	9
87	A Neutrally Charged Trimethylmanganese(III) Complex: Synthesis, Characterization, and Disproportionation Chemistry. Organometallics, 2016, 35, 2683-2688.	2.3	8
88	Activation of Low-Valent, Multiply Mâ€“M Bonded Group VI Dimers toward Catalytic Olefin Metathesis via Surface Organometallic Chemistry. Organometallics, 2020, 39, 1035-1045.	2.3	8
89	Oxidative Addition of Iodomethane to Charge-Tuned Rhodium(I) Complexes. Organometallics, 2009, 28, 2062-2071.	2.3	7
90	Atomic layer deposition of HfO2 films using carbon-free tetrakis(tetrahydroborato)hafnium and water. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	7

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91	Integrated Experimental and Computational K-Edge X-ray Absorption Near-Edge Structure Analysis of Vanadium Catalysts. Journal of Physical Chemistry C, 2022, 126, 11949-11962.	3.1	7
92	Coordination properties of the multifunctional S,N,S zwitterionic ligand EtNHC(S)Ph2PNPPh2C(S)NEt. Coordination Chemistry Reviews, 2010, 254, 753-764.	18.8	6
93	Electrochemical Investigation of Low-Valent Multiply Mâ‰¡M Bonded Group VI Dimers: A Standard Chemical Reduction Leads to an Unexpected Product. Organometallics, 2020, 39, 4430-4436.	2.3	6
94	Photocatalytic Transfer Hydrogenation in Water: Insight into Mechanism and Catalyst Speciation. Organometallics, 2021, 40, 1482-1491.	2.3	6
95	Ethylene polymerization with a crystallographically well-defined metalâ€“organic framework supported catalyst. Catalysis Science and Technology, 2022, 12, 1619-1627.	4.1	6
96	Lithium-Ion Battery Materials as Tunable, â€œRedox Non-Innocentâ€•Catalyst Supports. ACS Catalysis, 0, , 7233-7242.	11.2	6
97	Reactivity of the zwitterionic ligand EtNHC(S)Ph2Pî€NPPh2C(S)NEt towards [Ru3(CO)12]. Sulfur transfer and ligand fragmentation leading to the methideylamide [-N(Et)-CH(R)-] Î¼3-bridging moiety. Dalton Transactions, 2009, , 544-549.	3.3	5
98	Investigation of Shear-Thinning Behavior on Film Thickness and Friction Coefficient of Polyalphaolefin Base Fluids With Varying Olefin Copolymer Content. Journal of Tribology, 2017, 139, .	1.9	5
99	Synthesis, Structural Characterization, and Magnetic Properties of the Heteroleptic Dinuclear Nickel Selenite Complex [{Ni(TMEDA)SeO₃}₂]. European Journal of Inorganic Chemistry, 2011, 2011, 3327-3333.	2.0	4
100	Phosphorusâ€Atom Transfer from Phosphaethynolate to an Alkylidyne. Angewandte Chemie - International Edition, 2021, 60, 24411-24417.	13.8	4
101	Structural motifs in heteroleptic copper and cadmium selenites. Inorganica Chimica Acta, 2018, 470, 206-212.	2.4	3
102	Tetraaquabis{Î¼2-2,7-bis[(2,6-diisopropylphenyl)iminomethyl]naphthalene-1,8-diolato}di-Î¼3-hydroxido-di-Î¼2-hydroxido-bis(trimethyl Section E: Structure Reports Online, 2010, 66, m257-m257.	0.2	3
103	Tale of Three Molecular Nitrides: Mononuclear Vanadium (V) and (IV) Nitrides As Well As a Mixed-Valence Trivanadium Nitride Having a V₃N₄ Double-Diamond Core. Journal of the American Chemical Society, 2022, 144, 10201-10219.	13.7	3
104	Promoter Effects on Catalyst Selectivity and Stability for Propylene Partial Oxidation to Acrolein. Catalysis Letters, 2020, 150, 826-836.	2.6	1
105	Pâ€Atom Transfer from Phosphaethynolate to an Alkylidyne.. Angewandte Chemie, 0, , .	2.0	1
106	Organometallic Chemistry at Various Length Scales: More Than Just Metalâ€“Carbon Bonds Bring Chemists Together. Organometallics, 2020, 39, 881-882.	2.3	0
107	Lubrication in Desert Environments: Oil-Soluble Organo-Silver Molecules Designed for In-Situ Deposition of Metallic Silver at High Temperatures. , 2016, , .		0