Ai-Yong Zhang

List of Publications by Year
in descending order

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26 papers	1,316 citations	361413 20 h-index	552781 26 g-index
26 all docs	26 docs citations	26 times ranked	2242 citing authors

#	Article	IF	Citations
1	Defective titanium dioxide single crystals exposed by high-energy {001} facets for efficient oxygen reduction. Nature Communications, 2015, 6, 8696.	12.8	263
2	Efficient Electrochemical Reduction of Nitrobenzene by Defect-Engineered TiO_{2â€“x} Single Crystals. Environmental Science & Technology, 2016, 50, 5234-5242.	10.0	109
3	Epitaxial facet junctions on TiO₂ single crystals for efficient photocatalytic water splitting. Energy and Environmental Science, 2018, 11, 1444-1448.	30.8	102
4	Degradation of refractory pollutants under solar light irradiation by a robust and self-protected ZnO/CdS/TiO2 hybrid photocatalyst. Water Research, 2016, 92, 78-86.	11.3	86
5	Degradation of organic pollutants by Co3O4-mediated peroxymonosulfate oxidation: Roles of high-energy {0â€¯0â€¯1}-exposed TiO2 support. Chemical Engineering Journal, 2018, 334, 1430-1439.	12.7	75
6	Layer-controlled growth of MoS2 on self-assembled flower-like Bi2S3 for enhanced photocatalysis under visible light irradiation. NPG Asia Materials, 2016, 8, e263-e263.	7.9	72
7	Heterogeneous Fenton decontamination of organoarsenicals and simultaneous adsorption of released arsenic with reduced secondary pollution. Chemical Engineering Journal, 2018, 344, 1-11.	12.7	70
8	Electrochemical Sensing of Bisphenol A on Facet-Tailored TiO₂Single Crystals Engineered by Inorganic-Framework Molecular Imprinting Sites. Analytical Chemistry, 2018, 90, 3165-3173.	6.5	63
9	Electrochemical treatment of phenol-containing wastewater by facet-tailored TiO2: Efficiency, characteristics and mechanisms. Water Research, 2019, 165, 114980.	11.3	58
10	Electrochemical degradation of refractory pollutants using TiO2 single crystals exposed byÂhigh-energy {001} facets. Water Research, 2014, 66, 273-282.	11.3	56
11	Heterogeneous activation of H2O2 by defect-engineered TiO2â˜† single crystals for refractory pollutants degradation: A Fenton-like mechanism. Journal of Hazardous Materials, 2016, 311, 81-90.	12.4	54
12	A robust cocatalyst Pd₄S uniformly anchored onto Bi₂S₃ nanorods for enhanced visible light photocatalysis. Journal of Materials Chemistry A, 2015, 3, 4301-4306.	10.3	45
13	In situ organic Fenton-like catalysis triggered by anodic polymeric intermediates for electrochemical water purification. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30966-30972.	7.1	41
14	Photochemical Anti-Fouling Approach for Electrochemical Pollutant Degradation on Facet-Tailored TiO₂ Single Crystals. Environmental Science & Technology, 2017, 51, 11326-11335.	10.0	30
15	Reusing Sulfur-Poisoned Palladium Waste as a Highly Active, Nonradical Fenton-like Catalyst for Selective Degradation of Phenolic Pollutants. Environmental Science & Technology, 2022, 56, 564-574.	10.0	30
16	Chemical recycling of the waste anodic electrolyte from the TiO₂ nanotube preparation process to synthesize facet-controlled TiO₂ single crystals as an efficient photocatalyst. Green Chemistry, 2014, 16, 2745-2753.	9.0	27
17	Hexagonal microrods of anatase tetragonal TiO2: self-directed growth and superior photocatalytic performance. Chemical Communications, 2013, 49, 6075.	4.1	26
18	Photochemical Protection of Reactive Sites on Defective TiO_{2â€“x} Surface for Electrochemical Water Treatment. Environmental Science & Technology, 2019, 53, 7641-7652.	10.0	26

#	Article	IF	Citations
19	Photo-assisted electrochemical detection of bisphenol A in water samples by renewable {001}-exposed TiO2 single crystals. Water Research, 2019, 157, 30-39.	11.3	22
20	A simple strategy to refine Cu 2 O photocatalytic capacity for refractory pollutants removal: Roles of oxygen reduction and Fe(II) chemistry. Journal of Hazardous Materials, 2017, 330, 9-17.	12.4	21
21	Recycling chestnut shell for superior peroxymonosulfate activation in contaminants degradation via the synergistic radical/non-radical mechanisms. Journal of Hazardous Materials, 2022, 430, 128471.	12.4	11
22	Stable Electrochemical Determination of Dopamine by a Fluorine-Terminated {001}-Exposed TiO₂ Single Crystal Sensor. Analytical Chemistry, 2020, 92, 9629-9639.	6.5	10
23	Photochemical pollutant degradation on facet junction-engineered TiO2 promoted by organic arsenical: Governing roles of arsenic-terminated surface chemistry and bulk-free radical speciation. Journal of Hazardous Materials, 2020, 390, 122159.	12.4	10
24	Non-radical activation of H2O2 by surface-disordered WO3 for efficient and selective pollutant degradation with weak matrix effects. Environmental Science and Pollution Research, 2020, 27, 1898-1911.	5.3	7
25	Superior degradation of phenolic contaminants in different water matrices via non-radical Fenton-like mechanism mediated by surface-disordered WO3. Environmental Science and Pollution Research, 2022, 29, 18259-18270.	5.3	1
26	Tailoring the Fenton-like mechanisms of surface functional groups by corrosive structural defects for superior pollutant degradation on platform carbon. Journal of Environmental Chemical Engineering, 2022, 10, 108210.	6.7	1