

# Kazuhiro Sayama

## List of Publications by Citations

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#	Paper	IF	Citations
184	Direct splitting of water under visible light irradiation with an oxide semiconductor photocatalyst. <i>Nature</i> , <b>2001</b> , 414, 625-7	50.4	2760
183	Molecular Design of Coumarin Dyes for Efficient Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry B</i> , <b>2003</b> , 107, 597-606	3.4	936
182	Design of new coumarin dyes having thiophene moieties for highly efficient organic-dye-sensitized solar cells. <i>New Journal of Chemistry</i> , <b>2003</b> , 27, 783-785	3.6	596
181	A coumarin-derivative dye sensitized nanocrystalline TiO <sub>2</sub> solar cell having a high solar-energy conversion efficiency up to 5.6%. <i>Chemical Communications</i> , <b>2001</b> , 569-570	5.8	523
180	Highly efficient photon-to-electron conversion with mercurochrome-sensitized nanoporous oxide semiconductor solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2000</b> , 64, 115-134	6.4	482
179	Photoelectrochemical decomposition of water into H <sub>2</sub> and O <sub>2</sub> on porous BiVO <sub>4</sub> thin-film electrodes under visible light and significant effect of Ag ion treatment. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 11352-60	3.4	471
178	Photoelectrochemical Properties of a Porous Nb <sub>2</sub> O <sub>5</sub> Electrode Sensitized by a Ruthenium Dye. <i>Chemistry of Materials</i> , <b>1998</b> , 10, 3825-3832	9.6	442
177	Photocatalytic decomposition of water and photocatalytic reduction of carbon dioxide over zirconia catalyst. <i>The Journal of Physical Chemistry</i> , <b>1993</b> , 97, 531-533		435
176	Stoichiometric water splitting into H <sub>2</sub> and O <sub>2</sub> using a mixture of two different photocatalysts and an IO <sub>3</sub> <sup>-</sup> /I <sup>-</sup> shuttle redox mediator under visible light irradiation. <i>Chemical Communications</i> , <b>2001</b> , 2416-7	5.8	397
175	Effect of additives on the photovoltaic performance of coumarin-dye-sensitized nanocrystalline TiO <sub>2</sub> solar cells. <i>Langmuir</i> , <b>2004</b> , 20, 4205-10	4	386
174	Photoelectrochemical Properties of J Aggregates of Benzothiazole Merocyanine Dyes on a Nanostructured TiO <sub>2</sub> Film. <i>Journal of Physical Chemistry B</i> , <b>2002</b> , 106, 1363-1371	3.4	334
173	A new photocatalytic water splitting system under visible light irradiation mimicking a Z-scheme mechanism in photosynthesis. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2002</b> , 148, 71-74	4.7	310
172	Photosensitization of a porous TiO <sub>2</sub> electrode with merocyanine dyes containing a carboxyl group and a long alkyl chain. <i>Chemical Communications</i> , <b>2000</b> , 1173-1174	5.8	290
171	A new type of water splitting system composed of two different TiO <sub>2</sub> photocatalysts (anatase, rutile) and a IO <sub>3</sub> <sup>-</sup> /I <sup>-</sup> shuttle redox mediator. <i>Chemical Physics Letters</i> , <b>2001</b> , 344, 339-344	2.5	287
170	Development of new photocatalytic water splitting into H <sub>2</sub> and O <sub>2</sub> using two different semiconductor photocatalysts and a shuttle redox mediator IO <sub>3</sub> <sup>-</sup> /I <sup>-</sup> . <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 16052-61	3.4	285
169	Efficient Complete Oxidation of Acetaldehyde into CO <sub>2</sub> over CuBi <sub>2</sub> O <sub>4</sub> /WO <sub>3</sub> Composite Photocatalyst under Visible and UV Light Irradiation. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 7574-7577	3.8	283
168	Efficient sensitization of nanocrystalline TiO <sub>2</sub> films with cyanine and merocyanine organic dyes. <i>Solar Energy Materials and Solar Cells</i> , <b>2003</b> , 80, 47-71	6.4	271

167	Novel polyene dyes for highly efficient dye-sensitized solar cells. <i>Chemical Communications</i> , <b>2003</b> , 252-3	5.8	261
166	Photocatalytic activity of R <sub>3</sub> MO <sub>7</sub> and R <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> (R=Y, Gd, La; M=Nb, Ta) for water splitting into H <sub>2</sub> and O <sub>2</sub> . <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 2219-26	3.4	248
165	Nickel-loaded K <sub>4</sub> Nb <sub>6</sub> O <sub>17</sub> photocatalyst in the decomposition of H <sub>2</sub> O into H <sub>2</sub> and O <sub>2</sub> : Structure and reaction mechanism. <i>Journal of Catalysis</i> , <b>1989</b> , 120, 337-352	7.3	238
164	Photoelectrochemical decomposition of water on nanocrystalline BiVO <sub>4</sub> film electrodes under visible light. <i>Chemical Communications</i> , <b>2003</b> , 2908-9	5.8	235
163	Steady hydrogen evolution from water on Eosin Y-fixed TiO <sub>2</sub> photocatalyst using a silane-coupling reagent under visible light irradiation. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2000</b> , 137, 63-69	4.7	230
162	Dye-sensitized nanocrystalline TiO <sub>2</sub> solar cells based on novel coumarin dyes. <i>Solar Energy Materials and Solar Cells</i> , <b>2003</b> , 77, 89-103	6.4	227
161	Effect of Na <sub>2</sub> CO <sub>3</sub> addition on photocatalytic decomposition of liquid water over various semiconductor catalysis. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>1994</b> , 77, 243-247	4.7	224
160	Effect of carbonate salt addition on the photocatalytic decomposition of liquid water over Pt/TiO <sub>2</sub> catalyst. <i>Journal of the Chemical Society, Faraday Transactions</i> , <b>1997</b> , 93, 1647-1654		217
159	Highly efficient photoelectrochemical water splitting using a thin film photoanode of BiVO <sub>4</sub> /SnO <sub>2</sub> /WO <sub>3</sub> multi-composite in a carbonate electrolyte. <i>Chemical Communications</i> , <b>2012</b> , 48, 3833-5	5.8	215
158	Electronic-Insulating Coating of CaCO <sub>3</sub> on TiO <sub>2</sub> Electrode in Dye-Sensitized Solar Cells: Improvement of Electron Lifetime and Efficiency. <i>Chemistry of Materials</i> , <b>2006</b> , 18, 2912-2916	9.6	213
157	Quantitative Analysis of Light-Harvesting Efficiency and Electron-Transfer Yield in Ruthenium-Dye-Sensitized Nanocrystalline TiO <sub>2</sub> Solar Cells. <i>Chemistry of Materials</i> , <b>2002</b> , 14, 2527-2535	9.6	211
156	Efficient eosin y dye-sensitized solar cell containing Br <sup>-</sup> /Br <sub>3</sub> <sup>-</sup> electrolyte. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 22449-55	3.4	184
155	Photocatalytic decomposition of water into H <sub>2</sub> and O <sub>2</sub> by a two-step photoexcitation reaction using a WO <sub>3</sub> suspension catalyst and an Fe <sup>3+</sup> /Fe <sup>2+</sup> redox system. <i>Chemical Physics Letters</i> , <b>1997</b> , 277, 387-391	2.5	163
154	Dye-Sensitized Nanocrystalline TiO <sub>2</sub> Solar Cells Based on Ruthenium(II) Phenanthroline Complex Photosensitizers. <i>Langmuir</i> , <b>2001</b> , 17, 5992-5999	4	162
153	Preparation of S, C cation-codoped SrTiO <sub>3</sub> and its photocatalytic activity under visible light. <i>Applied Catalysis A: General</i> , <b>2005</b> , 288, 74-79	5.1	146
152	Significant effect of iodide addition on water splitting into H <sub>2</sub> and O <sub>2</sub> over Pt-loaded TiO <sub>2</sub> photocatalyst: suppression of backward reaction. <i>Chemical Physics Letters</i> , <b>2003</b> , 371, 360-364	2.5	145
151	Influence of electrolytes on the photovoltaic performance of organic dye-sensitized nanocrystalline TiO <sub>2</sub> solar cells. <i>Solar Energy Materials and Solar Cells</i> , <b>2001</b> , 70, 151-161	6.4	138
150	Efficient oxidative hydrogen peroxide production and accumulation in photoelectrochemical water splitting using a tungsten trioxide/bismuth vanadate photoanode. <i>Chemical Communications</i> , <b>2016</b> , 52, 5406-9	5.8	134

- 149 The effect of selected reaction parameters on the photoproduction of oxygen and hydrogen from a  $\text{WO}_3/\text{Fe}_2\text{O}_3/\text{Fe}^{3+}$  aqueous suspension. *Journal of Photochemistry and Photobiology A: Chemistry*, **1999**, 122, 175-183 4.7 134
- 148 The photocatalytic oxidation of water to  $\text{O}_2$  over pure  $\text{CeO}_2$ ,  $\text{WO}_3$ , and  $\text{TiO}_2$  using  $\text{Fe}^{3+}$  and  $\text{Ce}^{4+}$  as electron acceptors. *Applied Catalysis A: General*, **2001**, 205, 117-128 5.1 131
- 147 Effect of carbonate addition on the photocatalytic decomposition of liquid water over a  $\text{ZrO}_2$  catalyst. *Journal of Photochemistry and Photobiology A: Chemistry*, **1996**, 94, 67-76 4.7 128
- 146 Photocatalytic water splitting on nickel intercalated  $\text{A}_4\text{Ta}_x\text{Nb}_{6-x}\text{O}_{17}$  (A = K, Rb). *Catalysis Today*, **1996**, 28, 175-182 5.3 128
- 145 Photocatalytic decomposition of water over platinum-intercalated potassium niobate ( $\text{K}_4\text{Nb}_6\text{O}_{17}$ ). *The Journal of Physical Chemistry*, **1991**, 95, 1345-1348 127
- 144 Highly active  $\text{WO}_3$  semiconductor photocatalyst prepared from amorphous peroxy-tungstic acid for the degradation of various organic compounds. *Applied Catalysis B: Environmental*, **2010**, 94, 150-157<sup>21.8</sup> 126
- 143 Complete oxidation of acetaldehyde and toluene over a  $\text{Pd}/\text{WO}_3$  photocatalyst under fluorescent- or visible-light irradiation. *Chemical Communications*, **2008**, 5565-7 5.8 124
- 142 High-throughput screening using porous photoelectrode for the development of visible-light-responsive semiconductors. *ACS Combinatorial Science*, **2007**, 9, 574-81 123
- 141 In-situ FT-IR study on  $\text{CO}_2$  hydrogenation over Cu catalysts supported on  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ , and  $\text{TiO}_2$ . *Applied Catalysis A: General*, **1997**, 165, 391-409 5.1 112
- 140 Cs-Modified  $\text{WO}_3$  Photocatalyst Showing Efficient Solar Energy Conversion for  $\text{O}_2$  Production and Fe (III) Ion Reduction under Visible Light. *Journal of Physical Chemistry Letters*, **2010**, 1, 1196-1200 6.4 109
- 139 Reaction Mechanism and Activity of  $\text{WO}_3$ -Catalyzed Photodegradation of Organic Substances Promoted by a  $\text{CuO}$  Cocatalyst. *Journal of Physical Chemistry C*, **2009**, 113, 6602-6609 3.8 108
- 138 Cyclometalated ruthenium(II) complexes as near-IR sensitizers for high efficiency dye-sensitized solar cells. *Angewandte Chemie - International Edition*, **2012**, 51, 7528-31 16.4 102
- 137  $\text{CO}_2$  hydrogenation to ethanol over promoted  $\text{Rh}/\text{SiO}_2$  catalysts. *Catalysis Today*, **1996**, 28, 261-266 5.3 102
- 136 Semiconductor-sensitized solar cells based on nanocrystalline  $\text{In}_2\text{S}_3/\text{In}_2\text{O}_3$  thin film electrodes. *Solar Energy Materials and Solar Cells*, **2000**, 62, 441-447 6.4 99
- 135 Photocatalytic Water Splitting into  $\text{H}_2$  and  $\text{O}_2$  over  $\text{R}_3\text{TaO}_7$  and  $\text{R}_3\text{NbO}_7$  (R = Y, Yb, Gd, La): Effect of Crystal Structure on Photocatalytic Activity. *Journal of Physical Chemistry B*, **2004**, 108, 811-814 3.4 97
- 134 Photoelectrochemical Hydrogen Peroxide Production from Water on a  $\text{WO}_3/\text{BiVO}_4$  Photoanode and from  $\text{O}_2$  on an Au Cathode Without External Bias. *Chemistry - an Asian Journal*, **2017**, 12, 1111-1119 4.5 94
- 133 Photocatalytic activity and reaction mechanism of Pt-intercalated  $\text{K}_4\text{Nb}_6\text{O}_{17}$  catalyst on the water splitting in carbonate salt aqueous solution. *Journal of Photochemistry and Photobiology A: Chemistry*, **1998**, 114, 125-135 4.7 94
- 132 Significant effect of carbonate addition on stoichiometric photodecomposition of liquid water into hydrogen and oxygen from platinum-titanium(IV) oxide suspension. *Journal of the Chemical Society Chemical Communications*, **1992**, 150-152 93

131	Dye-sensitized photocatalysts for efficient hydrogen production from aqueous solution under visible light irradiation. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2004</b> , 166, 115-122	4.7	90
130	Photocatalytic Water Splitting for Solar Hydrogen Production Using the Carbonate Effect and the Z-Scheme Reaction. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1801294	21.8	89
129	Production of High-Value-Added Chemicals on Oxide Semiconductor Photoanodes under Visible Light for Solar Chemical-Conversion Processes. <i>ACS Energy Letters</i> , <b>2018</b> , 3, 1093-1101	20.1	88
128	Photocatalytic water splitting under visible light utilizing $\text{I}^{3\text{I}}$ and $\text{IO}_3^-$ redox mediators by Z-scheme system using surface treated $\text{PtOx}/\text{WO}_3$ as $\text{O}_2$ evolution photocatalyst. <i>Catalysis Science and Technology</i> , <b>2013</b> , 3, 1750	5.5	88
127	Efficient hydrogen evolution from aqueous mixture of $\text{I}^-$ and acetonitrile using a merocyanine dye-sensitized $\text{Pt}/\text{TiO}_2$ photocatalyst under visible light irradiation. <i>Chemical Physics Letters</i> , <b>2002</b> , 362, 441-444	2.5	87
126	A new efficient photosensitizer for nanocrystalline solar cells: synthesis and characterization of cis-bis(4,7-dicarboxy-1,10-phenanthroline)dithiocyanato ruthenium(II). <i>Dalton Transactions RSC</i> , <b>2000</b> , 2817-2822		82
125	Solar hydrogen production. Significant effect of $\text{Na}_2\text{CO}_3$ addition on water splitting using simple oxide semiconductor photocatalysts. <i>Catalysis Surveys From Asia</i> , <b>2000</b> , 4, 75-80		80
124	Photocatalytic decomposition of water over a Ni-Loaded $\text{Rb}_4\text{Nb}_6\text{O}_{17}$ catalyst. <i>Journal of Catalysis</i> , <b>1990</b> , 124, 541-547	7.3	80
123	Promotion effect of $\text{CuO}$ co-catalyst on $\text{WO}_3$ -catalyzed photodegradation of organic substances. <i>Catalysis Communications</i> , <b>2008</b> , 9, 1254-1258	3.2	77
122	Photosensitization of Porous $\text{TiO}_2$ Semiconductor Electrode with Xanthene Dyes. <i>Chemistry Letters</i> , <b>1998</b> , 27, 753-754	1.7	77
121	Photocatalytic and photophysical properties of a novel series of solid photocatalysts, $\text{BiTa}_{1-x}\text{Nb}_x\text{O}_4$ ( $0 \leq x \leq 1$ ). <i>Chemical Physics Letters</i> , <b>2001</b> , 343, 303-308	2.5	75
120	$\text{WO}_3/\text{BiVO}_4$ composite photoelectrode prepared by improved auto-combustion method for highly efficient water splitting. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 2454-2461	6.7	74
119	Optimization of tandem-structured dye-sensitized solar cell. <i>Solar Energy Materials and Solar Cells</i> , <b>2010</b> , 94, 297-302	6.4	72
118	Effect of the Ligand Structure on the Efficiency of Electron Injection from Excited Ru(II)phenanthroline Complexes to Nanocrystalline $\text{TiO}_2$ Films. <i>Journal of Physical Chemistry B</i> , <b>2002</b> , 106, 374-379	3.4	72
117	Enhanced Oxidative Hydrogen Peroxide Production on Conducting Glass Anodes Modified with Metal Oxides. <i>ChemistrySelect</i> , <b>2016</b> , 1, 5721-5726	1.8	71
116	Significant effects of the distance between the cyanine dye skeleton and the semiconductor surface on the photoelectrochemical properties of dye-sensitized porous semiconductor electrodes. <i>New Journal of Chemistry</i> , <b>2001</b> , 25, 200-202	3.6	69
115	Photocatalytic hydrogen and oxygen formation under visible light irradiation with M-doped $\text{InTaO}_4$ (M=Mn, Fe, Co, Ni and Cu) photocatalysts. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2002</b> , 148, 65-69	4.7	68
114	$\text{CO}_2$ Hydrogenation over Carbide Catalysts.. <i>Chemistry Letters</i> , <b>1992</b> , 5-8	1.7	68

113	Selective conversion of CO <sub>2</sub> to methanol by catalytic hydrogenation over promoted copper catalyst. <i>Energy Conversion and Management</i> , <b>1992</b> , 33, 521-528	10.6	67
112	Ethanol synthesis by catalytic hydrogenation of CO <sub>2</sub> over Rh <sub>2</sub> FeSiO <sub>2</sub> catalysts. <i>Energy</i> , <b>1997</b> , 22, 343-348	7.9	64
111	The enhancement of WO <sub>3</sub> -catalyzed photodegradation of organic substances utilizing the redox cycle of copper ions. <i>Applied Catalysis B: Environmental</i> , <b>2008</b> , 84, 42-47	21.8	63
110	An Artificial Z-Scheme Constructed from Dye-Sensitized Metal Oxide Nanosheets for Visible Light-Driven Overall Water Splitting. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 8412-8420	16.4	60
109	Synthesis of a new class of cyclometallated ruthenium(II) complexes and their application in dye-sensitized solar cells. <i>Inorganic Chemistry Communication</i> , <b>2009</b> , 12, 842-845	3.1	59
108	Significant influence of solvent on hydrogen production from aqueous I <sub>3</sub> <sup>-</sup> /I <sup>-</sup> redox solution using dye-sensitized Pt/TiO <sub>2</sub> photocatalyst under visible light irradiation. <i>Chemical Physics Letters</i> , <b>2003</b> , 379, 230-235	2.5	58
107	Highly Efficient Photon-to-Electron Conversion of Mercurochrome-sensitized Nanoporous ZnO Solar Cells. <i>Chemistry Letters</i> , <b>2000</b> , 29, 316-317	1.7	58
106	Photocatalytic Water Splitting into H <sub>2</sub> and O <sub>2</sub> over R <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> (R = Y, Rare Earth) with Pyrochlore Structure. <i>Chemistry Letters</i> , <b>2004</b> , 33, 954-955	1.7	56
105	Photo-Electrochemical C-H Bond Activation of Cyclohexane Using a WO Photoanode and Visible Light. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 11238-11241	16.4	55
104	Improvement of nickel-loaded K <sub>4</sub> Nb <sub>6</sub> O <sub>17</sub> photocatalyst for the decomposition of H <sub>2</sub> O. <i>Catalysis Letters</i> , <b>1990</b> , 4, 217-222	2.8	52
103	Photocatalytic Z-Scheme Water Splitting for Independent H <sub>2</sub> /O <sub>2</sub> Production via a Stepwise Operation Employing a Vanadate Redox Mediator under Visible Light. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 9691-9697	3.8	51
102	Near-IR dye-sensitized solar cells using a new type of ruthenium complexes having 2,6-bis(quinolin-2-yl)pyridine derivatives. <i>Solar Energy Materials and Solar Cells</i> , <b>2011</b> , 95, 310-314	6.4	51
101	Electrochemical and Photoelectrochemical Water Oxidation for Hydrogen Peroxide Production. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 10469-10480	16.4	51
100	Effect of Carbonate Ions on the Photooxidation of Water over Porous BiVO <sub>4</sub> Film Photoelectrode under Visible Light. <i>Chemistry Letters</i> , <b>2010</b> , 39, 17-19	1.7	49
99	Investigations on anodic photocurrent loss processes in dye sensitized solar cells: comparison between nanocrystalline SnO <sub>2</sub> and TiO <sub>2</sub> films. <i>Chemical Physics Letters</i> , <b>2002</b> , 364, 297-302	2.5	49
98	New Ru(II) phenanthroline complex photosensitizers having different number of carboxyl groups for dye-sensitized solar cells. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2001</b> , 145, 117-122	4.7	44
97	WO <sub>3</sub> /BiVO <sub>4</sub> photoanode coated with mesoporous Al <sub>2</sub> O <sub>3</sub> layer for oxidative production of hydrogen peroxide from water with high selectivity. <i>RSC Advances</i> , <b>2017</b> , 7, 47619-47623	3.7	42
96	Photoelectrochemical reaction for the efficient production of hydrogen and high-value-added oxidation reagents. <i>ChemSusChem</i> , <b>2015</b> , 8, 1593-600	8.3	42

95	Photoelectrochemical dimethoxylation of furan via a bromide redox mediator using a BiVO <sub>4</sub> /WO <sub>3</sub> photoanode. <i>Chemical Communications</i> , <b>2017</b> , 53, 4378-4381	5.8	41
94	Efficient Photosensitization of Nanocrystalline TiO <sub>2</sub> Films by a New Class of Sensitizer: cis-Dithiocyanato bis(4,7-dicarboxy-1,10-phenanthroline)ruthenium(II). <i>Chemistry Letters</i> , <b>1998</b> , 27, 1005-1006	1.7	39
93	UV photoinduced reduction of water to hydrogen in Na <sub>2</sub> S, Na <sub>2</sub> SO <sub>3</sub> , and Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> aqueous solutions. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>1999</b> , 128, 27-31	4.7	39
92	Near-IR sensitization of nanocrystalline TiO <sub>2</sub> with a new ruthenium complex having a 2,6-bis(4-carboxyquinolin-2-yl)pyridine ligand. <i>Inorganic Chemistry Communication</i> , <b>2009</b> , 12, 1212-1215	3.1	38
91	Decomposition of water into H <sub>2</sub> and O <sub>2</sub> by a two-step photoexcitation reaction over a Pt/TiO <sub>2</sub> photocatalyst in NaNO <sub>2</sub> and Na <sub>2</sub> CO <sub>3</sub> aqueous solution. <i>Catalysis Communications</i> , <b>2006</b> , 7, 96-99	3.2	38
90	Photoanode characteristics of multi-layer composite BiVO <sub>4</sub> thin film in a concentrated carbonate electrolyte solution for water splitting. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2013</b> , 258, 51-60	4.7	37
89	Photocatalytic hydrogen and oxygen formation over SiO <sub>2</sub> -supported RuS <sub>2</sub> in the presence of sacrificial donor and acceptor. <i>Applied Catalysis A: General</i> , <b>1999</b> , 189, 127-137	5.1	36
88	Remarkable Effect of Na <sub>2</sub> CO <sub>3</sub> Addition on Photodecomposition of Liquid Water into H <sub>2</sub> and O <sub>2</sub> from Suspension of Semiconductor Powder Loaded with Various Metals. <i>Chemistry Letters</i> , <b>1992</b> , 21, 253-256	1.7	36
87	WO <sub>3</sub> nanosponge photoanodes with high applied bias photon-to-current efficiency for solar hydrogen and peroxydisulfate production. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17809-17818	13	35
86	Oxide semiconductor materials for solar light energy utilization. <i>Research on Chemical Intermediates</i> , <b>2000</b> , 26, 145-152	2.8	34
85	Improvement of Photocatalytic Activity of Titanate Pyrochlore Y <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> by Addition of Excess Y. <i>Chemistry Letters</i> , <b>2005</b> , 34, 1122-1123	1.7	33
84	Effect of Cations on the Interactions of Ru Dye and Iodides in Dye-Sensitized Solar Cells: A Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 2544-2552	3.8	32
83	Utilization of Fe <sup>3+</sup> /Fe <sup>2+</sup> Redox for the Photodegradation of Organic Substances over WO <sub>3</sub> Photocatalyst and for H <sub>2</sub> Production from the Electrolysis of Water. <i>Electrochemistry</i> , <b>2008</b> , 76, 128-131	1.2	31
82	Efficient hypochlorous acid (HClO) production via photoelectrochemical solar energy conversion using a BiVO <sub>4</sub> -based photoanode. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 155-162	5.8	30
81	Modification of BiVO <sub>4</sub> /WO <sub>3</sub> composite photoelectrodes with Al <sub>2</sub> O <sub>3</sub> via chemical vapor deposition for highly efficient oxidative H <sub>2</sub> O <sub>2</sub> production from H <sub>2</sub> O. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 1621-1629	5.8	29
80	Conversion of CO <sub>2</sub> to Dimethylether and Methanol over Hybrid Catalysts. <i>Chemistry Letters</i> , <b>1992</b> , 21, 1115-1118	1.7	29
79	Photoelectrochemical Oxidation of Benzylic Alcohol Derivatives on BiVO <sub>4</sub> /WO <sub>3</sub> under Visible Light Irradiation. <i>ChemElectroChem</i> , <b>2017</b> , 4, 3283-3287	4.3	28
78	Theoretical Study on the Interactions between Black Dye and Iodide in Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 9267-9275	3.8	28

77	Alcohol synthesis by catalytic hydrogenation of CO <sub>2</sub> over Rh <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> . <i>Applied Organometallic Chemistry</i> , <b>2000</b> , 14, 836-840	3.1	27
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73	Combinatorial search for iron/titanium-based ternary oxides with a visible-light response. <i>ACS Combinatorial Science</i> , <b>2010</b> , 12, 356-62		22
72	Simultaneous Interactions of Ru Dye with Iodide Ions and Nitrogen-Containing Heterocycles in Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 11335-11341	3.8	20
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67	Near-IR Sensitization of Dye-Sensitized Solar Cells Using Thiocyanate-Free Cyclometalated Ruthenium(II) Complexes Having a Pyridylquinoline Ligand. <i>European Journal of Inorganic Chemistry</i> , <b>2014</b> , 2014, 1303-1311	2.3	18
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65	Highly efficient Fe(III) reduction and solar-energy accumulation over a BiVO <sub>4</sub> photocatalyst. <i>Chemical Communications</i> , <b>2018</b> , 54, 2670-2673	5.8	17
64	Systematic evaluation of HOMO energy levels for efficient dye regeneration in dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 15945-15951	13	17
63	Improved performance of Black-dye-sensitized solar cells with nanocrystalline anatase TiO <sub>2</sub> photoelectrodes prepared from TiCl <sub>4</sub> and ammonium carbonate. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2007</b> , 189, 100-104	4.7	17
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54	A comparative computational study on the interactions of N719 and N749 dyes with iodine in dye-sensitized solar cells. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 4379-87	3.6	12
53	Dependence of electron transport in nanocrystalline TiO <sub>2</sub> films sensitized with [NBu <sub>4</sub> ] <sub>2</sub> [Ru(Htcterpy)(NCS) <sub>3</sub> ] ([NBu <sub>4</sub> ] <sup>+</sup> = tetrabutylammonium cation; H <sub>3</sub> tcterpy = 4,4',4'-tricarboxy-2,4:2',4':2''-terpyridine) on the properties of TiO <sub>2</sub> nanoparticles. <i>Electrochimica Acta</i> , <b>2006</b> , 51, 3993-4002	6.7	12
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51	Effect of Catalyst Preparation on the Oxidative Coupling of Methane over SrO  a <sub>2</sub> O <sub>3</sub> . <i>Bulletin of the Chemical Society of Japan</i> , <b>1994</b> , 67, 2894-2897	5.1	12
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34	Photo-electrochemical properties of oxide semiconductors on porous titanium metal electrodes. <i>Solar Energy Materials and Solar Cells</i> , <b>2006</b> , 90, 2429-2437	6.4	7
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30	Electron Transport in Nanocrystalline TiO <sub>2</sub> Films Sensitized with [NBu <sub>4</sub> ] <sub>2</sub> [cis-Ru(Hdcbpy) <sub>2</sub> (NCS) <sub>2</sub> ] (N719; [NBu <sub>4</sub> ] <sup>+</sup> = Tetrabutyl Ammonium Cation; H <sub>2</sub> dcbpy = 4,4'-Dicarboxy-2,2'-bipyridine) and [NBu <sub>4</sub> ] <sub>2</sub> [Ru(Htcterpy)(NCS) <sub>3</sub> ] (B-dye; H <sub>3</sub> tcterpy = 4,4',4'-Tricarboxy-2,2':6',2'-terpyridine). <i>Chemistry Letters</i> , <b>2004</b> , 33, 884-885	1.7	6
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23	Photocatalytic Activity of Ru <sub>2</sub> /SiO <sub>2</sub> for Water Decomposition. <i>Chemistry Letters</i> , <b>1998</b> , 27, 387-388	1.7	5
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