Akihide Iwase

List of Publications by Year
in descending order

101 papers	8,827 citations	53660 45 h-index	40881 93 g-index
108 all docs	108 docs citations	108 times ranked	9053 citing authors

#	Article	IF	Citations
1	Reduced Graphene Oxide as a Solid-State Electron Mediator in Z-Scheme Photocatalytic Water Splitting under Visible Light. Journal of the American Chemical Society, 2011, 133, 11054-11057.	6.6	952
2	Reducing Graphene Oxide on a Visible-Light BiVO₄ Photocatalyst for an Enhanced Photoelectrochemical Water Splitting. Journal of Physical Chemistry Letters, 2010, 1, 2607-2612.	2.1	825
3	Surface Modification of CoO_{<i>x</i>} Loaded BiVO₄ Photoanodes with Ultrathin <i>p</i>-Type NiO Layers for Improved Solar Water Oxidation. Journal of the American Chemical Society, 2015, 137, 5053-5060.	6.6	542
4	Z-Schematic Water Splitting into H₂ and O₂ Using Metal Sulfide as a Hydrogen-Evolving Photocatalyst and Reduced Graphene Oxide as a Solid-State Electron Mediator. Journal of the American Chemical Society, 2015, 137, 604-607.	6.6	467
5	Water Splitting and CO₂ Reduction under Visible Light Irradiation Using Z-Scheme Systems Consisting of Metal Sulfides, CoOx-Loaded BiVO₄, and a Reduced Graphene Oxide Electron Mediator. Journal of the American Chemical Society, 2016, 138, 10260-10264.	6.6	461
6	The effect of co-catalyst for Z-scheme photocatalysis systems with an Fe3+/Fe2+ electron mediator on overall water splitting under visible light irradiation. Journal of Catalysis, 2008, 259, 133-137.	3.1	382
7	Photocatalytic H₂ Evolution over TiO₂ Nanoparticles. The Synergistic Effect of Anatase and Rutile. Journal of Physical Chemistry C, 2010, 114, 2821-2829.	1.5	335
8	BiVO4â€“Ru/SrTiO3:Rh composite Z-scheme photocatalyst for solar water splitting. Chemical Science, 2014, 5, 1513.	3.7	228
9	A visible light responsive rhodium and antimony-codoped SrTiO₃ powdered photocatalyst loaded with an IrO₂ cocatalyst for solar water splitting. Chemical Communications, 2014, 50, 2543-2546.	2.2	202
10	Photoelectrochemical water splitting using visible-light-responsive BiVO4 fine particles prepared in an aqueous acetic acid solution. Journal of Materials Chemistry, 2010, 20, 7536.	6.7	197
11	Effects of doping of metal cations on morphology, activity, and visible light response of photocatalysts. Chemical Physics, 2007, 339, 104-110.	0.9	191
12	Semiconductor/reduced graphene oxide nanocomposites derived from photocatalytic reactions. Catalysis Today, 2011, 164, 353-357.	2.2	167
13	Sustained solar hydrogen generation using a dye-sensitised NiO photocathode/BiVO4 tandem photo-electrochemical device. Energy and Environmental Science, 2012, 5, 9472.	15.6	167
14	Nanosized Au Particles as an Efficient Cocatalyst for Photocatalytic Overall Water Splitting. Catalysis Letters, 2006, 108, 7-10.	1.4	136
15	Role of Iron Ion Electron Mediator on Photocatalytic Overall Water Splitting under Visible Light Irradiation Using Z-Scheme Systems. Bulletin of the Chemical Society of Japan, 2007, 80, 2457-2464.	2.0	130
16	Utilization of Metal Sulfide Material of (CuGa)_{1â€“<i>x</i>}Zn_{2<i>x</i>}S₂ Solid Solution with Visible Light Response in Photocatalytic and Photoelectrochemical Solar Water Splitting Systems. Journal of Physical Chemistry Letters, 2015, 6, 1042-1047.	2.1	130
17	Flame Preparation of Visible-Light-Responsive BiVO₄ Oxygen Evolution Photocatalysts with Subsequent Activation via Aqueous Route. ACS Applied Materials & Interfaces, 2011, 3, 1997-2004.	4.0	128
18	Highly Active NaTaO₃â€Based Photocatalysts for CO₂ Reduction to Form CO Using Water as the Electron Donor. ChemSusChem, 2017, 10, 112-118.	3.6	124

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19	Enhanced photocatalytic water splitting by BaLa4Ti4O15 loaded with âˆ¼1 nm gold nanoclusters using glutathione-protected Au25 clusters. Nanoscale, 2013, 5, 7188.	2.8	103
20	The Effect of Alkaline Earth Metal Ion Dopants on Photocatalytic Water Splitting by NaTaO₃ Powder. ChemSusChem, 2009, 2, 873-877.	3.6	96
21	Influence of Annealing Temperature of WO₃ in Photoelectrochemical Conversion and Energy Storage for Water Splitting. ACS Applied Materials & Interfaces, 2013, 5, 5269-5275.	4.0	89
22	The effect of Au cocatalyst loaded on La-doped NaTaO3 on photocatalytic water splitting and O2 photoreduction. Applied Catalysis B: Environmental, 2013, 136-137, 89-93.	10.8	88
23	Controlled Loading of Small Au_{<i>n</i>} Clusters (<i>n</i> = 10â€“39) onto BaLa₄Ti₄O₁₅ Photocatalysts: Toward an Understanding of Size Effect of Cocatalyst on Water-Splitting Photocatalytic Activity. Journal of Physical Chemistry C, 2015, 119, 11224-11232.	1.5	87
24	Transforming Anodized WO₃ Films into Visible-Light-Active Bi₂WO₆ Photoelectrodes by Hydrothermal Treatment. Journal of Physical Chemistry Letters, 2012, 3, 913-918.	2.1	86
25	Formation of Surface Nano-step Structures and Improvement of Photocatalytic Activities of NaTaO3by Doping of Alkaline Earth Metal Ions. Chemistry Letters, 2004, 33, 1260-1261.	0.7	81
26	CO₂ Reduction Using Water as an Electron Donor over Heterogeneous Photocatalysts Aiming at Artificial Photosynthesis. Accounts of Chemical Research, 2022, 55, 966-977.	7.6	80
27	A Novel Photodeposition Method in the Presence of Nitrate Ions for Loading of an Iridium Oxide Cocatalyst for Water Splitting. Chemistry Letters, 2005, 34, 946-947.	0.7	76
28	The KCaSrTa₅O₁₅ photocatalyst with tungsten bronze structure for water splitting and CO₂ reduction. Physical Chemistry Chemical Physics, 2014, 16, 24417-24422.	1.3	74
29	The role of surface states during photocurrent switching: Intensity modulated photocurrent spectroscopy analysis of BiVO4 photoelectrodes. Applied Catalysis B: Environmental, 2018, 237, 401-408.	10.8	73
30	Photoelectrochemical water oxidation using a Bi₂MoO₆/MoO₃ heterojunction photoanode synthesised by hydrothermal treatment of an anodised MoO₃ thin film. Journal of Materials Chemistry A, 2016, 4, 6964-6971.	5.2	71
31	Photocatalytic CO₂ reduction using water as an electron donor by a powdered Z-scheme system consisting of metal sulfide and an RGOâ€“TiO₂ composite. Faraday Discussions, 2017, 198, 397-407.	1.6	71
32	Loading effects of silver oxides upon generation of reactive oxygen species in semiconductor photocatalysis. Physical Chemistry Chemical Physics, 2008, 10, 2986.	1.3	68
33	Interfacing BiVO 4 with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling. Small, 2016, 12, 5295-5302.	5.2	68
34	Au₂₅-Loaded BaLa₄Ti₄O₁₅ Water-Splitting Photocatalyst with Enhanced Activity and Durability Produced Using New Chromium Oxide Shell Formation Method. Journal of Physical Chemistry C, 2018, 122, 13669-13681.	1.5	67
35	Z-scheme water splitting under visible light irradiation over powdered metal-complex/semiconductor hybrid photocatalysts mediated by reduced graphene oxide. Journal of Materials Chemistry A, 2015, 3, 13283-13290.	5.2	65
36	Sensitization of NaMO3 (M: Nb and Ta) Photocatalysts with Wide Band Gaps to Visible Light by Ir Doping. Bulletin of the Chemical Society of Japan, 2009, 82, 514-518.	2.0	62

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37	Photoreduced Graphene Oxide as a Conductive Binder to Improve the Water Splitting Activity of Photocatalyst Sheets. Advanced Functional Materials, 2016, 26, 7011-7019.	7.8	62
38	Atomic-Level Understanding of the Effect of Heteroatom Doping of the Cocatalyst on Water-Splitting Activity in AuPd or AuPt Alloy Cluster-Loaded BaLa₄Ti₄O₁₅. ACS Applied Energy Materials, 2019, 2, 4175-4187.	2.5	61
39	An effect of Ag(<scp>i</scp>)-substitution at Cu sites in CuGaS₂ on photocatalytic and photoelectrochemical properties for solar hydrogen evolution. Journal of Materials Chemistry A, 2015, 3, 21815-21823.	5.2	59
40	Photocatalytic CO₂ Reduction Using Water as an Electron Donor under Visible Light Irradiation by Z-Scheme and Photoelectrochemical Systems over (CuGa)_{0.5}ZnS₂ in the Presence of Basic Additives. Journal of the American Chemical Society, 2022, 144, 2323-2332.	6.6	56
41	Time-Resolved Infrared Absorption Study of NaTaO₃ Photocatalysts Doped with Alkali Earth Metals. Journal of Physical Chemistry C, 2009, 113, 13918-13923.	1.5	55
42	Enhancement of CO2 reduction activity under visible light irradiation over Zn-based metal sulfides by combination with Ru-complex catalysts. Applied Catalysis B: Environmental, 2018, 224, 572-578.	10.8	55
43	A Simple Preparation Method of Visible-Light-Driven BiVO4 Photocatalysts From Oxide Starting Materials (Bi2O3 and V2O5) and Their Photocatalytic Activities. Journal of Solar Energy Engineering, Transactions of the ASME, 2010, 132, .	1.1	53
44	Z-Schematic and visible-light-driven CO₂ reduction using H₂O as an electron donor by a particulate mixture of a Ru-complex/(CuGa)_{1âˆ’x}Zn_{2x}S₂ hybrid catalyst, BiVO₄ and an electron mediator. Chemical Communications, 2018, 54, 10199-10202.	2.2	52
45	Visible light-induced charge storage, on-demand release and self-photorechargeability of WO3 film. Physical Chemistry Chemical Physics, 2011, 13, 13421.	1.3	50
46	Activation of Waterâ€Splitting Photocatalysts by Loading with Ultrafine Rhâ€“Cr Mixedâ€Oxide Cocatalyst Nanoparticles. Angewandte Chemie - International Edition, 2020, 59, 7076-7082.	7.2	48
47	Photocatalytic Water Splitting and CO2 Reduction over KCaSrTa5O15 Nanorod Prepared by a Polymerized Complex Method. Bulletin of the Chemical Society of Japan, 2015, 88, 538-543.	2.0	47
48	Solar hydrogen evolution using a CuGaS₂ photocathode improved by incorporating reduced graphene oxide. Journal of Materials Chemistry A, 2015, 3, 8566-8570.	5.2	45
49	Preparation of Mo- and W-doped BiVO4 fine particles prepared by an aqueous route for photocatalytic and photoelectrochemical O2 evolution. Journal of Photochemistry and Photobiology A: Chemistry, 2018, 353, 284-291.	2.0	40
50	Enhanced H₂ evolution over an Ir-doped SrTiO₃ photocatalyst by loading of an Ir cocatalyst using visible light up to 800 nm. Chemical Communications, 2018, 54, 10606-10609.	2.2	39
51	Photocathode Characteristics of a Spray-Deposited Cu₂ZnGeS₄ Thin Film for CO₂ Reduction in a CO₂-Saturated Aqueous Solution. ACS Applied Energy Materials, 2019, 2, 6911-6918.	2.5	37
52	Nitrogen/fluorine-codoped rutile titania as a stable oxygen-evolution photocatalyst for solar-driven Z-scheme water splitting. Sustainable Energy and Fuels, 2018, 2, 2025-2035.	2.5	36
53	Photoexcited Electrons Driven by Doping Concentration Gradient: Flux-Prepared NaTaO₃ Photocatalysts Doped with Strontium Cations. ACS Catalysis, 2018, 8, 9334-9341.	5.5	36
54	Understanding Selfâ€Photorechargeability of WO₃ for H₂ Generation without Light Illumination. ChemSusChem, 2013, 6, 291-298.	3.6	35

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55	The Importance of the Interfacial Contact: Is Reduced Graphene Oxide Always an Enhancer in Photo(Electro)Catalytic Water Oxidation?. ACS Applied Materials & Interfaces, 2019, 11, 23125-23134.	4.0	34
56	Development of Ir and La-codoped BaTa₂O₆ photocatalysts using visible light up to 640 nm as an H₂-evolving photocatalyst for Z-schematic water splitting. Chemical Communications, 2017, 53, 6156-6159.	2.2	33
57	A CoOx-modified SnNb2O6photoelectrode for highly efficient oxygen evolution from water. Chemical Communications, 2017, 53, 629-632.	2.2	33
58	Z-scheme photocatalyst systems employing Rh- and Ir-doped metal oxide materials for water splitting under visible light irradiation. Faraday Discussions, 2019, 215, 313-328.	1.6	33
59	Sensitization of wide band gap photocatalysts to visible light by molten CuCl treatment. Chemical Science, 2015, 6, 687-692.	3.7	31
60	Z-scheme water splitting by microspherical Rh-doped SrTiO3 photocatalysts prepared by a spray drying method. Applied Catalysis B: Environmental, 2019, 252, 222-229.	10.8	31
61	Z-Schematic CO₂ Reduction to CO through Interparticle Electron Transfer between SrTiO₃:Rh of a Reducing Photocatalyst and BiVO₄ of a Water Oxidation Photocatalyst under Visible Light. ACS Applied Energy Materials, 2020, 3, 10001-10007.	2.5	30
62	Photocatalysis of heat treated sodium- and hydrogen-titanate nanoribbons for water splitting, H2/O2 generation and oxalic acid oxidation. Chemical Engineering Science, 2013, 93, 341-349.	1.9	29
63	Water Splitting on Aluminum Porphyrins To Form Hydrogen and Hydrogen Peroxide by One Photon of Visible Light. ACS Applied Energy Materials, 2019, 2, 8045-8051.	2.5	29
64	Powder-based (CuGa_{1âˆ’y}In_y)_{1âˆ’x}Zn_{2x}S₂ solid solution photocathodes with a largely positive onset potential for solar water splitting. Sustainable Energy and Fuels, 2018, 2, 2016-2024.	2.5	28
65	Development of Various Metal Sulfide Photocatalysts Consisting of d⁰, d⁵, and d¹⁰ Metal Ions for Sacrificial H₂ Evolution under Visible Light Irradiation. Chemistry Letters, 2017, 46, 616-619.	0.7	27
66	Solar water splitting over Rh_{0.5}Cr_{1.5}O₃-loaded AgTaO₃ of a valence-band-controlled metal oxide photocatalyst. Chemical Science, 2020, 11, 2330-2334.	3.7	26
67	Solar Water Splitting Utilizing a SiC Photocathode, a BiVO₄ Photoanode, and a Perovskite Solar Cell. ChemSusChem, 2017, 10, 4420-4423.	3.6	24
68	Cu₃MS₄ (M=V, Nb, Ta) and its Solid Solutions with Sulvanite Structure for Photocatalytic and Photoelectrochemical H₂ Evolution under Visibleâ€Light Irradiation. ChemSusChem, 2019, 12, 1977-1983.	3.6	24
69	Long wavelength visible light-responsive SrTiO₃ photocatalysts doped with valence-controlled Ru for sacrificial H₂ and O₂ evolution. Catalysis Science and Technology, 2020, 10, 4912-4916.	2.1	24
70	Photocatalytic CO2 reduction using water as an electron donor over Ag-loaded metal oxide photocatalysts consisting of several polyhedra of Ti4+, Zr4+, and Ta5+. Journal of Photochemistry and Photobiology A: Chemistry, 2018, 358, 416-421.	2.0	23
71	Z-Schematic Solar Water Splitting Using Fine Particles of H₂-Evolving (CuGa)_{0.5}ZnS₂ Photocatalyst Prepared by a Flux Method with Chloride Salts. ACS Applied Energy Materials, 2020, 3, 5684-5692.	2.5	22
72	Enhanced Activity of BiVO4 Powdered Photocatalyst Under Visible Light Irradiation by Preparing Microwave-Assisted Aqueous Solution Methods. Catalysis Letters, 2014, 144, 1962-1967.	1.4	21

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73	Solar-driven BiVO₄ Photoanodes Prepared by a Facile Screen Printing Method. Chemistry Letters, 2016, 45, 152-154.	0.7	20
74	Visible-Light-Responsive CuLi_{1/3}Ti_{2/3}O₂ Powders Prepared by a Molten CuCl Treatment of Li₂TiO₃ for Photocatalytic H₂ Evolution and Z-Schematic Water Splitting. Chemistry of Materials, 2016, 28, 4677-4685.	3.2	20
75	Characterization of Rh:SrTiO3 photoelectrodes surface-modified with a cobalt clathrochelate and their application to the hydrogen evolution reaction. Electrochimica Acta, 2017, 258, 255-265.	2.6	19
76	Decomposition of an aqueous ammonia solution as a photon energy conversion reaction using a Ru-loaded ZnS photocatalyst. Chemical Communications, 2018, 54, 6117-6119.	2.2	19
77	Photocatalytic Properties of Layered Metal Oxides Substituted with Silver by a Molten AgNO₃ Treatment. ACS Applied Materials & Interfaces, 2015, 7, 14638-14643.	4.0	18
78	Capturing local structure modulations of photoexcited BiVO₄ by ultrafast transient XAFS. Chemical Communications, 2017, 53, 7314-7317.	2.2	18
79	Photocatalysis using a Wide Range of the Visible Light Spectrum: Hydrogen Evolution from Doped AgGaS₂. ChemSusChem, 2015, 8, 2902-2906.	3.6	17
80	<i>In situ</i> metal doping during modified anodization synthesis of Nb₂O₅ with enhanced photoelectrochemical water splitting. AICHE Journal, 2016, 62, 352-358.	1.8	16
81	Photochemical hydrogen evolution on metal ion surface-grafted TiO2-particles prepared by sol/gel method without calcination. Journal of Photochemistry and Photobiology A: Chemistry, 2018, 358, 386-394.	2.0	15
82	Photoelectrochemical Reduction of CO₂ to CO Using a CuGaS₂ Thin-film Photocathode Prepared by a Spray Pyrolysis Method. Chemistry Letters, 2018, 47, 1424-1427.	0.7	15
83	Efficient Solar Water Oxidation to Oxygen over Mo-doped BiVO₄ Thin Film Photoanode Prepared by a Facile Aqueous Solution Route. Chemistry Letters, 2017, 46, 651-654.	0.7	14
84	Solar Water Splitting under Neutral Conditions Using Zâ€Scheme Systems with Moâ€Doped BiVO₄ as an O₂â€Evolving Photocatalyst. Energy Technology, 2019, 7, 1900358.	1.8	13
85	Improvement of hydrogen evolution under visible light over Zn1âˆ’2x(CuGa)xGa2S4 photocatalysts by synthesis utilizing a polymerizable complex method. Journal of Materials Chemistry A, 2015, 3, 14239-14244.	5.2	11
86	Effects of Coapplication of Rh-Doping and Ag-Substitution on the Band Structure of Li₂TiO₃ and the Photocatalytic Property. ACS Sustainable Chemistry and Engineering, 2019, 7, 9881-9887.	3.2	10
87	Water reduction into hydrogen using Rh-doped SrTiO3 photoelectrodes surface-modified by minute amounts of Pt: Insights from heterogeneous kinetic analysis. Electrochimica Acta, 2019, 297, 696-704.	2.6	10
88	Water Splitting over CaTa4O11 and LaZrTa3O11 Photocatalysts with Laminated Structure Consisting of Layers of TaO6 Octahedra and TaO7 Decahedra. Chemistry Letters, 2014, 43, 396-398.	0.7	8
89	Development of visible-light-responsive Ir and La-codoped KTaO₃ photocatalysts for water splitting. Chemical Communications, 2021, 57, 10331-10334.	2.2	8
90	Activation of Waterâ€Splitting Photocatalysts by Loading with Ultrafine Rhâ€"Cr Mixedâ€Oxide Cocatalyst Nanoparticles. Angewandte Chemie, 2020, 132, 7142-7148.	1.6	7

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91	Photocatalytic Overall Water Splitting over ALi2Ti6O14 (A: 2Na and Sr) with Tunneling Structure. Chemistry Letters, 2011, 40, 108-110.	0.7	6
92	Photocatalytic Water Splitting over Rod-shaped K3Ta3Si2O13 and Block-shaped Ba3Ta6Si4O26 Prepared by Flux Method. Chemistry Letters, 2015, 44, 306-308.	0.7	6
93	New Visible-Light-Driven H₂- and O₂-Evolving Photocatalysts Developed by Ag(I) and Cu(I) Ion Exchange of Various Layered and Tunneling Metal Oxides Using Molten Salts Treatments. Chemistry of Materials, 2020, 32, 10524-10537.	3.2	6
94	Inorganic assembly catalysts for artificial photosynthesis: general discussion. Faraday Discussions, 2017, 198, 481-507.	1.6	2
95	Water Splitting over Ba₂In₂O₅ Photocatalysts with a Brownmillerite Structure and the Effect of La-substitution on Its Band Structure and Photocatalytic Activities. Chemistry Letters, 2018, 47, 1526-1529.	0.7	2
96	Powder-Based Cu₃VS₄ Photocathode Prepared by Particle-Transfer Method for Water Splitting Using the Whole Range of Visible Light. ECS Journal of Solid State Science and Technology, 2022, 11, 063002.	0.9	2
97	Phase relations in the pseudo ternary system In2O3-TiO2-BO (B: Zn, Co and Ni) at 1200 Â°C in air. Journal of Solid State Chemistry, 2018, 258, 865-875.	1.4	1
98	Contror of Surface Structure and Effect of Cocatalyst Aiming at Water Splitting over Photocatalyst. Hyomen Kagaku, 2006, 27, 386-391.	0.0	1
99	3ï¼Žäººå·¥å…‰åˆæˆã'ç›®æŒ‡ã—ãŸé‡'å±žé…¸åŒ–ç‰©å…‰è§¦åª'ã®é–‹ç™ºã¨æº–ã®åˆ†è§£ãŠã‚ˆã³ä¸€é…¸åŒ–ç‚ç´ ã®é‚„å…ƒã¸ã®å¿œç”¨ï¼ˆä»¥ä¸‹çœç•¥ï¼‰	0.6	[illegible]
100	Photocatalysis: Interfacing BiVO₄ with Reduced Graphene Oxide for Enhanced Photoactivity: A Tale of Facet Dependence of Electron Shuttling (Small 38/2016). Small, 2016, 12, 5232-5232.	5.2	0
101	Fundamentals of Development of Photocatalyst Materials and Evaluation of Photocatalytic Abilities. Journal of the Institute of Electrical Engineers of Japan, 2018, 138, 594-597.	0.0	0