Xiao Liu

List of Publications by Year in descending order

45 papers	1,114 citations	394286 19 h-index	395590 33 g-index
46 all docs	46 docs citations	46 times ranked	1638 citing authors

#	Article	IF	Citations
1	Activation of subnanometric Pt on Cu-modified CeO2 via redox-coupled atomic layer deposition for CO oxidation. Nature Communications, 2020, 11, 4240.	5.8	101
2	Review Article: Catalysts design and synthesis via selective atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	0.9	91
3	A first-principles study of sodium adsorption and diffusion on phosphorene. Physical Chemistry Chemical Physics, 2015, 17, 16398-16404.	1.3	75
4	Oxideâ€Nanotrapâ€Anchored Platinum Nanoparticles with High Activity and Sintering Resistance by Areaâ€Selective Atomic Layer Deposition. Angewandte Chemie - International Edition, 2017, 56, 1648-1652.	7.2	65
5	Nanofence Stabilized Platinum Nanoparticles Catalyst via Facetâ€Selective Atomic Layer Deposition. Small, 2017, 13, 1700648.	5.2	61
6	NO oxidation catalysis on copper doped hexagonal phase LaCoO3: a combined experimental and theoretical study. Physical Chemistry Chemical Physics, 2014, 16, 5106.	1.3	59
7	Density Functional Theory Study of the Oxygen Chemistry and NO Oxidation Mechanism on Low-Index Surfaces of SmMn₂O₅ Mullite. ACS Catalysis, 2015, 5, 4913-4926.	5.5	55
8	Promotional role of La addition in the NO oxidation performance of a SmMn₂O₅ mullite catalyst. Catalysis Science and Technology, 2016, 6, 5580-5589.	2.1	54
9	Selective Passivation of Pt Nanoparticles with Enhanced Sintering Resistance and Activity toward CO Oxidation via Atomic Layer Deposition. ACS Applied Nano Materials, 2018, 1, 522-530.	2.4	47
10	Origin of the superior activity of surface doped SmMn2O5 mullites for NO oxidation: A first-principles based microkinetic study. Journal of Catalysis, 2018, 359, 122-129.	3.1	41
11	Fluidized bed coupled rotary reactor for nanoparticles coating via atomic layer deposition. Review of Scientific Instruments, 2015, 86, 075101.	0.6	33
12	Bifunctional CO oxidation over Mn-mullite anchored Pt sub-nanoclustersviaatomic layer deposition. Chemical Science, 2018, 9, 2469-2473.	3.7	33
13	Getting Insights into the Temperature-Specific Active Sites on Platinum Nanoparticles for CO Oxidation: A Combined in Situ Spectroscopic and ab Initio Density Functional Theory Study. ACS Catalysis, 2019, 9, 7759-7768.	5.5	33
14	Atomically Controllable Pd@Pt Coreâ€“Shell Nanoparticles towards Preferential Oxidation of CO in Hydrogen Reactions Modulated by Platinum Shell Thickness. ChemCatChem, 2016, 8, 326-330.	1.8	28
15	Oxideâ€Nanotrapâ€Anchored Platinum Nanoparticles with High Activity and Sintering Resistance by Areaâ€Selective Atomic Layer Deposition. Angewandte Chemie, 2017, 129, 1670-1674.	1.6	27
16	Surface passivation of aluminum hydride particles via atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	24
17	Ultrathin CoOx-modified hematite with low onset potential for solar water oxidation. Physical Chemistry Chemical Physics, 2017, 19, 14178-14184.	1.3	24
18	Tuning the morphology and composition of ultrathin cobalt oxide films via atomic layer deposition. RSC Advances, 2015, 5, 71816-71823.	1.7	23

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19	CO oxidation over MO_x (M = Mn, Fe, Co, Ni, Cu) supported on SmMn₂O₅ composite catalysts. Catalysis Science and Technology, 2018, 8, 5490-5497.	2.1	19
20	Ultrathin Zirconia Passivation and Stabilization of Aluminum Nanoparticles for Energetic Nanomaterials via Atomic Layer Deposition. ACS Applied Nano Materials, 2018, 1, 5500-5506.	2.4	19
21	Modulation of Dirac points and band-gaps in graphene via periodic fullerene adsorption. AIP Advances, 2013, 3, .	0.6	18
22	Tunable H2 binding on alkaline and alkaline earth metals decorated graphene substrates from first-principles calculations. International Journal of Hydrogen Energy, 2017, 42, 10064-10071.	3.8	17
23	A-site cation exfoliation of amorphous SmMnxOy oxides for low temperature propane oxidation. Journal of Catalysis, 2022, 409, 59-69.	3.1	17
24	Theoretical Study of sp²-sp³ Hybridized Carbon Network for Li-ion Battery Anode. Journal of Physical Chemistry C, 2013, 117, 4951-4956.	1.5	15
25	Progress in enhanced fluidization process for particle coating via atomic layer deposition. Chemical Engineering and Processing: Process Intensification, 2021, 159, 108234.	1.8	14
26	Tuning the structure of bifunctional Pt/SmMn₂O₅ interfaces for promoted low-temperature CO oxidation activity. Nanoscale, 2019, 11, 8150-8159.	2.8	13
27	Surface stabilities and NO oxidation kinetics on hexagonal-phase LaCoO₃ facets: a first-principles study. Catalysis Science and Technology, 2014, 4, 3687-3696.	2.1	12
28	Combined effects of defects and hydroxyl groups on the electronic transport properties of reduced graphene oxide. Applied Physics A: Materials Science and Processing, 2015, 118, 885-892.	1.1	12
29	Unravelling origins of Pd ensemblesâ€™ activity in CO oxidation via state-to-state microkinetic analysis. Journal of Catalysis, 2019, 371, 276-286.	3.1	12
30	Effect of exposed facets and oxygen vacancies on the catalytic activity of Pd_xCe_{1â^'x}O_{2â^'Î´} catalysts: a combined experimental and theoretical study. Catalysis Science and Technology, 2017, 7, 4462-4469.	2.1	11
31	Unravelling the selective growth mechanism of AlOx with dimethylaluminum isopropoxide as a precursor in atomic layer deposition: a combined theoretical and experimental study. Journal of Materials Chemistry A, 2020, 8, 4308-4317.	5.2	10
32	Highly efficient copper-manganese oxide catalysts with abundant surface vacancies for low-temperature water-gas shift reaction. International Journal of Hydrogen Energy, 2020, 45, 8629-8639.	3.8	9
33	Reduction of Surface Residual Lithium Compounds for Single-Crystal LiNi0.6Mn0.2Co0.2O2 via Al2O3 Atomic Layer Deposition and Post-Annealing. Coatings, 2022, 12, 84.	1.2	7
34	Theoretical Study of Li-Doped sp²â€“sp³ Hybrid Carbon Network for Hydrogen Storage. Journal of Physical Chemistry C, 2015, 119, 15831-15838.	1.5	6
35	Fe₃O₄/Co₃O₄ binary oxides as bifunctional electrocatalysts for rechargeable Znâ€“air batteries by one-pot pyrolysis of zeolitic imidazolate frameworks. Sustainable Energy and Fuels, 2021, 5, 2985-2993.	2.5	6
36	A combined multiscale modeling and experimental study on surface modification of high-volume micro-nanoparticles with atomic accuracy. International Journal of Extreme Manufacturing, 2022, 4, 025101.	6.3	6

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37	First-principles study of the structural, energetic and electronic properties of C₂₀-carbon nanobuds. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 035006.	0.8	5
38	Development of a pair potential for Ta-He system. Computational Materials Science, 2019, 156, 268-272.	1.4	4
39	Well-controlled Ptâ€“CeO₂â€“nitrogen doped carbon triple-junction catalysts with enhanced activity and durability for the oxygen reduction reaction. Sustainable Energy and Fuels, 2022, 6, 2989-2995.	2.5	4
40	Facet-dependent activity of shape-controlled TiO2 supported Au nanoparticles for the waterâ€“gas shift reaction. Catalysis Science and Technology, 0, , .	2.1	2
41	Catalysts via Atomic Layer Deposition. Molecular Catalysis, 2020, , 69-105.	1.3	1
42	Electronic transport properties of atomic scale graphene/metal side contact. Materials Research Society Symposia Proceedings, 2013, 1553, 1.	0.1	0
43	Promoted Platinum Catalytic Activity and Thermal Stability with Nano-Scale Cobalt Oxide Coating via Atomic Layer Deposition. ECS Transactions, 2014, 64, 159-166.	0.3	0
44	Alumina nanocoating assisted dispersion stability of permanent violet pigments via atomic layer deposition. Materials Chemistry and Physics, 2022, 282, 125937.	2.0	0
45	Atomic layer deposition for advanced nanomanufacturing. Science China Technological Sciences, 0, , .	2.0	0