Masanobu Higashi

List of Publications by Citations

68 papers	5,435 citations	30 h-index	71 g-index
71 ext. papers	6,065 ext. citations	9.7 avg, IF	5.95 L-index

#	Paper	IF	Citations
68	Efficient nonsacrificial water splitting through two-step photoexcitation by visible light using a modified oxynitride as a hydrogen evolution photocatalyst. *Journal of the American Chemical Society*, **2010**, 132, 5858-68	16.4	597
67	Mimicking Natural Photosynthesis: Solar to Renewable H Fuel Synthesis by Z-Scheme Water Splitting Systems. *Chemical Reviews*, **2018**, 118, 5201-5241	68.1	497
66	Facile fabrication of an efficient oxynitride TaON photoanode for overall water splitting into H2 and O2 under visible light irradiation. *Journal of the American Chemical Society*, **2010**, 132, 11828-9	16.4	410
65	Highly stable water splitting on oxynitride TaON photoanode system under visible light irradiation. *Journal of the American Chemical Society*, **2012**, 134, 6968-71	16.4	347
64	Fabrication of efficient TaON and Ta3N5 photoanodes for water splitting under visible light irradiation. *Energy and Environmental Science*, **2011**, 4, 4138	35.4	291
63	Layered Perovskite Oxychloride Bi4NbO8Cl: A Stable Visible Light Responsive Photocatalyst for Water Splitting. *Journal of the American Chemical Society*, **2016**, 138, 2082-5	16.4	265
62	Photocatalytic Overall Water Splitting under Visible Light Using ATaO2N (A = Ca, Sr, Ba) and WO3 in a IO3−/I− Shuttle Redox Mediated System. *Chemistry of Materials*, **2009**, 21, 1543-1549	9.6	259
61	Photoelectrochemical Reduction of CO Coupled to Water Oxidation Using a Photocathode with a Ru(II)-Re(I) Complex Photocatalyst and a CoO/TaON Photoanode. *Journal of the American Chemical Society*, **2016**, 138, 14152-14158	16.4	216
60	SrNbO2N as a water-splitting photoanode with a wide visible-light absorption band. *Journal of the American Chemical Society*, **2011**, 133, 12334-7	16.4	204
59	Two step water splitting into H2 and O2 under visible light by ATaO2N (A=Ca, Sr, Ba) and WO3 with . *Chemical Physics Letters*, **2008**, 452, 120-123	2.5	174
58	Fabrication of an efficient BaTaO2N photoanode harvesting a wide range of visible light for water splitting. *Journal of the American Chemical Society*, **2013**, 135, 10238-41	16.4	173
57	Modified Ta3N5 powder as a photocatalyst for O2 evolution in a two-step water splitting system with an iodate/iodide shuttle redox mediator under visible light. *Langmuir*, **2010**, 26, 9161-5	4	167
56	Z-scheme Overall Water Splitting on Modified-TaON Photocatalysts under Visible Light (*Chemistry Letters*, **2008**, 37, 138-139	1.7	149
55	Surface Modification of TaON with Monoclinic ZrO2to Produce a Composite Photocatalyst with Enhanced Hydrogen Evolution Activity under Visible Light. *Bulletin of the Chemical Society of Japan*, **2008**, 81, 927-937	5.1	130
54	Photoelectrochemical CO2 reduction using a Ru(II)-Re(I) multinuclear metal complex on a p-type semiconducting NiO electrode. *Chemical Communications*, **2015**, 51, 10722-5	5.8	122
53	Hybrid photocathode consisting of a CuGaO p-type semiconductor and a Ru(ii)-Re(i) supramolecular photocatalyst: non-biased visible-light-driven CO reduction with water oxidation. *Chemical Science*, **2017**, 8, 4242-4249	9.4	111
52	Partial Oxidation of Alcohols on Visible-Light-Responsive WO3 Photocatalysts Loaded with Palladium Oxide Cocatalyst. *ACS Catalysis*, **2016**, 6, 1134-1144	13.1	107

51	Valence Band Engineering of Layered Bismuth Oxyhalides toward Stable Visible-Light Water Splitting: Madelung Site Potential Analysis. *Journal of the American Chemical Society*, **2017**, 139, 18725-18731	16.4	95
50	Inside Cover: Overall Water Splitting under Visible Light through a Two-Step Photoexcitation between TaON and WO3 in the Presence of an Iodate□Iodide Shuttle Redox Mediator (ChemSusChem 2/2011). *ChemSusChem*, **2011**, 4, 154-154	8.3	86
49	Strong hybridization between Bi-6s and O-2p orbitals in Sill□Aurivillius perovskite Bi4MO8X (M = Nb, Ta; X = Cl, Br), visible light photocatalysts enabling stable water oxidation. *Journal of Materials Chemistry A*, **2018**, 6, 3100-3107	13	70
48	Photosplitting of Water from Wide-Gap Cu(In,Ga)S2 Thin Films Modified with a CdS Layer and Pt Nanoparticles for a High-Onset-Potential Photocathode. *Journal of Physical Chemistry C*, **2015**, 119, 8576-8583	3.8	68
47	Lead Bismuth Oxyhalides PbBiO2X (X = Cl, Br) as Visible-Light-Responsive Photocatalysts for Water Oxidation: Role of Lone-Pair Electrons in Valence Band Engineering. *Chemistry of Materials*, **2018**, 30, 5862-5869	9.6	62
46	Earth-Abundant Molecular Z-Scheme Photoelectrochemical Cell for Overall Water-Splitting. *Journal of the American Chemical Society*, **2019**, 141, 9593-9602	16.4	59
45	Flux Synthesis of Layered Oxyhalide BiNbOCl Photocatalyst for Efficient Z-Scheme Water Splitting Under Visible Light. *ACS Applied Materials & Interfaces*, **2019**, 11, 5642-5650	9.5	58
44	Highly Dispersed Cobalt Oxide on TaON as Efficient Photoanodes for Long-Term Solar Water Splitting. *ACS Catalysis*, **2016**, 6, 3404-3417	13.1	57
43	Manganese-Substituted Polyoxometalate as an Effective Shuttle Redox Mediator in Z-Scheme Water Splitting under Visible Light. *ChemSusChem*, **2016**, 9, 2201-8	8.3	43
42	Two-step photocatalytic water splitting into H2 and O2 using layered metal oxide KCa2Nb3O10 and its derivatives as O2-evolving photocatalysts with IO3⁻/I⁻ or Fe3+/Fe2+ redox mediator. *Catalysis Science and Technology*, **2015**, 5, 2640-2648	5.5	41
41	Highly Dispersed RuO2 Hydrates Prepared via Simple Adsorption as Efficient Cocatalysts for Visible-Light-Driven Z-Scheme Water Splitting with an IO3⁻/I⁻ Redox Mediator. *ACS Catalysis*, **2017**, 7, 4336-4343	13.1	33
40	Two-step synthesis of Sill□Aurivillius type oxychlorides to enhance their photocatalytic activity for visible-light-induced water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 10909-10917	13	33
39	Band Engineering of Double-Layered Sill□Aurivillius Perovskite Oxychlorides for Visible-Light-Driven Water Splitting. *Chemistry of Materials*, **2019**, 31, 3419-3429	9.6	32
38	Fabrication of cation-doped BaTaO2N photoanodes for efficient photoelectrochemical water splitting under visible light irradiation. *APL Materials*, **2015**, 3, 104418	5.7	30
37	Low-Temperature Synthesis of Bismuth Chalcohalides: Candidate Photovoltaic Materials with Easily, Continuously Controllable Band gap. *Scientific Reports*, **2016**, 6, 32664	4.9	30
36	Surface-modified metal sulfides as stable H2-evolving photocatalysts in Z-scheme water splitting with a [Fe(CN)6]3⁻/4⁻ redox mediator under visible-light irradiation. *Sustainable Energy and Fuels*, **2017**, 1, 1065-1073	5.8	29
35	Tungstic acids H2WO4 and H4WO5 as stable photocatalysts for water oxidation under visible light. *Journal of Materials Chemistry A*, **2017**, 5, 10280-10288	13	23
34	Improved water oxidation under visible light on oxyhalide Bi4MO8X (M = Nb, Ta; X = Cl, Br) photocatalysts prepared using excess halogen precursors. *Sustainable Energy and Fuels*, **2018**, 2, 1474-1480	5.8	23

33	Overall water splitting under visible light through a two-step photoexcitation between TaON and WO3 in the presence of an iodate-iodide shuttle redox mediator. *ChemSusChem*, **2011**, 4, 228-37	8.3	22
32	Sill□□Aurivillius-related Oxychloride Bi6NbWO14Cl as a Stable O2-evolving Photocatalyst in Z-scheme Water Splitting under Visible Light. *Chemistry Letters*, **2017**, 46, 583-586	1.7	21
31	Photoconductivity□ifetime Product Correlates Well with the Photocatalytic Activity of Oxyhalides Bi4TaO8Cl and PbBiO2Cl: An Approach to Boost Their O2 Evolution Rates. *ACS Energy Letters*, **2019**, 4, 1572-1578	20.1	21
30	Design of nitrogen-doped layered tantalates for non-sacrificial and selective hydrogen evolution from water under visible light. *Journal of Materials Chemistry A*, **2016**, 4, 14444-14452	13	21
29	Conduction Band Control of Oxyhalides with a Triple-Fluorite Layer for Visible Light Photocatalysis. *Journal of the American Chemical Society*, **2021**, 143, 2491-2499	16.4	20
28	Improved visible-light activity of nitrogen-doped layered niobate photocatalysts by NH3-nitridation with KCl flux. *Applied Catalysis B: Environmental*, **2018**, 232, 49-54	21.8	17
27	Photo-assisted electrodeposition of manganese oxide on TaON anodes: effect on water photooxidation capacity under visible light irradiation. *Catalysis Science and Technology*, **2016**, 6, 3745-3757	5.5	15
26	Improved Photocatalytic Water Oxidation with Fe3+/Fe2+ Redox on Rectangular-shaped WO3 Particles with Specifically Exposed Crystal Faces via Hydrothermal Synthesis. *Chemistry Letters*, **2017**, 46, 221-224	1.7	15
25	Durable photoelectrochemical CO2 reduction with water oxidation using a visible-light driven molecular photocathode. *Journal of Materials Chemistry A*, **2021**, 9, 1517-1529	13	15
24	Photoelectrochemical CO2 Reduction to Formate with the Sacrificial Reagent Free System of Semiconductor Photocatalysts and Formate Dehydrogenase. *ChemCatChem*, **2019**, 11, 6227-6235	5.2	14
23	Optimization of Titania Post-Necking Treatment of TaON Photoanodes to Enhance Water-Oxidation Activity under Visible-Light Irradiation. *ChemElectroChem*, **2015**, 2, 1270-1278	4.3	14
22	Enhanced oxygen evolution on visible light responsive TaON photocatalysts co-loaded with highly active Ru species for IO3□reduction and Co species for water oxidation. *Sustainable Energy and Fuels*, **2017**, 1, 748-754	5.8	13
21	Molybdenum-substituted polyoxometalate as stable shuttle redox mediator for visible light driven Z-scheme water splitting system. *Journal of Photochemistry and Photobiology A: Chemistry*, **2018**, 356, 347-354	4.7	13
20	Effective strategy for enhancing Z-scheme water splitting with the IO3/I□redox mediator by using a visible light responsive TaON photocatalyst co-loaded with independently optimized two different cocatalysts. *Sustainable Energy and Fuels*, **2019**, 3, 1501-1508	5.8	12
19	Fabrication of a porous ZnRh2O4 photocathode for photoelectrochemical water splitting under visible light irradiation and a significant effect of surface modification by ZnO necking treatment. *Journal of Materials Chemistry A*, **2016**, 4, 6116-6123	13	12
18	Porous TaON Photoanodes Loaded with Cobalt-Based Cocatalysts for Efficient and Stable Water Oxidation Under Visible Light. *Topics in Catalysis*, **2016**, 59, 740-749	2.3	12
17	Solvothermal Synthesis of Ca2Nb2O7 Fine Particles and Their High Activity for Photocatalytic Water Splitting into H2 and O2 under UV Light Irradiation. *Chemistry Letters*, **2015**, 44, 1001-1003	1.7	11
16	Z-scheme Water Splitting into H2 and O2 Using Tungstic Acid as an Oxygen-evolving Photocatalyst under Visible Light Irradiation. *Chemistry Letters*, **2015**, 44, 1134-1136	1.7	10

15	MnTaO2N: Polar LiNbO3-type Oxynitride with a Helical Spin Order. *Angewandte Chemie*, **2015**, 127, 526-531	3.6	9
14	Enhanced H2 Evolution on ZnIn2S4 Photocatalyst under Visible Light by Surface Modification with Metal Cyanoferrates. *Chemistry Letters*, **2018**, 47, 941-944	1.7	9
13	Fe/Ru Oxide as a Versatile and Effective Cocatalyst for Boosting Z-Scheme Water-Splitting: Suppressing Undesirable Backward Electron Transfer. *ACS Applied Materials & Interfaces*, **2019**, 11, 45606-45611	9.5	7
12	Supramolecular photocatalysts fixed on the inside of the polypyrrole layer in dye sensitized molecular photocathodes: application to photocatalytic CO reduction coupled with water oxidation. *Chemical Science*, **2021**, 12, 13216-13232	9.4	7
11	Fabrication of CuInS2 photocathodes on carbon microfiber felt by arc plasma deposition for efficient water splitting under visible light. *Sustainable Energy and Fuels*, **2017**, 1, 699-709	5.8	6
10	Triple-layered Sill□Aurivillius Perovskite Oxychloride Bi5PbTi3O14Cl as a Visible-light-responsive Photocatalyst for Water Splitting. *Chemistry Letters*, **2020**, 49, 978-981	1.7	6
9	Valence Band Engineering by a Layer Insertion to Sill□Aurivillius Perovskite Oxyhalides. *Chemistry Letters*, **2017**, 46, 1083-1085	1.7	4
8	Improved Activity of Hydrothermally-prepared WO3 Photocatalysts by Sodium Salt Additives. *Chemistry Letters*, **2018**, 47, 985-988	1.7	4
7	RhO cocatalyst for efficient water oxidation over TaON photoanodes in wide pH range under visible-light irradiation. *Journal of Photochemistry and Photobiology A: Chemistry*, **2021**, 419, 113463	4.7	4
6	Solar Water Oxidation by Multicomponent TaON Photoanodes Functionalized with Nickel Oxide. *ChemPlusChem*, **2016**, 81, 1107-1115	2.8	3
5	PbBi3O4X3 (X = Cl, Br) with Single/Double Halogen Layers as a Photocatalyst for Visible-Light-Driven Water Splitting: Impact of a Halogen Layer on the Band Structure and Stability. *Chemistry of Materials*, **2021**, 33, 9580-9587	9.6	3
4	The first example of an oxide semiconductor photocatalyst consisting of a heptavalent cation: visible-light-induced water oxidation on M3ReO8. *Journal of Materials Chemistry A*, **2018**, 6, 1991-1994	13	2
3	Controlling the Carrier Density in Niobium Oxynitride BaNbO2N via Cation Doping for Efficient Photoelectrochemical Water Splitting under Visible Light. *Sustainable Energy and Fuels*,	5.8	1
2	Photoelectrochemical reduction of CO2 to formate over a hybrid system of CuInS2 photocathode and formate dehydrogenase under visible-light irradiation. *New Journal of Chemistry*, **2021**, 45, 14803-14807	3.6	1
1	Fabrication of a stable CdS photoanode for photoelectrochemical CO2 reduction under visible-light irradiation. *New Journal of Chemistry*, **2022**, 46, 5932-5938	3.6	