Akihiko Kudo

List of Publications by Year
in descending order

104 papers	30,423 citations	22099 59 h-index	28224 105 g-index
106 all docs	106 docs citations	106 times ranked	20500 citing authors

#	Article	IF	Citations
1	Heterogeneous photocatalyst materials for water splitting. Chemical Society Reviews, 2009, 38, 253-278.	18.7	9,155
2	A Novel Aqueous Process for Preparation of Crystal Form-Controlled and Highly Crystalline BiVO4Powder from Layered Vanadates at Room Temperature and Its Photocatalytic and Photophysical Properties. Journal of the American Chemical Society, 1999, 121, 11459-11467.	6.6	1,813
3	Highly Efficient Water Splitting into H2and O2over Lanthanum-Doped NaTaO3Photocatalysts with High Crystallinity and Surface Nanostructure. Journal of the American Chemical Society, 2003, 125, 3082-3089.	6.6	1,585
4	Scalable water splitting on particulate photocatalyst sheets with a solar-to-hydrogen energy conversion efficiency exceeding 1%. Nature Materials, 2016, 15, 611-615.	13.3	1,311
5	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
6	Photocatalytic Activities of Noble Metal Ion Doped SrTiO3under Visible Light Irradiation. Journal of Physical Chemistry B, 2004, 108, 8992-8995.	1.2	832
7	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
8	Visible-Light-Response and Photocatalytic Activities of TiO2 and SrTiO3 Photocatalysts Codoped with Antimony and Chromium. Journal of Physical Chemistry B, 2002, 106, 5029-5034.	1.2	796
9	Water Splitting into H2and O2on Alkali Tantalate Photocatalysts ATaO3(A = Li, Na, and K). Journal of Physical Chemistry B, 2001, 105, 4285-4292.	1.2	629
10	Photocatalytic Reduction of Carbon Dioxide over Ag Cocatalyst-Loaded ALa₄Ti₄O₁₅ (A = Ca, Sr, and Ba) Using Water as a Reducing Reagent. Journal of the American Chemical Society, 2011, 133, 20863-20868.	6.6	561
11	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
12	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
13	H2or O2Evolution from Aqueous Solutions on Layered Oxide Photocatalysts Consisting of Bi3+with 6s2Configuration and d0Transition Metal Ions. Chemistry Letters, 1999, 28, 1103-1104.	0.7	465
14	Role of Ag+in the Band Structures and Photocatalytic Properties of AgMO3(M:Â Ta and Nb) with the Perovskite Structure. Journal of Physical Chemistry B, 2002, 106, 12441-12447.	1.2	463
15	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
16	Visible-Light-Induced H2 Evolution from an Aqueous Solution Containing Sulfide and Sulfite over a ZnS-CuInS2-AgInS2 Solid-Solution Photocatalyst. Angewandte Chemie - International Edition, 2005, 44, 3565-3568.	7.2	434
17	Solar Water Splitting Using Powdered Photocatalysts Driven by Z-Schematic Interparticle Electron Transfer without an Electron Mediator. Journal of Physical Chemistry C, 2009, 113, 17536-17542.	1.5	432
18	Construction of Z-scheme Type Heterogeneous Photocatalysis Systems for Water Splitting into H2and O2under Visible Light Irradiation. Chemistry Letters, 2004, 33, 1348-1349.	0.7	401

#	Article	IF	Citations
19	Rh-Doped SrTiO₃ Photocatalyst Electrode Showing Cathodic Photocurrent for Water Splitting under Visible-Light Irradiation. Journal of the American Chemical Society, 2011, 133, 13272-13275.	6.6	400
20	Strategies for the Development of Visible-light-driven Photocatalysts for Water Splitting. Chemistry Letters, 2004, 33, 1534-1539.	0.7	397
21	[Co(bpy)₃]^{3+/2+} and [Co(phen)₃]^{3+/2+} Electron Mediators for Overall Water Splitting under Sunlight Irradiation Using Z-Scheme Photocatalyst System. Journal of the American Chemical Society, 2013, 135, 5441-5449.	6.6	327
22	H2 evolution from an aqueous methanol solution on SrTiO3 photocatalysts codoped with chromium and tantalum ions under visible light irradiation. Journal of Photochemistry and Photobiology A: Chemistry, 2004, 163, 181-186.	2.0	323
23	Particulate Photocatalyst Sheets Based on Carbon Conductor Layer for Efficient Z-Scheme Pure-Water Splitting at Ambient Pressure. Journal of the American Chemical Society, 2017, 139, 1675-1683.	6.6	322
24	A Frontâ€Illuminated Nanostructured Transparent BiVO₄ Photoanode for >2% Efficient Water Splitting. Advanced Energy Materials, 2016, 6, 1501645.	10.2	313
25	Photophysical properties and photocatalytic activities under visible light irradiation of silver vanadates. Physical Chemistry Chemical Physics, 2003, 5, 3061.	1.3	305
26	Ultrastable low-bias water splitting photoanodes via photocorrosion inhibition and in situ catalystÂregeneration. Nature Energy, 2017, 2, .	19.8	298
27	Facile fabrication of an efficient BiVO ₄ thin film electrode for water splitting under visible light irradiation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11564-11569.	3.3	284
28	Nickel and either tantalum or niobium-codoped TiO2 and SrTiO3 photocatalysts with visible-light response for H2 or O2 evolution from aqueous solutions. Physical Chemistry Chemical Physics, 2005, 7, 2241.	1.3	280
29	Photocatalytic Hydrogen Evolution on ZnSâˆ'CuInS2âˆ'AgInS2 Solid Solution Photocatalysts with Wide Visible Light Absorption Bands. Chemistry of Materials, 2006, 18, 1969-1975.	3.2	271
30	Water splitting into H2 and O2 over niobate and titanate photocatalysts with (111) plane-type layered perovskite structure. Energy and Environmental Science, 2009, 2, 306.	15.6	248
31	Role of Sn²⁺ in the Band Structure of SnM₂O₆ and Sn₂M₂O₇(M = Nb and Ta) and Their Photocatalytic Properties. Chemistry of Materials, 2008, 20, 1299-1307.	3.2	231
32	BiVO4â€“Ru/SrTiO3:Rh composite Z-scheme photocatalyst for solar water splitting. Chemical Science, 2014, 5, 1513.	3.7	228
33	Synthesis of highly active rhodium-doped SrTiO3 powders in Z-scheme systems for visible-light-driven photocatalytic overall water splitting. Journal of Materials Chemistry A, 2013, 1, 12327.	5.2	214
34	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
35	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
36	Z-scheme photocatalyst systems for water splitting under visible light irradiation. MRS Bulletin, 2011, 36, 32-38.	1.7	183

#	Article	IF	Citations
37	Hydrothermal-synthesized SrTiO3 photocatalyst codoped with rhodium and antimony with visible-light response for sacrificial H2 and O2 evolution and application to overall water splitting. Applied Catalysis B: Environmental, 2014, 150-151, 187-196.	10.8	131
38	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
39	Photocatalytic O₂ Evolution of Rhodium and Antimony-Codoped Rutile-Type TiO₂ under Visible Light Irradiation. Journal of Physical Chemistry C, 2007, 111, 17420-17426.	1.5	128
40	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
41	Photoinduced Dynamics of TiO₂ Doped with Cr and Sb. Journal of Physical Chemistry C, 2008, 112, 1167-1173.	1.5	109
42	The Effect of Alkaline Earth Metal Ion Dopants on Photocatalytic Water Splitting by NaTaO₃ Powder. ChemSusChem, 2009, 2, 873-877.	3.6	96
43	Photocatalytic Activities of Layered Titanates and Niobates Ion-Exchanged with Sn²⁺ under Visible Light Irradiation. Journal of Physical Chemistry C, 2008, 112, 17678-17682.	1.5	94
44	Time-Resolved Infrared Absorption Study of SrTiO₃ Photocatalysts Codoped with Rhodium and Antimony. Journal of Physical Chemistry C, 2013, 117, 19101-19106.	1.5	91
45	Elucidation of Rh-Induced In-Gap States of Rh:SrTiO₃ Visible-Light-Driven Photocatalyst by Soft X-ray Spectroscopy and First-Principles Calculations. Journal of Physical Chemistry C, 2012, 116, 24445-24448.	1.5	89
46	Visible light response of AgLi₁_{/3}M_{2/3}O₂(M = Ti and) Tj ETQq0 0 0 rgBT /Overlock 1 of Materials Chemistry, 2008, 18, 647-653.	6.7	82
47	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
48	The KCaSrTa₅O₁₅ photocatalyst with tungsten bronze structure for water splitting and CO₂ reduction. Physical Chemistry Chemical Physics, 2014, 16, 24417-24422.	1.3	74
49	Photophysical and Photocatalytic Properties of Molybdates and Tungstates with a Scheelite Structure. Chemistry Letters, 2004, 33, 1216-1217.	0.7	71
50	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
51	Photoelectrochemical water splitting enhanced by self-assembled metal nanopillars embedded in an oxide semiconductor photoelectrode. Nature Communications, 2016, 7, 11818.	5.8	70
52	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
53	Investigations of Electronic Structures and Photocatalytic Activities under Visible Light Irradiation of Lead Molybdate Replaced with Chromium(VI). Bulletin of the Chemical Society of Japan, 2007, 80, 885-893.	2.0	67
54	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

#	Article	IF	Citations
55	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
56	Electronic Structure and Photoelectrochemical Properties of an Ir-Doped SrTiO₃ Photocatalyst. Journal of Physical Chemistry C, 2014, 118, 20222-20228.	1.5	63
57	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
58	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
59	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
60	Revealing the role of the Rh valence state, La doping level and Ru cocatalyst in determining the H₂ evolution efficiency in doped SrTiO₃ photocatalysts. Sustainable Energy and Fuels, 2019, 3, 208-218.	2.5	56
61	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
62	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
63	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
64	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
65	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
66	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
67	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
68	Particulate photocatalyst sheets for Z-scheme water splitting: advantages over powder suspension and photoelectrochemical systems and future challenges. Faraday Discussions, 2017, 197, 491-504.	1.6	45
69	Enhancement of photocatalytic activity of zinc-germanium oxynitride solid solution for overall water splitting under visible irradiation. Dalton Transactions, 2009, , 10055.	1.6	44
70	Photocatalytic Overall Water Splitting Under Visible Light Enabled by a Particulate Conjugated Polymer Loaded with Palladium and Iridium**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	40
71	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
72	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

#	Article	IF	Citations
73	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
74	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
75	A CoOx-modified SnNb2O6photoelectrode for highly efficient oxygen evolution from water. Chemical Communications, 2017, 53, 629-632.	2.2	33
76	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
77	Cosubstituting effects of copper(I) and gallium(III) for ZnGa2S4 with defect chalcopyrite structure on photocatalytic activity for hydrogen evolution. Journal of Catalysis, 2014, 310, 31-36.	3.1	32
78	Sensitization of wide band gap photocatalysts to visible light by molten CuCl treatment. Chemical Science, 2015, 6, 687-692.	3.7	31
79	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
80	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
81	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
82	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
83	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
84	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
85	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
86	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
87	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
88	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
89	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
90	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

#	Article	IF	Citations
91	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
92	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
93	<i>In situ</i> photoacoustic analysis of near-infrared absorption of rhodium-doped strontium titanate photocatalyst powder. Chemical Communications, 2020, 56, 14255-14258.	2.2	9
94	Visible light responsive photocatalysts developed by substitution with metal cations aiming at artificial photosynthesis. Frontiers in Energy, 2021, 15, 568-576.	1.2	9
95	Highly crystalline Na_{0.5}Bi_{0.5}TiO₃ of a photocatalyst valence-band-controlled with Bi(<scp>iii</scp>) for solar water splitting. Chemical Communications, 2021, 57, 323-326.	2.2	8
96	Photocatalytic CO2 reduction by a Z-scheme mechanism in an aqueous suspension of particulate (CuGa)0.3Zn1.4S2, BiVO4 and a Co complex operating dual-functionally as an electron mediator and as a cocatalyst. Applied Catalysis B: Environmental, 2022, 316, 121600.	10.8	8
97	Activation of Waterâ€Splitting Photocatalysts by Loading with Ultrafine Rhâ€"Cr Mixedâ€Oxide Cocatalyst Nanoparticles. Angewandte Chemie, 2020, 132, 7142-7148.	1.6	7
98	Photocatalytic Overall Water Splitting Under Visible Light Enabled by a Particulate Conjugated Polymer Loaded with Palladium and Iridium**. Angewandte Chemie, 2022, 134, .	1.6	7
99	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
100	Impact of lattice defects on water oxidation properties in SnNb2O6 photoanode prepared by pulsed-laser deposition method. Journal of Applied Physics, 2019, 126, .	1.1	5
101	Demonstrator devices for artificial photosynthesis: general discussion. Faraday Discussions, 2019, 215, 345-363.	1.6	2
102	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
103	Heterogeneous Photocatalyst for CO2 Reduction. Springer Handbooks, 2022, , 1369-1380.	0.3	2
104	Beyond artificial photosynthesis: general discussion. Faraday Discussions, 2019, 215, 422-438.	1.6	0