

Mark E Bussell

List of Publications by Year in descending order

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46
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117625

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3155
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal Phosphides: Preparation, Characterization and Catalytic Reactivity. <i>Catalysis Letters</i> , 2012, 142, 1413-1436.	2.6	369
2	Thiophene hydrodesulfurization over nickel phosphide catalysts: effect of the precursor composition and support. <i>Journal of Catalysis</i> , 2005, 231, 300-313.	6.2	313
3	Synthesis, Characterization, and Hydrodesulfurization Properties of Silica-Supported Molybdenum Phosphide Catalysts. <i>Journal of Catalysis</i> , 2002, 207, 266-273.	6.2	257
4	Thiophene hydrodesulfurization over supported nickel phosphide catalysts. <i>Journal of Catalysis</i> , 2003, 215, 208-219.	6.2	210
5	Physical and Chemical Properties of MoP, Ni ₂ P, and MoNiP Hydrodesulfurization Catalysts: Time-Resolved X-ray Diffraction, Density Functional, and Hydrodesulfurization Activity Studies. <i>Journal of Physical Chemistry B</i> , 2003, 107, 6276-6285.	2.6	198
6	Thiophene Hydrodesulfurization over Alumina-Supported Molybdenum Carbide and Nitride Catalysts: Adsorption Sites, Catalytic Activities, and Nature of the Active Surface. <i>Journal of Catalysis</i> , 1996, 164, 109-121.	6.2	184
7	Understanding the relationship between composition and hydrodesulfurization properties for cobalt phosphide catalysts. <i>Applied Catalysis A: General</i> , 2008, 343, 68-76.	4.3	148
8	Infrared Spectroscopic Investigation of CO Adsorption on Silica-Supported Nickel Phosphide Catalysts. <i>Journal of Physical Chemistry B</i> , 2004, 108, 10930-10941.	2.6	140
9	Spongy chalcogels of non-platinum metals act as effective hydrodesulfurization catalysts. <i>Nature Chemistry</i> , 2009, 1, 217-224.	13.6	121
10	XPS study of the passive films formed on nitrogen-implanted austenitic stainless steels. <i>Applied Surface Science</i> , 1992, 59, 7-21.	6.1	116
11	Synthesis and Characterization of Discrete Nickel Phosphide Nanoparticles: Effect of Surface Ligation Chemistry on Catalytic Hydrodesulfurization of Thiophene. <i>Advanced Functional Materials</i> , 2007, 17, 3933-3939.	14.9	112
12	Hydrodesulfurization properties of cobalt-nickel phosphide catalysts: Ni-rich materials are highly active. <i>Journal of Catalysis</i> , 2008, 260, 262-269.	6.2	103
13	Thiophene Hydrodesulfurization over Alumina-Supported Molybdenum Carbide and Nitride Catalysts: Effect of Mo Loading and Phase. <i>Journal of Catalysis</i> , 1997, 171, 255-267.	6.2	99
14	Rational Design of Nickel Phosphide Hydrodesulfurization Catalysts: Controlling Particle Size and Preventing Sintering. <i>Chemistry of Materials</i> , 2013, 25, 825-833.	6.7	92
15	Hydrodesulfurization over supported monometallic, bimetallic and promoted carbide and nitride catalysts. <i>Catalysis Today</i> , 2003, 86, 191-209.	4.4	81
16	Hydrodesulfurization properties of rhodium phosphide: Comparison with rhodium metal and sulfide catalysts. <i>Journal of Catalysis</i> , 2010, 276, 249-258.	6.2	81
17	Synthesis and Hydrodeoxygenation Properties of Ruthenium Phosphide Catalysts. <i>ACS Catalysis</i> , 2011, 1, 917-922.	11.2	81
18	Atomic arrangement of sulfur adatoms on Mo(001) at atmospheric pressure: A scanning tunneling microscopy study. <i>Physical Review Letters</i> , 1988, 60, 1166-1169.	7.8	78

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19	Vibrational Study of Organometallic Complexes with Thiophene Ligands: Models for Adsorbed Thiophene on Hydrodesulfurization Catalysts. <i>Journal of Physical Chemistry A</i> , 2001, 105, 4418-4429.	2.5	76
20	Simultaneous Control of Composition, Size, and Morphology in Discrete Ni ₂ CoP Nanoparticles. <i>Chemistry of Materials</i> , 2015, 27, 4349-4357.	6.7	64
21	Catalytic hydrodesulfurization over the Mo(100) single crystal surface II. The role of adsorbed sulfur and mechanism of the desulfurization step. <i>Journal of Catalysis</i> , 1987, 107, 103-113.	6.2	63
22	An infrared spectroscopy and temperature-programmed desorption study of carbon monoxide on molybdena/alumina catalysts: quantitation of the molybdena overlayer. <i>The Journal of Physical Chemistry</i> , 1993, 97, 470-477.	2.9	59
23	Mössbauer spectroscopy investigation and hydrodesulfurization properties of iron-nickel phosphide catalysts. <i>Journal of Catalysis</i> , 2010, 272, 18-27.	6.2	59
24	Highly-active nickel phosphide hydrotreating catalysts prepared in situ using nickel hypophosphite precursors. <i>Journal of Catalysis</i> , 2016, 335, 204-214.	6.2	56
25	Identification of the Adsorption Mode of Thiophene on Sulfided Mo Catalysts. <i>Journal of Physical Chemistry B</i> , 1998, 102, 7845-7857.	2.6	53
26	Synthesis of Bulk and Alumina-Supported Bimetallic Carbide and Nitride Catalysts. <i>Chemistry of Materials</i> , 2002, 14, 4049-4058.	6.7	48
27	A radiotracer (¹⁴ C) and catalytic study of thiophene hydrodesulfurization on the clean and carbided Mo(100) single-crystal surface. <i>Journal of Catalysis</i> , 1987, 106, 93-104.	6.2	45
28	Mesoporous Matrix Encapsulation for the Synthesis of Monodisperse Pd ₅ P ₂ Nanoparticle Hydrodesulfurization Catalysts. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 5403-5407.	8.0	44
29	Characterization and hydrodesulfurization properties of catalysts derived from amorphous metal-boron materials. <i>Journal of Catalysis</i> , 2007, 246, 277-292.	6.2	43
30	Synthesis and Hydrodesulfurization Properties of Noble Metal Phosphides: Ruthenium and Palladium. <i>Topics in Catalysis</i> , 2012, 55, 999-1009.	2.8	41
31	Thiophene hydrodesulfurization over transition metal surfaces: Structure insensitive over molybdenum and structure sensitive over rhenium. <i>Journal of Catalysis</i> , 1988, 110, 423-426.	6.2	40
32	Carbazole hydrodenitrogenation over nickel phosphide and Ni-rich bimetallic phosphide catalysts. <i>Applied Catalysis A: General</i> , 2014, 482, 221-230.	4.3	40
33	Investigation of the Adsorption and Reactions of Thiophene on Sulfided Cu, Mo, and Rh Catalysts. <i>Journal of Physical Chemistry B</i> , 2000, 104, 3237-3249.	2.6	38
34	Infrared Spectroscopy and Temperature-Programmed Desorption Study of Adsorbed Thiophene on γ -Al ₂ O ₃ . <i>Langmuir</i> , 1996, 12, 1500-1510.	3.5	35
35	Thiophene hydrodesulfurization over bimetallic and promoted nitride catalysts. <i>Catalysis Letters</i> , 1998, 56, 165-171.	2.6	31
36	Infrared Spectroscopic Investigation of Thiophene Adsorption on Silica-Supported Nickel Phosphide Catalysts. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15791-15802.	2.6	30

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37	Probing hydrodesulfurization over bimetallic phosphides using monodisperse Ni _{2-x} M _x P nanoparticles encapsulated in mesoporous silica. <i>Surface Science</i> , 2016, 648, 126-135.	1.9	21
38	Effect of Particle Size on the Deep HDS Properties of Ni ₂ P Catalysts. <i>Journal of Physical Chemistry C</i> , 2019, 123, 25701-25711.	3.1	21
39	New methods for the preparation of nanoscale nickel phosphide catalysts for heteroatom removal reactions. <i>Reaction Chemistry and Engineering</i> , 2017, 2, 628-635.	3.7	19
40	A simple means for reproducibly dosing low vapor pressure and/or reactive gases to surfaces in ultrahigh vacuum. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1991, 9, 10-13.	2.1	16
41	Hydrodesulfurization Properties of Nickel Phosphide on Boron-treated Alumina Supports. <i>ChemCatChem</i> , 2020, 12, 4939-4950.	3.7	16
42	Synthesis and hydrodesulfurization properties of silica-supported nickel-ruthenium phosphide catalysts. <i>Journal of Catalysis</i> , 2021, 403, 173-180.	6.2	15
43	STM study of the structure of the sulphur (1Å–2) overlayer on molybdenum (001) in air: ordered domains, phase boundaries and defects. <i>Journal of Microscopy</i> , 1988, 152, 427-439.	1.8	12
44	The role of fluorine, nickel and full sulfidation in the hydrodenitrogenation of o-toluidine over tungsten-based catalysts prepared from oxy- and thiosalts. <i>Applied Catalysis A: General</i> , 2001, 216, 103-115.	4.3	10
45	Thiophene hydrodesulfurization over transition metal foils: Comparison with metal sulfides. <i>Catalysis Letters</i> , 1989, 3, 1-7.	2.6	9
46	Synthesis of Bulk and Alumina-Supported Bimetallic Carbide and Nitride Catalysts.. <i>ChemInform</i> , 2003, 34, no-no.	0.0	0