Xinhua Liang

List of Publications by Year
in descending order

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100	3,524	136740	155451
papers	citations	32 h-index	55 g-index

103	103	103	4173
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atomic layer deposition on particles using a fluidized bed reactor with in situ mass spectrometry. Surface and Coatings Technology, 2007, 201, 9163-9171.	2.2	172
2	Highly active and stable alumina supported nickel nanoparticle catalysts for dry reforming of methane. Applied Catalysis B: Environmental, 2017, 201, 302-309.	10.8	158
3	Chemoselective Transfer Hydrogenation of Nitroarenes Catalyzed by Highly Dispersed, Supported Nickel Nanoparticles. ACS Catalysis, 2015, 5, 4814-4818.	5.5	137
4	Na ⁺ -gated water-conducting nanochannels for boosting CO ₂ conversion to liquid fuels. Science, 2020, 367, 667-671.	6.0	136
5	Recent Advances in Selective Hydrogenation of Cinnamaldehyde over Supported Metal-Based Catalysts. ACS Catalysis, 2020, 10, 2395-2412.	5.5	128
6	Highly dispersed Pt nanoparticle catalyst prepared by atomic layer deposition. Applied Catalysis B: Environmental, 2010, 97, 220-226.	10.8	117
7	Stabilization of Supported Metal Nanoparticles Using an Ultrathin Porous Shell. ACS Catalysis, 2011, 1, 1162-1165.	5.5	106
8	Ultra-thin microporousâ€“mesoporous metal oxide films prepared by molecular layer deposition (MLD). Chemical Communications, 2009, , 7140.	2.2	105
9	Atomic layer deposition of iron(III) oxide on zirconia nanoparticles in a fluidized bed reactor using ferrocene and oxygen. Thin Solid Films, 2009, 517, 1874-1879.	0.8	103
10	Optimal preparation of Pt/TiO2 photocatalysts using atomic layer deposition. Applied Catalysis B: Environmental, 2010, 101, 54-60.	10.8	102
11	Novel Processing to Produce Polymer/Ceramic Nanocomposites by Atomic Layer Deposition. Journal of the American Ceramic Society, 2007, 90, 57-63.	1.9	99
12	Enhanced activity and stability of MgO-promoted Ni/Al2O3 catalyst for dry reforming of methane: Role of MgO. Fuel, 2021, 284, 119082.	3.4	87
13	Highly active and selective Cu-ZnO based catalyst for methanol and dimethyl ether synthesis via CO2 hydrogenation. Fuel, 2019, 239, 1125-1133.	3.4	86
14	Enhanced catalytic performance of Zr modified CuO/ZnO/Al2O3 catalyst for methanol and DME synthesis via CO2 hydrogenation. Journal of CO2 Utilization, 2020, 36, 82-95.	3.3	74
15	Atomic Layer Deposition Functionalized Composite SOFC Cathode La_{0.6}Sr_{0.4}Fe_{0.8}Co_{0.2}O_{3-Î´} -Gd_{0.2}Ce_{0.8}O_{1.9}: Enhanced Long-Term Stability. Chemistry of Materials, 2013, 25, 4224-4231.	3.2	73
16	Hydrogenolysis of 5-hydroxymethylfurfural to 2,5-dimethylfuran over supported Ptâ€“Co bimetallic catalysts under mild conditions. Green Chemistry, 2018, 20, 2894-2902.	4.6	73
17	Catalytic hydrogenolysis of biomass-derived 5-hydroxymethylfurfural to biofuel 2, 5-dimethylfuran. Applied Catalysis A: General, 2019, 576, 85-95.	2.2	65
18	Atomic layer deposited Pt-Co bimetallic catalysts for selective hydrogenation of Î±, Î²-unsaturated aldehydes to unsaturated alcohols. Journal of Catalysis, 2018, 366, 61-69.	3.1	61

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19	Supported Single Fe Atoms Prepared via Atomic Layer Deposition for Catalytic Reactions. ACS Applied Nano Materials, 2020, 3, 2867-2874.	2.4	57
20	Nanocoating hybrid polymer films on large quantities of cohesive nanoparticles by molecular layer deposition. AICHE Journal, 2009, 55, 1030-1039.	1.8	55
21	Molecular Layer Deposition-Modified 5A Zeolite for Highly Efficient CO₂ Capture. ACS Applied Materials & Interfaces, 2018, 10, 769-775.	4.0	50
22	Comprehensive Study of Al- and Zr-Modified LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂ through Synergy of Coating and Doping. ACS Applied Energy Materials, 2020, 3, 8978-8987.	2.5	46
23	Photoactivity passivation of TiO2 nanoparticles using molecular layer deposited (MLD) polymer films. Journal of Nanoparticle Research, 2010, 12, 135-142.	0.8	43
24	Scalable synthesis of palladium nanoparticle catalysts by atomic layer deposition. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	43
25	Biocompatible Interface Films Deposited within Porous Polymers by Atomic Layer Deposition (ALD). ACS Applied Materials & Interfaces, 2009, 1, 1988-1995.	4.0	42
26	Reaction mechanism studies for platinum nanoparticle growth by atomic layer deposition. Journal of Nanoparticle Research, 2011, 13, 3781-3788.	0.8	40
27	Macro-/Micro-Controlled 3D Lithium-Ion Batteries via Additive Manufacturing and Electric Field Processing. Scientific Reports, 2018, 8, 1846.	1.6	40
28	Ultrathin highly porous alumina films prepared by alucone ABC molecular layer deposition (MLD). Microporous and Mesoporous Materials, 2013, 168, 178-182.	2.2	39
29	Significant Capacity and Cycleâ€Life Improvement of Lithiumâ€Ion Batteries through Ultrathin Conductive Film Stabilized Cathode Particles. Advanced Materials Interfaces, 2015, 2, 1500046.	1.9	35
30	Boosting the Electrochemical Performance of Li_{1.2}Mn_{0.54}Ni_{0.13}Co_{0.13}O₂ by Atomic Layer-Deposited CeO₂ Coating. ACS Omega, 2018, 3, 906-916.	1.6	35
31	Synthesis of High Metal Loading Single Atom Catalysts and Exploration of the Active Center Structure. ChemCatChem, 2021, 13, 28-58.	1.8	35
32	Metabolomic effects of CeO2, SiO2 and CuO metal oxide nanomaterials on HepG2 cells. Particle and Fibre Toxicology, 2017, 14, 50.	2.8	34
33	Rapid Silica Atomic Layer Deposition on Large Quantities of Cohesive Nanoparticles. ACS Applied Materials & Interfaces, 2010, 2, 2248-2253.	4.0	33
34	Li4Ti5O12 coated with ultrathin aluminum-doped zinc oxide films as an anode material for lithium-ion batteries. Journal of Power Sources, 2019, 436, 226859.	4.0	30
35	Unveiling the Role of CeO₂ Atomic Layer Deposition Coatings on LiMn₂O₄ Cathode Materials: An Experimental and Theoretical Study. ACS Applied Materials & Interfaces, 2017, 9, 30599-30607.	4.0	29
36	Effects of mixing methods of bifunctional catalysts on catalyst stability of DME synthesis via CO2 hydrogenation. Carbon Resources Conversion, 2019, 2, 85-94.	3.2	29

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37	Encapsulation of supported metal nanoparticles with an ultra-thin porous shell for size-selective reactions. Chemical Communications, 2013, 49, 10067.	2.2	28
38	Ultrathin Conductive CeO₂Coating for Significant Improvement in Electrochemical Performance of LiMn_{1.5}Ni_{0.5}O₄Cathode Materials. Journal of the Electrochemical Society, 2017, 164, A6236-A6243.	1.3	28
39	Steam reforming of n-dodecane over mesoporous alumina supported nickel catalysts: Effects of metal-support interaction on nickel catalysts. International Journal of Hydrogen Energy, 2019, 44, 6965-6977.	3.8	28
40	Atomic Layer Deposition on Bulk Quantities of Surfactantâ€Modified Singleâ€Walled Carbon Nanotubes. Journal of the American Ceramic Society, 2008, 91, 831-835.	1.9	27
41	Highly Durable and Active Pt/Sb-Doped SnO2 Oxygen Reduction Reaction Electrocatalysts Produced by Atomic Layer Deposition. ACS Applied Energy Materials, 2020, 3, 5774-5783.	2.5	27
42	Slightly Fluorination of Al2O3 ALD Coating on Li1.2Mn0.54Co0.13Ni0.13O2 Electrodes: Interface Reaction to Create Stable Solid Permeable Interphase Layer. Journal of the Electrochemical Society, 2019, 166, A2021-A2027.	1.3	26
43	Ptâ€“Carbon interaction-determined reaction pathway and selectivity for hydrogenation of 5-hydroxymethylfurfural over carbon supported Pt catalysts. Catalysis Science and Technology, 2021, 11, 1298-1310.	2.1	26
44	Lowâ€Temperature Atomic Layerâ€Deposited TiO₂ Films with Low Photoactivity. Journal of the American Ceramic Society, 2009, 92, 649-654.	1.9	25
45	An overview of highly porous oxide films with tunable thickness prepared by molecular layer deposition. Current Opinion in Solid State and Materials Science, 2015, 19, 115-125.	5.6	25
46	Engineering metal-oxide interface by depositing ZrO2 overcoating on Ni/Al2O3 for dry reforming of methane. Chemical Engineering Journal, 2022, 436, 135195.	6.6	25
47	Atomic layer deposited highly dispersed platinum nanoparticles supported on non-functionalized multiwalled carbon nanotubes for the hydrogenation of xylose to xylitol. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	24
48	Cooperating effects of conformal iron oxide (FeOx) ALD coating and post-annealing on Li-Rich layered cathode materials. Electrochimica Acta, 2019, 318, 513-524.	2.6	24
49	Employing Synergetic Effect of Doping and Thin Film Coating to Boost the Performance of Lithium-Ion Battery Cathode Particles. Scientific Reports, 2016, 6, 25293.	1.6	23
50	Nonuniform Growth of Sub-2 Nanometer Atomic Layer Deposited Alumina Films on Lithium Nickel Manganese Cobalt Oxide Cathode Battery Materials. ACS Applied Nano Materials, 2019, 2, 6989-6997.	2.4	23
51	Template-directed synthesis of porous alumina particles with precise wall thickness control via atomic layer deposition. Microporous and Mesoporous Materials, 2012, 149, 106-110.	2.2	22
52	Silk-derived graphene-like carbon with high electrocatalytic activity for oxygen reduction reaction. RSC Advances, 2016, 6, 34219-34224.	1.7	22
53	Reforming of methane with carbon dioxide over cerium oxide promoted nickel nanoparticles deposited on 4-channel hollow fibers by atomic layer deposition. Catalysis Science and Technology, 2020, 10, 3212-3222.	2.1	20
54	Nanocoating zinc alkoxide (zincone) hybrid polymer films on particles using a fluidized bed reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	19

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55	Highly porous titania films coated on sub-micron particles with tunable thickness by molecular layer deposition in a fluidized bed reactor. Ceramics International, 2015, 41, 2240-2246.	2.3	19
56	Atomic Layer Deposited Ni/ZrO₂â€“SiO₂ for Combined Capture and Oxidation of VOCs. ACS Applied Materials & Interfaces, 2020, 12, 39318-39334.	4.0	19
57	Selective hydrogenation of citral over supported Pt catalysts: insight into support effects. Journal of Nanoparticle Research, 2017, 19, 1.	0.8	17
58	Synergic Titanium Nitride Coating and Titanium Doping by Atomic Layer Deposition for Stable- and High-Performance Li-Ion Battery. Journal of the Electrochemical Society, 2018, 165, A3871-A3877.	1.3	16
59	Ionic and electronic conductivities of atomic layer deposition thin film coated lithium ion battery cathode particles. RSC Advances, 2016, 6, 98768-98776.	1.7	15
60	Atomic layer deposition surface functionalized biochar for adsorption of organic pollutants: improved hydrophilia and adsorption capacity. International Journal of Environmental Science and Technology, 2017, 14, 1825-1834.	1.8	15
61	â€œCoreâ€“Shellâ€•Nanostructured Supported Size-Selective Catalysts with High Catalytic Activity. Nano Letters, 2017, 17, 104-109.	4.5	15
62	Significant improvement in TiO₂ photocatalytic activity through controllable ZrO₂ deposition. RSC Advances, 2018, 8, 25829-25834.	1.7	15
63	Roles of interaction between components in <scp>CZZA</scp>/<scp>HZSM</scp>â€5 catalyst for dimethyl ether synthesis via <scp>CO₂</scp> hydrogenation. AICHE Journal, 2021, 67, e17353.	1.8	15
64	Stereoselective Transformations of Î±â€Trifluoromethylated Ketoximes to Optically Active Amines by Enzymeâ€“Nanometal Cocatalysis: Synthesis of (S)â€Inhibitor of Phenylethanolamine Nâ€Methyltransferase. ChemCatChem, 2014, 6, 2129-2133.	1.8	14
65	Significant photocatalytic performance enhancement of TiO₂ by CeO₂ atomic layer deposition. Nanotechnology, 2017, 28, 505709.	1.3	14
66	Structure-sensitive hydro-conversion of oleic acid to aviation-fuel-range-alkanes over alumina-supported nickel catalyst. Catalysis Communications, 2020, 134, 105842.	1.6	14
67	The high-yield direct synthesis of dimethyl ether from CO₂ and H₂ in a dry reaction environment. Journal of Materials Chemistry A, 2021, 9, 2678-2682.	5.2	14
68	Understanding the roles of atomic layer deposition in improving the electrochemical performance of lithium-ion batteries. Applied Physics Reviews, 2021, 8, .	5.5	14
69	Ultrafast metal-insulator varistors based on tunable Al2O3 tunnel junctions. Applied Physics Letters, 2008, 92, .	1.5	13
70	Synthesis of Highly Dispersed and Highly Stable Supported Auâ€“Pt Bimetallic Catalysts by a Two-Step Method. Catalysis Letters, 2016, 146, 2606-2613.	1.4	13
71	AlF₃-Al₂O₃ ALD Thin-Film-Coated Li_{1.2}Mn_{0.54}Co_{0.13}Ni_{0.13}O₂ Particles for Lithium-Ion Batteries: Long-Term Protection. ACS Applied Materials & Interfaces, 2022, 14, 3991-4003.	4.0	13
72	Crystal Phase Evolution in Quantum Confined ZnO Domains on Particles via Atomic Layer Deposition. Crystal Growth and Design, 2009, 9, 2828-2834.	1.4	12

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73	Solvent-Free Solid-State Lithium Battery Based on LiFePO₄ and MWCNT/PEO/PVDF-HFP for High-Temperature Applications. ACS Omega, 2021, 6, 29060-29070.	1.6	12
74	Improving the Comprehensive Performance of Na_{0.7}MnO₂ for Sodium Ion Batteries by ZrO₂ Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2021, 13, 54884-54893.	4.0	12
75	Selective Hydrogenation of 2â€Methylfuran and 2,5â€Dimethylfuran over Atomic Layer Deposited Platinum Catalysts on Multiwalled Carbon Nanotube and Alumina Supports. ChemCatChem, 2017, 9, 282-286.	1.8	11
76	Ultraâ€Thin Coating and Threeâ€Dimensional Electrode Structures to Boosted Thick Electrode Lithiumâ€Ion Battery Performance. Batteries and Supercaps, 2019, 2, 139-143.	2.4	11
77	Catalytic hydrogen transfer of ketones over atomic layer deposited highly-dispersed platinum nanoparticles supported on multi-walled carbon nanotubes. Catalysis Communications, 2014, 46, 41-45.	1.6	10
78	A 1-D coordination polymer route to catalytically active Co@C nanoparticles. RSC Advances, 2016, 6, 38533-38540.	1.7	10
79	Adsorption of metal and metalloid ions onto nanoporous microparticles functionalized by atomic layer deposition. Journal of Environmental Chemical Engineering, 2016, 4, 3767-3774.	3.3	10
80	Nanoâ€engineered nickel catalysts supported on 4â€channel Î±â€Al 2 O 3 hollow fibers for dry reforming of methane. AIChE Journal, 2018, 64, 2625-2631.	1.8	10
81	Enhanced Battery Performance through Three-Dimensional Structured Electrodes: Experimental and Modeling Study. Journal of the Electrochemical Society, 2018, 165, A3566-A3573.	1.3	10
82	Simple Approach: Heat Treatment to Improve the Electrochemical Performance of Commonly Used Anode Electrodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 41368-41380.	4.0	10
83	Understanding cation doping achieved by atomic layer deposition for high-performance Li-Ion batteries. Electrochimica Acta, 2020, 340, 135951.	2.6	10
84	Fe Doping in LiMn_{1.5}Ni_{0.5}O₄ by Atomic Layer Deposition Followed by Annealing: Depths and Occupation Sites. Journal of Physical Chemistry C, 2021, 125, 7560-7567.	1.5	10
85	Porous titania microspheres with uniform wall thickness and high photoactivity. Ceramics International, 2014, 40, 3097-3103.	2.3	8
86	Surface Modification of Catalysts via Atomic Layer Deposition for Pollutants Elimination. Catalysts, 2020, 10, 1298.	1.6	8
87	Discovery of an Unexpected Metal Dissolution of Thinâ€Coated Cathode Particles and Its Theoretical Explanation. Advanced Theory and Simulations, 2020, 3, 2000002.	1.3	8
88	High safety and long-life lithium batteries with low leakage and high wettability ceramic-polymer electrolyte. Ionics, 2021, 27, 1113-1123.	1.2	8
89	Enhanced cycle life and capacity retention of iron oxide ultrathin film coated SnO2 nanoparticles at high current densities. RSC Advances, 2016, 6, 24340-24348.	1.7	7
90	Atomic layer deposited conformal ceramic coatings for anti-corrosion of Ag nanoparticles. Applied Surface Science, 2020, 532, 147374.	3.1	7

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91	Highly Active and Stable Fe/SiO2 Catalyst Synthesized by Atomic Layer Deposition for CO Oxidation. Catalysis Letters, 2020, 150, 3296-3303.	1.4	7
92	Impact of ultrathin coating layer on lithium-ion intercalation into particles for lithium-ion batteries. Chemical Engineering Journal, 2022, 440, 135565.	6.6	7
93	The ubiquitous paddle-wheel building block in two-dimensional coordination polymers with square grid structure. Journal of Coordination Chemistry, 2016, 69, 1957-1969.	0.8	6
94	Recovery of Degraded Ni-Rich NMC811 Particles for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 050520.	1.3	6
95	Enhanced stability of Fe-modified CuO-ZnO-ZrO2-Al2O3/HZSM-5 bifunctional catalysts for dimethyl ether synthesis from CO2 hydrogenation. Chinese Journal of Chemical Engineering, 2021, 38, 106-113.	1.7	5
96	Stabilizing the Interface of All-Solid-State Electrolytes against Cathode Electrodes by Atomic Layer Deposition. ACS Applied Energy Materials, 2022, 5, 760-769.	2.5	4
97	High-Performance Catalytic Four-Channel Hollow Fibers with Highly Dispersed Nickel Nanoparticles Prepared by Atomic Layer Deposition for Dry Reforming of Methane. Industrial & Engineering Chemistry Research, 2022, 61, 10377-10386.	1.8	4
98	Highly stable Ptâ€“Co bimetallic catalysts prepared by atomic layer deposition for selective hydrogenation of cinnamaldehyde. Nanotechnology, 2022, 33, 215602.	1.3	3
99	Analysis of Sequential Adsorptionâ€“Oxidation of VOCs on Atomic Layer-Deposited PtNi/ZrO₂â€“SiO₂ Dual-Function Materials. Energy & Fuels, 2022, 36, 6989-6998.	2.5	3
100	Atomic Layer Deposition: Significant Capacity and Cycleâ€Life Improvement of Lithiumâ€Ion Batteries through Ultrathin Conductive Film Stabilized Cathode Particles (Adv. Mater. Interfaces 8/2015). Advanced Materials Interfaces, 2015, 2, .	1.9	1