Xiao-Yong Lai

List of Publications by Year
in descending order

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61 papers	5,896 citations	172457 29 h-index	118850 62 g-index
62 all docs	62 docs citations	62 times ranked	8187 citing authors

#	Article	IF	Citations
1	Recent advances in micro-/nano-structured hollow spheres for energy applications: From simple to complex systems. Energy and Environmental Science, 2012, 5, 5604-5618.	30.8	1,069
2	Hierarchically Ordered Macroâ^'Mesoporous TiO₂â^'Graphene Composite Films: Improved Mass Transfer, Reduced Charge Recombination, and Their Enhanced Photocatalytic Activities. ACS Nano, 2011, 5, 590-596.	14.6	715
3	Multi-shelled hollow micro-/nanostructures. Chemical Society Reviews, 2015, 44, 6749-6773.	38.1	603
4	General Synthesis and Gasâ€Sensing Properties of Multipleâ€Shell Metal Oxide Hollow Microspheres. Angewandte Chemie - International Edition, 2011, 50, 2738-2741.	13.8	517
5	Accurate Control of Multishelled ZnO Hollow Microspheres for Dyeâ€Sensitized Solar Cells with High Efficiency. Advanced Materials, 2012, 24, 1046-1049.	21.0	482
6	A Novel and Highly Efficient Photocatalyst Based on P25â€"Graphdiyne Nanocomposite. Small, 2012, 8, 265-271.	10.0	289
7	General Synthesis of Homogeneous Hollow Coreâ^'Shell Ferrite Microspheres. Journal of Physical Chemistry C, 2009, 113, 2792-2797.	3.1	220
8	Ordered Arrays of Bead-Chain-like In₂O₃ Nanorods and Their Enhanced Sensing Performance for Formaldehyde. Chemistry of Materials, 2010, 22, 3033-3042.	6.7	140
9	3D NiO hollow sphere/reduced graphene oxide composite for high-performance glucose biosensor. Scientific Reports, 2017, 7, 5220.	3.3	132
10	Highly sensitive acetone gas sensor based on ultrafine Î±-Fe2O3 nanoparticles. Sensors and Actuators B: Chemical, 2017, 238, 923-927.	7.8	126
11	Ordered mesoporous NiO with thin pore walls and its enhanced sensing performance for formaldehyde. Nanoscale, 2015, 7, 4005-4012.	5.6	110
12	Direct hydrothermal synthesis of single-crystalline hematite nanorods assisted by 1,2-propanediamine. Nanotechnology, 2009, 20, 245603.	2.6	100
13	Hierarchically Mesoporous Hematite Microspheres and Their Enhanced Formaldehydeâ€Sensing Properties. Small, 2011, 7, 578-582.	10.0	92
14	Volatile Organic Compound Gas-Sensing Properties of Bimodal Porous Î±-Fe₂O₃ with Ultrahigh Sensitivity and Fast Response. ACS Applied Materials & Interfaces, 2018, 10, 13702-13711.	8.0	87
15	Improving the photocatalytic H₂ evolution activity of Keggin polyoxometalates anchoring copper-azole complexes. Green Chemistry, 2021, 23, 3104-3114.	9.0	77
16	Sandwich Photothermal Membrane with Confined Hierarchical Carbon Cells Enabling Highâ€Efficiency Solar Steam Generation. Small, 2020, 16, e2000573.	10.0	67
17	Co3O4 /N-doped RGO nanocomposites derived from MOFs and their highly enhanced gas sensing performance. Sensors and Actuators B: Chemical, 2020, 303, 127219.	7.8	53
18	A CoMoO₄â€"Co₂Mo₃O₈ heterostructure with valence-rich molybdenum for a high-performance hydrogen evolution reaction in alkaline solution. Journal of Materials Chemistry A, 2019, 7, 16761-16769.	10.3	50

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19	Ordered Large-Pore Mesoporous Cr₂O₃ with Ultrathin Framework for Formaldehyde Sensing. ACS Applied Materials & Interfaces, 2017, 9, 18170-18177.	8.0	47
20	Saltâ€Resistant Carbon Nanotubes/Polyvinyl Alcohol Hybrid Gels with Tunable Water Transport for Highâ€Efficiency and Longâ€Term Solar Steam Generation. Energy Technology, 2020, 8, 1900721.	3.8	46
21	Mechanism of catalytic tar reforming over biochar: Description of volatile-H2O-char interaction. Fuel, 2020, 275, 117954.	6.4	45
22	Chestnut-like CoFe2O4@SiO2@In2O3 nanocomposite microspheres with enhanced acetone sensing property. Sensors and Actuators B: Chemical, 2018, 255, 3364-3373.	7.8	40
23	Hierarchical structure N, O-co-doped porous carbon/carbon nanotube composite derived from coal for supercapacitors and CO₂ capture. Nanoscale Advances, 2020, 2, 878-887.	4.6	40
24	Review of Carbon Fixation Evaluation and Emission Reduction Effectiveness for Biochar in China. Energy & Fuels, 2020, 34, 10583-10606.	5.1	39
25	Synthesis and electrochemical performance of NaV₆O₁₅ microflowers for lithium and sodium ion batteries. RSC Advances, 2017, 7, 29481-29488.	3.6	38
26	Microwave-assisted fast synthesis of hierarchical NiCo₂O₄ nanoflower-like supported Ni(OH)₂ nanoparticles with an enhanced electrocatalytic activity towards methanol oxidation. Inorganic Chemistry Frontiers, 2018, 5, 172-182.	6.0	36
27	Catalytic Mechanism of K and Ca on the Volatileâ€“Biochar Interaction for Rapid Pyrolysis of Biomass: Experimental and Simulation Studies. Energy & Fuels, 2020, 34, 9741-9753.	5.1	34
28	Ordered array of Agâ€“In2O3 composite nanorods with enhanced gas-sensing properties. Scripta Materialia, 2012, 67, 293-296.	5.2	33
29	Controlling synthesis and gas-sensing properties of ordered mesoporous In2O3-reduced graphene oxide (rGO) nanocomposite. Science Bulletin, 2015, 60, 1348-1354.	9.0	30
30	Hierarchical NiCo2O4 Hollow Sphere as a Peroxidase Mimetic for Colorimetric Detection of H2O2 and Glucose. Sensors, 2017, 17, 217.	3.8	29
31	Controlled synthesis and enhanced toluene-sensing properties of mesoporous NixCo1-xFe2O4 nanostructured microspheres with tunable composite. Sensors and Actuators B: Chemical, 2019, 280, 227-234.	7.8	29
32	One-Pot Synthesis of Porous Hematite Hollow Microspheres and Their Application in Water Treatment. Journal of Nanoscience and Nanotechnology, 2010, 10, 7707-7710.	0.9	28
33	Ultrathin Î³-Al₂O₃ nanofibers with large specific surface area and their enhanced thermal stability by Si-doping. RSC Advances, 2015, 5, 54053-54058.	3.6	28
34	Synthesis and photocatalytic activity of hierarchical flower-like SrTiO3 nanostructure. Science China Materials, 2015, 58, 192-197.	6.3	28
35	Ordered mesoporous NiFe2O4 with ultrathin framework for low-ppb toluene sensing. Science Bulletin, 2018, 63, 187-193.	9.0	26
36	Morphology manipulation of Î±-Fe2O3 in the mixed solvent system. Solid State Sciences, 2009, 11, 2056-2059.	3.2	25

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37	Hollow Co₃O₄ dodecahedrons with controlled crystal orientation and oxygen vacancies for the high performance oxygen evolution reaction. Materials Chemistry Frontiers, 2021, 5, 259-267.	5.9	22
38	Formation of efficient dye-sensitized solar cells by introducing an interfacial layer of hierarchically ordered macro-mesoporous TiO2 film. Science China Chemistry, 2011, 54, 930-935.	8.2	19
39	TiO2 nanotubes modified with polydopamine and graphene quantum dots as a photochemical biosensor for the ultrasensitive detection of glucose. Journal of Materials Science, 2020, 55, 6105-6117.	3.7	19
40	Product distribution from oil sludge and waste tires under high pressure pyrolysis. Fuel, 2022, 311, 122511.	6.4	17
41	First-principles calculations of 0D/2D GQDsâ€“MoS₂ mixed van der Waals heterojunctions for photocatalysis: a transition from type I to type II. Physical Chemistry Chemical Physics, 2022, 24, 8529-8536.	2.8	17
42	Hierarchical Hydroxyapatite Microspheres Composed of Nanorods and Their Competitive Sorption Behavior for Heavy Metal Ions. European Journal of Inorganic Chemistry, 2012, 2012, 2665-2668.	2.0	14
43	Theoretical study on photophysical properties of three high water solubility polypyridyl complexes for two-photon photodynamic therapy. Physical Chemistry Chemical Physics, 2018, 20, 18074-18081.	2.8	12
44	Simultaneous Electrochemical Detection of Nitrite and Hydrogen Peroxide Based on 3D Au-rGO/FTO Obtained Through a One-Step Synthesis. Sensors, 2019, 19, 1304.	3.8	12
45	Field-induced slow relaxation of magnetization in a distorted octahedral mononuclear high-spin Co(<scp>ii</scp>) complex. CrystEngComm, 2018, 20, 962-968.	2.6	9
46	Insight into tar thermal cracking and catalytic cracking by char: Characteristics and kinetics. Fuel, 2022, 326, 124929.	6.4	8
47	Ordered mesoporous ZnGa₂O₄ for photocatalytic hydrogen evolution. Materials Chemistry Frontiers, 2021, 5, 5790-5797.	5.9	6
48	Enhanced charge separation efficiency of sulfur-doped TiO2 nanorod arrays for an improved photoelectrochemical glucose sensing performance. Journal of Materials Science, 2022, 57, 1362-1372.	3.7	6
49	Synthesis and Enhanced Formaldehyde-Sensing Properties of In2O3 Hollow Spheres with Thin Shells. Journal of Electronic Materials, 2018, 47, 2165-2170.	2.2	5
50	Highly porous nitrogen-doped carbon superstructures derived from the intramolecular cyclization-induced crystallization-driven self-assembly of poly(amic acid). Nanoscale Advances, 2022, 4, 1422-1430.	4.6	5
51	Ordered large-pore mesoporous ZnCr2O4 with ultrathin crystalline frameworks for highly sensitive and selective detection of ppb-level p-xylene. Sensors and Actuators B: Chemical, 2022, 365, 131964.	7.8	5
52	Theoretical insight into the photophysical properties of long-lifetime Ir(<scp>iii</scp>) and Rh(<scp>iii</scp>) complexes for two-photon photodynamic therapy. Physical Chemistry Chemical Physics, 2019, 21, 8394-8401.	2.8	4
53	Light manipulation in a dually ordered porous TiO2â€“rGO composite for efficient solar energy utilization. Inorganic Chemistry Frontiers, 2017, 4, 578-580.	6.0	3
54	A theoretical study of a series of water-soluble triphenylamine photosensitizers for two-photon photodynamic therapy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 203, 229-235.	3.9	3

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55	Theoretical insights on type I/II photoreactions of potential Zn(II) polypyridyl photosensitizers for two-photon photodynamic therapy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 242, 118771.	3.9	3
56	An irregular-octagonal-prism-shaped hostâ€“guest supramolecular network based on silicotungstate and manganese-complex for light-driven hydrogen evolution. New Journal of Chemistry, 2021, 45, 3954-3959.	2.8	3
57	Pomegranate-like mesoporous double carbon-coated Fe2P nanoparticles as advanced anode materials for sodium-ion batteries. Journal of Materials Science, 2022, 57, 9389-9402.	3.7	3
58	Size-Controlled Silver Nanoparticles Confined in Ordered Mesoporous Silica and Their Enhanced Catalytic Activities. Nano, 2017, 12, 1750104.	1.0	1
59	New Mg2+, Mn2+ coordination complexes with quinoline-monoacylhydrazidate ligand via in situ acylation reaction. Inorganica Chimica Acta, 2017, 467, 67-74.	2.4	1
60	Magnetism, stability and electronic properties of a novel one-dimensional infinite monatomic copper wire: a density functional study. New Journal of Chemistry, 2019, 43, 5065-5069.	2.8	1
61	A Photoelectrochemical Platform Based on Polyaniline-Modified Titanium Dioxide Facet Heterostructure. ACS Applied Bio Materials, 2022, 5, 1297-1304.	4.6	1