Takeo Arai

List of Publications by Year
in descending order

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35 papers	3,518 citations	257450 24 h-index	361022 35 g-index
37 all docs	37 docs citations	37 times ranked	4379 citing authors

#	Article	IF	Citations
1	Photoelectrochemical Decomposition of Water into H2and O2on Porous BiVO4Thin-Film Electrodes under Visible Light and Significant Effect of Ag Ion Treatment. Journal of Physical Chemistry B, 2006, 110, 11352-11360.	2.6	515
2	Selective CO₂ Conversion to Formate Conjugated with H₂O Oxidation Utilizing Semiconductor/Complex Hybrid Photocatalysts. Journal of the American Chemical Society, 2011, 133, 15240-15243.	13.7	458
3	Efficient Complete Oxidation of Acetaldehyde into CO2over CuBi2O4/WO3Composite Photocatalyst under Visible and UV Light Irradiation. Journal of Physical Chemistry C, 2007, 111, 7574-7577.	3.1	313
4	Solar CO2 reduction using H2O by a semiconductor/metal-complex hybrid photocatalyst: enhanced efficiency and demonstration of a wireless system using SrTiO3 photoanodes. Energy and Environmental Science, 2013, 6, 1274.	30.8	251
5	Photoelectrochemical reduction of CO2 in water under visible-light irradiation by a p-type InP photocathode modified with an electropolymerized ruthenium complex. Chemical Communications, 2010, 46, 6944.	4.1	180
6	Cu-Doped ZnS Hollow Particle with High Activity for Hydrogen Generation from Alkaline Sulfide Solution under Visible Light. Chemistry of Materials, 2008, 20, 1997-2000.	6.7	168
7	A monolithic device for CO₂ photoreduction to generate liquid organic substances in a single-compartment reactor. Energy and Environmental Science, 2015, 8, 1998-2002.	30.8	157
8	Highly active WO3 semiconductor photocatalyst prepared from amorphous peroxo-tungstic acid for the degradation of various organic compounds. Applied Catalysis B: Environmental, 2010, 94, 150-157.	20.2	137
9	High-Throughput Screening Using Porous Photoelectrode for the Development of Visible-Light-Responsive Semiconductors. ACS Combinatorial Science, 2007, 9, 574-581.	3.3	136
10	Complete oxidation of acetaldehyde and toluene over a Pd/WO3 photocatalyst under fluorescent- or visible-light irradiation. Chemical Communications, 2008, , 5565.	4.1	135
11	Selective CO2 conversion to formate in water using a CZTS photocathode modified with a ruthenium complex polymer. Chemical Communications, 2011, 47, 12664.	4.1	127
12	Reaction Mechanism and Activity of WO₃-Catalyzed Photodegradation of Organic Substances Promoted by a CuO Cocatalyst. Journal of Physical Chemistry C, 2009, 113, 6602-6609.	3.1	118
13	Toward Solar-Driven Photocatalytic CO₂ Reduction Using Water as an Electron Donor. Inorganic Chemistry, 2015, 54, 5105-5113.	4.0	115
14	Solar-Driven Photocatalytic CO₂ Reduction in Water Utilizing a Ruthenium Complex Catalyst on p-Type Fe₂O₃ with a Multiheterojunction. ACS Catalysis, 2018, 8, 1405-1416.	11.2	110
15	Promotion effect of CuO co-catalyst on WO3-catalyzed photodegradation of organic substances. Catalysis Communications, 2008, 9, 1254-1258.	3.3	87
16	The enhancement of WO3-catalyzed photodegradation of organic substances utilizing the redox cycle of copper ions. Applied Catalysis B: Environmental, 2008, 84, 42-47.	20.2	67
17	Structural Improvement of CaFe₂O₄ by Metal Doping toward Enhanced Cathodic Photocurrent. ACS Applied Materials & Interfaces, 2014, 6, 10969-10973.	8.0	65
18	Solar-Driven CO₂ Reduction Using a Semiconductor/Molecule Hybrid Photosystem: From Photocatalysts to a Monolithic Artificial Leaf. Accounts of Chemical Research, 2022, 55, 933-943.	15.6	47

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19	Self-assembled Cuprous Coordination Polymer as a Catalyst for CO₂ Electrochemical Reduction into C₂ Products. ACS Catalysis, 2020, 10, 10412-10419.	11.2	44
20	Highly crystalline Î²-FeOOH(Cl) nanorod catalysts doped with transition metals for efficient water oxidation. Sustainable Energy and Fuels, 2017, 1, 636-643.	4.9	40
21	p -type conduction induced by N-doping in Î±-Fe2O3. Applied Physics Letters, 2011, 98, .	3.3	37
22	Stoichiometric water splitting using a p-type Fe₂O₃based photocathode with the aid of a multi-heterojunction. Journal of Materials Chemistry A, 2017, 5, 6483-6493.	10.3	34
23	Solar-driven CO₂ to CO reduction utilizing H₂O as an electron donor by earth-abundant Mnâ€“bipyridine complex and Ni-modified Fe-oxyhydroxide catalysts activated in a single-compartment reactor. Chemical Communications, 2019, 55, 237-240.	4.1	33
24	Utilization of Fe3+/Fe2+ Redox for the Photodegradation of Organic Substances over WO3 Photocatalyst and for H2 Production from the Electrolysis of Water. Electrochemistry, 2008, 76, 128-131.	1.4	32
25	Molecular Catalysts Immobilized on Semiconductor Photosensitizers for Proton Reduction toward Visibleâ€Lightâ€Driven Overall Water Splitting. ChemSusChem, 2019, 12, 1807-1824.	6.8	25
26	Electrocatalytic CO₂ reduction near the theoretical potential in water using Ru complex supported on carbon nanotubes. Nanotechnology, 2018, 29, 034001.	2.6	19
27	Nitrogen and transition-metal codoped titania nanotube arrays for visible-light-sensitive photoelectrochemical water oxidation. Chemical Communications, 2014, 50, 7614.	4.1	17
28	Photoactivity of p-Type Î±-Fe₂O₃Induced by Anionic/Cationic Codoping of N and Zn. Applied Physics Express, 2013, 6, 041201.	2.4	14
29	Low-Overpotential Electrochemical Water Oxidation Catalyzed by CuO Derived from 2 nm-Sized Cu₂(NO₃)(OH)₃ Nanoparticles Generated by Laser Ablation at the Airâ€“Liquid Interface. ACS Applied Energy Materials, 2020, 3, 8383-8392.	5.1	12
30	Carbon microfiber layer as noble metal-catalyst support for selective CO2 photoconversion in phosphate solution: Toward artificial photosynthesis in a single-compartment reactor. Journal of Photochemistry and Photobiology A: Chemistry, 2016, 327, 1-5.	3.9	8
31	Enhanced electrochemical CO₂ reduction selectivity by application of self-assembled polymer microparticles to a silver electrode. Chemical Communications, 2019, 55, 11623-11625.	4.1	6
32	Electrochemical CO2 reduction improved by tuning the Cu-Cu distance in halogen-bridged dinuclear cuprous coordination polymers. Journal of Catalysis, 2021, 404, 12-17.	6.2	5
33	Aminoalkylsilane-modified Silver Cathodes for Electrochemical CO₂ Reduction. Chemistry Letters, 2016, 45, 1362-1364.	1.3	3
34	Light-Driven Carbon Dioxide Reduction Devices. Green Chemistry and Sustainable Technology, 2018, , 259-280.	0.7	2
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