Yong-Kul Lee

List of Publications by Year
in descending order

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71 papers	3,947 citations	147801 31 h-index	118850 62 g-index
73 all docs	73 docs citations	73 times ranked	3543 citing authors

#	Article	IF	Citations
1	Transition metal phosphide hydroprocessing catalysts: A review. Catalysis Today, 2009, 143, 94-107.	4.4	704
2	Effect of Phosphorus Content in Nickel Phosphide Catalysts Studied by XAFS and Other Techniques. Journal of Catalysis, 2002, 210, 207-217.	6.2	311
3	The active site of nickel phosphide catalysts for the hydrodesulfurization of 4,6-DMDBT. Journal of Catalysis, 2008, 258, 393-400.	6.2	248
4	Bifunctional nature of a SiO2-supported Ni2P catalyst for hydrotreating: EXAFS and FTIR studies. Journal of Catalysis, 2006, 239, 376-389.	6.2	229
5	Active phase of Ni2P/SiO2 in hydroprocessing reactions. Journal of Catalysis, 2004, 221, 263-273.	6.2	222
6	Active sites of Ni2P/SiO2 catalyst for hydrodeoxygenation of guaiacol: A joint XAFS and DFT study. Journal of Catalysis, 2014, 311, 144-152.	6.2	169
7	Structure and Oxidation State of Silica-Supported Manganese Oxide Catalysts and Reactivity for Acetone Oxidation with Ozone. Journal of Physical Chemistry B, 2006, 110, 4207-4216.	2.6	108
8	The nature of active sites of Ni2P electrocatalyst for hydrogen evolution reaction. Journal of Catalysis, 2015, 326, 92-99.	6.2	107
9	Active phase of a nickel phosphide (Ni2P) catalyst supported on KUSY zeolite for the hydrodesulfurization of 4,6-DMDBT. Applied Catalysis A: General, 2007, 322, 191-204.	4.3	99
10	Acetone Oxidation Using Ozone on Manganese Oxide Catalysts. Journal of Physical Chemistry B, 2005, 109, 17587-17596.	2.6	98
11	Structure-sensitivity of hydrodesulfurization of 4,6-dimethyldibenzothiophene over silica-supported nickel phosphide catalysts. Journal of Catalysis, 2005, 236, 112-121.	6.2	97
12	Effects of nitrogen compounds, aromatics, and aprotic solvents on the oxidative desulfurization (ODS) of light cycle oil over Ti-SBA-15 catalyst. Applied Catalysis B: Environmental, 2014, 147, 35-42.	20.2	87
13	Effects of dispersed MoS2 catalysts and reaction conditions on slurry phase hydrocracking of vacuum residue. Journal of Catalysis, 2017, 347, 127-137.	6.2	87
14	Kinetics of Two Pathways for 4,6-Dimethyldibenzothiophene Hydrodesulfurization over NiMo, CoMo Sulfide, and Nickel Phosphide Catalysts. Energy & Fuels, 2005, 19, 353-364.	5.1	82
15	EXAFS measurements of a working catalyst in the liquid phase: An in situ study of a Ni2P hydrodesulfurization catalyst. Journal of Catalysis, 2006, 241, 20-24.	6.2	81
16	Novel Ni2P/zeolite catalysts for naphthalene hydrocracking to BTX. Catalysis Communications, 2014, 45, 133-138.	3.3	62
17	Rationalization of electrocatalysis of nickel phosphide nanowires for efficient hydrogen production. Nano Energy, 2016, 26, 496-503.	16.0	61
18	Conversion mechanisms of cobalt oxide anode for Li-ion battery: In situ X-ray absorption fine structure studies. Journal of Power Sources, 2015, 274, 748-754.	7.8	58

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19	Morphology effect of Î²-zeolite supports for Ni 2 P catalysts on the hydrocracking of polycyclic aromatic hydrocarbons to benzene, toluene, and xylene. Journal of Catalysis, 2017, 351, 67-78.	6.2	54
20	Resolving Potential-Dependent Degradation of Electrodeposited Ni(OH)2 Catalysts in Alkaline Oxygen Evolution Reaction (OER): In Situ XANES Studies. Applied Catalysis B: Environmental, 2021, 284, 119729.	20.2	54
21	Mechanism of Hydrodenitrogenation on Phosphides and Sulfidesâ€. Journal of Physical Chemistry B, 2005, 109, 2109-2119.	2.6	50
22	Selective hydrotreating and hydrocracking of FCC light cycle oil into high-value light aromatic hydrocarbons. Applied Catalysis A: General, 2019, 577, 86-98.	4.3	49
23	Structure and activity of dispersed Co, Ni, or Mo sulfides for slurry phase hydrocracking of vacuum residue. Journal of Catalysis, 2018, 364, 131-140.	6.2	46
24	A new synthesis of highly active Ni2P/Al2O3 catalyst by liquid phase phosphidation for deep hydrodesulfurization. Catalysis Communications, 2011, 12, 470-474.	3.3	44
25	Dispersion effects of Ni2P catalysts on hydrotreating of light cycle oil. Applied Catalysis B: Environmental, 2014, 150-151, 647-655.	20.2	44
26	Promotional effect of Ga for Ni2P catalyst on hydrodesulfurization of 4,6-DMDBT. Applied Catalysis B: Environmental, 2019, 250, 181-188.	20.2	43
27	Active phase of dispersed MoS2 catalysts for slurry phase hydrocracking of vacuum residue. Journal of Catalysis, 2019, 369, 111-121.	6.2	43
28	Beneficial roles of H-donors as diluent and H-shuttle for asphaltenes in catalytic upgrading of vacuum residue. Chemical Engineering Journal, 2017, 314, 1-10.	12.7	41
29	Promoting asphaltene conversion by tetralin for hydrocracking of petroleum pitch. Fuel, 2018, 222, 105-113.	6.4	37
30	Formation mechanisms of Ni2P nanocrystals using XANES and EXAFS spectroscopy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 132-140.	3.5	35
31	Sulfur resistant nature of Ni2P catalyst in deep hydrodesulfurization. Applied Catalysis A: General, 2017, 548, 103-113.	4.3	35
32	Support Effects of Ni2P Catalysts on the Hydrodeoxygenation of Guaiacol: In Situ XAFS Studies. Topics in Catalysis, 2015, 58, 211-218.	2.8	31
33	Transalkylation of toluene and 1,2,4-trimethylbenzene over large pore zeolites. Catalysis Today, 1998, 44, 223-233.	4.4	27
34	The active phase of NaCo/ZnO catalyst for ethanol steam reforming: EXAFS and in situ XANES studies. International Journal of Hydrogen Energy, 2010, 35, 5378-5382.	7.1	22
35	Comparison of unsupported WS2 and MoS2 catalysts for slurry phase hydrocracking of vacuum residue. Applied Catalysis A: General, 2019, 572, 90-96.	4.3	22
36	Anomalous in situ Activation of Carbon-Supported Ni2P Nanoparticles for Oxygen Evolving Electrocatalysis in Alkaline Media. Scientific Reports, 2017, 7, 8236.	3.3	21

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37	Preparation of colloidal silica using peptization method. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2000, 173, 109-116.	4.7	20
38	Conversion of V-porphyrin in asphaltenes into V2S3 as an active catalyst for slurry phase hydrocracking of vacuum residue. Fuel, 2020, 263, 116620.	6.4	19
39	Hydrogen production from ethanol over Co/ZnO catalyst in a multi-layered reformer. International Journal of Hydrogen Energy, 2010, 35, 1147-1151.	7.1	17
40	Vapor phase deoxygenation of heptanoic acid over silica-supported palladium and palladium-tin catalysts. Journal of Catalysis, 2016, 344, 202-212.	6.2	17
41	Beneficial effects of polycyclic aromatics on oxidative desulfurization of light cycle oil over phosphotungstic acid (PTA) catalyst. Fuel Processing Technology, 2013, 114, 1-5.	7.2	16
42	Effects of the asphaltene structure and the tetralin/heptane solvent ratio on the size and shape of asphaltene aggregates. Physical Chemistry Chemical Physics, 2017, 19, 13931-13940.	2.8	16
43	Strong metal-support interaction effect of Pt/Nb2O5 catalysts on aqueous phase hydrodeoxygenation of 1,6-hexanediol. Catalysis Today, 2018, 302, 108-114.	4.4	16
44	Designing supported NiMoS2 catalysts for hydrocracking of vacuum residue. Fuel, 2019, 239, 1265-1273.	6.4	16
45	In Situ X-ray Absorption Fine Structure Studies on the Structure of Nickel Phosphide Catalyst Supported on K-USY. Chemistry Letters, 2003, 32, 956-957.	1.3	15
46	Comparison of Structural Properties of SiO2, Al2O3, and C/Al2O3Supported Ni2P catalysts. Studies in Surface Science and Catalysis, 2006, 159, 357-360.	1.5	15
47	35-We polymer electrolyte membrane fuel cell system for notebook computer using a compact fuel processor. Journal of Power Sources, 2008, 185, 171-178.	7.8	15
48	Promotional effect of Co on unsupported MoS2 catalysts for slurry phase hydrocracking of vacuum residue: X-ray absorption fine structure studies. Journal of Catalysis, 2019, 380, 278-288.	6.2	13
49	Structure and Activity of Ni2P/Desilicated Zeolite Î² Catalysts for Hydrocracking of Pyrolysis Fuel Oil into Benzene, Toluene, and Xylene. Catalysts, 2020, 10, 47.	3.5	13
50	Sacrificial species approach to designing robust transition metal phosphide cathodes for alkaline water electrolysis in discontinuous operation. Journal of Materials Chemistry A, 2021, 9, 16713-16724.	10.3	13
51	TPR and EXAFS Studies on Na-Promoted Co/ZnO Catalysts for Ethanol Steam Reforming. Topics in Catalysis, 2010, 53, 615-620.	2.8	12
52	Understanding conversion mechanism of NiO anodic materials for Li-ion battery using in situ X-ray absorption near edge structure spectroscopy. Journal of Power Sources, 2016, 304, 189-195.	7.8	10
53	A New Approach to Deep Desulfurization of Light Cycle Oil over Ni2P Catalysts: Combined Selective Oxidation and Hydrotreating. Catalysts, 2018, 8, 102.	3.5	9
54	Highly active and stable MoWS2 catalysts in slurry phase hydrocracking of vacuum residue. Journal of Catalysis, 2020, 390, 117-125.	6.2	9

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55	Density Functional Theory (DFT) Calculations and Catalysis. Catalysts, 2021, 11, 454.	3.5	9
56	Structure and activity of unsupported NiWS2 catalysts for slurry phase hydrocracking of vacuum residue: XAFS studies. Journal of Catalysis, 2021, 403, 131-140.	6.2	8
57	EXAFS Studies on the Formation of MoS2 Nanowires. Journal of the Korean Physical Society, 2011, 59, 730-734.	0.7	8
58	Boosting Activity and Durability of an Electrodeposited Ni(OH)₂ Catalyst Using Carbon Nanotube-Grafted Substrates for the Alkaline Oxygen Evolution Reaction. ACS Applied Nano Materials, 2021, 4, 10267-10274.	5.0	7
59	XAFS studies on highly dispersed Ni2P/SiO2 catalysts for hydrodesulfurization of 4,6-dimethyldibenzothiophene. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 621, 690-694.	1.6	6
60	Beneficial roles of carbon black additives in slurry phase hydrocracking of vacuum residue. Applied Catalysis A: General, 2020, 607, 117837.	4.3	6
61	Effects of Phosphorus Precursor on Structure and Activity of Ni2P/SiO2 Hydrotreating Catalysts: EXAFS Studies. Journal of the Korean Physical Society, 2010, 56, 2083-2087.	0.7	6
62	Hydrotreating of Waste Tire Pyrolysis Oil over Highly Dispersed Ni2P Catalyst Supported on SBA-15. Catalysts, 2021, 11, 1272.	3.5	6
63	Active phase of a Pd-Cu/ZSM-5 catalyst for benzene hydroxylation: In-situ XAFS studies. Journal of the Korean Physical Society, 2012, 61, 293-296.	0.7	4
64	In Situ EXAFS Studies on Ni2P Hydrodesulfurization Catalysts in the Presence of High Pressure and High Temperature Oil. AIP Conference Proceedings, 2007, , .	0.4	3
65	Nickel Phosphide Catalysts Supported on SBA-15 for Hydrodesulfurization of 4,6-Dimethyldibenzothiophene. Journal of the Japan Petroleum Institute, 2010, 53, 173-177.	0.6	3
66	Thermodynamic analysis of steam and aqueous reforming of hydroxylated C6 aliphatic compounds. Journal of Industrial and Engineering Chemistry, 2013, 19, 2072-2078.	5.8	3
67	Reactivity of sulfur compounds in FCC decant oils for hydrodesulfurization over CoMoS2/Al2O3 catalysts. Korean Journal of Chemical Engineering, 2021, 38, 1179-1187.	2.7	3
68	Factors influencing the formation of 2-hydroxy-6-naphthoic acid from carboxylation of naphthol. Journal of Industrial and Engineering Chemistry, 2013, 19, 2060-2063.	5.8	2
69	Effects of co loadings on NaCo/ZnO catalysts for ethanol steam reforming: XAFS studies. Journal of the Korean Physical Society, 2013, 63, 1395-1398.	0.7	2
70	Beneficial effect of V on stability of dispersed MoS2 catalysts in slurry phase hydrocracking of vacuum residue: XAFS studies. Journal of Catalysis, 2022, 413, 443-454.	6.2	2
71	True Intermediates and Spectators in Reaction Mechanisms: A Kinetic and Spectroscopic Study. Studies in Surface Science and Catalysis, 2007, 172, 103-108.	1.5	0