Sixto Gimenez

List of Publications by Year
in descending order

108 papers	9,102 citations	53794 45 h-index	39675 94 g-index
112 all docs	112 docs citations	112 times ranked	9657 citing authors

#	Article	IF	Citations
1	Water Oxidation at Hematite Photoelectrodes: The Role of Surface States. Journal of the American Chemical Society, 2012, 134, 4294-4302.	13.7	895
2	Recombination in Quantum Dot Sensitized Solar Cells. Accounts of Chemical Research, 2009, 42, 1848-1857.	15.6	747
3	Electron Lifetime in Dye-Sensitized Solar Cells: Theory and Interpretation of Measurements. Journal of Physical Chemistry C, 2009, 113, 17278-17290.	3.1	694
4	Photoelectrochemical and Impedance Spectroscopic Investigation of Water Oxidation with â€œCoâ€“Piâ€•Coated Hematite Electrodes. Journal of the American Chemical Society, 2012, 134, 16693-16700.	13.7	635
5	Electrochemical and photoelectrochemical investigation of water oxidation with hematite electrodes. Energy and Environmental Science, 2012, 5, 7626.	30.8	451
6	Improving the performance of colloidal quantum-dot-sensitized solar cells. Nanotechnology, 2009, 20, 295204.	2.6	383
7	Understanding the Role of Underlayers and Overlayers in Thin Film Hematite Photoanodes. Advanced Functional Materials, 2014, 24, 7681-7688.	14.9	289
8	Design of Injection and Recombination in Quantum Dot Sensitized Solar Cells. Journal of the American Chemical Society, 2010, 132, 6834-6839.	13.7	252
9	Panchromatic Sensitized Solar Cells Based on Metal Sulfide Quantum Dots Grown Directly on Nanostructured TiO₂ Electrodes. Journal of Physical Chemistry Letters, 2011, 2, 454-460.	4.6	247
10	Factors determining the photovoltaic performance of a CdSe quantum dot sensitized solar cell: the role of the linker molecule and of the counter electrode. Nanotechnology, 2008, 19, 424007.	2.6	237
11	Controlled Carbon Nitride Growth on Surfaces for Hydrogen Evolution Electrodes. Angewandte Chemie - International Edition, 2014, 53, 3654-3658.	13.8	187
12	Near-complete suppression of surface losses and total internal quantum efficiency in BiVO₄ photoanodes. Energy and Environmental Science, 2017, 10, 1517-1529.	30.8	159
13	A Sulfide/Polysulfide-Based Ionic Liquid Electrolyte for Quantum Dot-Sensitized Solar Cells. Journal of the American Chemical Society, 2011, 133, 20156-20159.	13.7	153
14	Impact of Oxygen Vacancy Occupancy on Charge Carrier Dynamics in BiVO₄ Photoanodes. Journal of the American Chemical Society, 2019, 141, 18791-18798.	13.7	147
15	High performance PbS Quantum Dot Sensitized Solar Cells exceeding 4% efficiency: the role of metal precursors in the electron injection and charge separation. Physical Chemistry Chemical Physics, 2013, 15, 13835.	2.8	143
16	Water Oxidation at Hematite Photoelectrodes with an Iridium-Based Catalyst. Journal of Physical Chemistry C, 2013, 117, 3826-3833.	3.1	128
17	Photocatalytic and Photoelectrochemical Degradation of Organic Compounds with All-Inorganic Metal Halide Perovskite Quantum Dots. Journal of Physical Chemistry Letters, 2019, 10, 630-636.	4.6	124
18	Cobalt Hexacyanoferrate on BiVO₄ Photoanodes for Robust Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 37671-37681.	8.0	109

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19	Identifying charge and mass transfer resistances of an oxygen reducing biocathode. Energy and Environmental Science, 2011, 4, 5035.	30.8	107
20	Fluorine Treatment of TiO2 for Enhancing Quantum Dot Sensitized Solar Cell Performance. Journal of Physical Chemistry C, 2011, 115, 14400-14407.	3.1	105
21	Harnessing Infrared Photons for Photoelectrochemical Hydrogen Generation. A PbS Quantum Dot Based â€œQuasi-Artificial Leafâ€. Journal of Physical Chemistry Letters, 2013, 4, 141-146.	4.6	101
22	Quantum Dot Based Heterostructures for Unassisted Photoelectrochemical Hydrogen Generation. Advanced Energy Materials, 2013, 3, 176-182.	19.5	101
23	Photoanodes Based on Nanostructured WO₃ for Water Splitting. ChemPhysChem, 2012, 13, 3025-3034.	2.1	99
24	Direct Correlation between Ultrafast Injection and Photoanode Performance in Quantum Dot Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 22352-22360.	3.1	97
25	Exploring Graphene Quantum Dots/TiO2 interface in photoelectrochemical reactions: Solar to fuel conversion. Electrochimica Acta, 2016, 187, 249-255.	5.2	79
26	Suppressing H₂ Evolution and Promoting Selective CO₂ Electroreduction to CO at Low Overpotentials by Alloying Au with Pd. ACS Catalysis, 2019, 9, 3527-3536.	11.2	79
27	Electronic Effects Determine the Selectivity of Planar Auâ€“Cu Bimetallic Thin Films for Electrochemical CO₂ Reduction. ACS Applied Materials & Interfaces, 2019, 11, 16546-16555.	8.0	71
28	Interpretation of Cyclic Voltammetry Measurements of Thin Semiconductor Films for Solar Fuel Applications. Journal of Physical Chemistry Letters, 2013, 4, 1334-1339.	4.6	69
29	Spectroelectrochemical Analysis of the Water Oxidation Mechanism on Doped Nickel Oxides. Journal of the American Chemical Society, 2022, 144, 7622-7633.	13.7	66
30	Effect of nanostructured electrode architecture and semiconductor deposition strategy on the photovoltaic performance of quantum dot sensitized solar cells. Electrochimica Acta, 2012, 75, 139-147.	5.2	62
31	Energy Diagram of Semiconductor/Electrolyte Junctions. Journal of Physical Chemistry Letters, 2014, 5, 205-207.	4.6	61
32	Toward Stable Solar Hydrogen Generation Using Organic Photoelectrochemical Cells. Journal of Physical Chemistry C, 2015, 119, 6488-6494.	3.1	61
33	Unraveling Charge Transfer in CoFe Prussian Blue Modified BiVO₄ Photoanodes. ACS Energy Letters, 2019, 4, 337-342.	17.4	61
34	WO₃/BiVO₄: impact of charge separation at the timescale of water oxidation. Chemical Science, 2019, 10, 2643-2652.	7.4	59
35	A metalâ€“organic framework converted catalyst that boosts photo-electrochemical water splitting. Journal of Materials Chemistry A, 2019, 7, 11143-11149.	10.3	59
36	Selective contacts drive charge extraction in quantum dot solids via asymmetry in carrier transfer kinetics. Nature Communications, 2013, 4, 2272.	12.8	56

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37	Calculation of the Energy Band Diagram of a Photoelectrochemical Water Splitting Cell. Journal of Physical Chemistry C, 2014, 118, 29599-29607.	3.1	56
38	Competitive Photoelectrochemical Methanol and Water Oxidation with Hematite Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 7653-7660.	8.0	56
39	Organic photoelectrochemical cells with quantitative photocarrier conversion. Energy and Environmental Science, 2014, 7, 3666-3673.	30.8	55
40	Unravelling the Photocatalytic Behavior of All-Inorganic Mixed Halide Perovskites: The Role of Surface Chemical States. ACS Applied Materials & Interfaces, 2020, 12, 914-924.	8.0	55
41	Carrier density and interfacial kinetics of mesoporous TiO2 in aqueous electrolyte determined by impedance spectroscopy. Journal of Electroanalytical Chemistry, 2012, 668, 119-125.	3.8	54
42	The role of oxygen vacancies in water splitting photoanodes. Sustainable Energy and Fuels, 2020, 4, 5916-5926.	4.9	52
43	Sintering behaviour and microstructure development of T42 powder metallurgy high speed steel under different processing conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 480, 130-137.	5.6	47
44	Plasmonic versus catalytic effect of gold nanoparticles on mesoporous TiO2 electrodes for water splitting. Electrochimica Acta, 2014, 144, 64-70.	5.2	46
45	Modeling and characterization of extremely thin absorber (eta) solar cells based on ZnO nanowires. Physical Chemistry Chemical Physics, 2011, 13, 7162.	2.8	45
46	Analysis of bio-anode performance through electrochemical impedance spectroscopy. Bioelectrochemistry, 2015, 106, 64-72.	4.6	45
47	Charge transfer kinetics in CdSe quantum dot sensitized solar cells. Physical Chemistry Chemical Physics, 2010, 12, 2819.	2.8	44
48	Enhancing the Optical Absorption and Interfacial Properties of BiVO₄ with Ag₃PO₄ Nanoparticles for Efficient Water Splitting. Journal of Physical Chemistry C, 2018, 122, 11608-11615.	3.1	44
49	Fast Regeneration of CdSe Quantum Dots by Ru Dye in Sensitized TiO2 Electrodes. Journal of Physical Chemistry C, 2010, 114, 6755-6761.	3.1	43
50	Hole conductivity and acceptor density of p-type CuGaO2 nanoparticles determined by impedance spectroscopy: The effect of Mg doping. Electrochimica Acta, 2013, 113, 570-574.	5.2	43
51	The role of chemical wear in machining iron based materials by PCD and PCBN super-hard tool materials. Diamond and Related Materials, 2007, 16, 435-445.	3.9	42
52	Determination of limiting factors of photovoltaic efficiency in quantum dot sensitized solar cells: Correlation between cell performance and structural properties. Journal of Applied Physics, 2010, 108, 064310.	2.5	42
53	Energy transfer versus charge separation in hybrid systems of semiconductor quantum dots and Ru-dyes as potential co-sensitizers of TiO2-based solar cells. Journal of Applied Physics, 2011, 110, .	2.5	42
54	Easily manufactured TiO₂hollow fibers for quantum dot sensitized solar cells. Physical Chemistry Chemical Physics, 2012, 14, 522-528.	2.8	42

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55	Cooperative Catalytic Effect of ZrO₂ and Î±â€Fe₂O₃ Nanoparticles on BiVO₄ Photoanodes for Enhanced Photoelectrochemical Water Splitting. ChemSusChem, 2016, 9, 2779-2783.	6.8	42
56	The Complex Role of Carbon Nitride as a Sensitizer in Photoelectrochemical Cells. Advanced Optical Materials, 2015, 3, 1052-1058.	7.3	41
57	Understanding the synergistic effect of WO3â€"BiVO4 heterostructures by impedance spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 9255-9261.	2.8	41
58	Solar Energy Storage by a Heterostructured BiVO₄â€"PbO_{<i>x</i>} Photocapacitive Device. ACS Energy Letters, 2017, 2, 469-475.	17.4	38
59	Photon Up-Conversion with Lanthanide-Doped Oxide Particles for Solar H₂ Generation. Journal of Physical Chemistry C, 2014, 118, 11279-11284.	3.1	37
60	Level Alignment as Descriptor for Semiconductor/Catalyst Systems in Water Splitting: The Case of Hematite/Cobalt Hexacyanoferrate Photoanodes. ChemSusChem, 2017, 10, 4552-4560.	6.8	33
61	Chromium doped copper vanadate photoanodes for water splitting. Catalysis Today, 2017, 290, 65-72.	4.4	32
62	The Role of Underlayers and Overlayers in Thin Film BiVO₄ Photoanodes for Solar Water Splitting. Advanced Materials Interfaces, 2019, 6, 1900299.	3.7	28
63	Panchromatic Solar-to-H₂ Conversion by a Hybrid Quantum Dotsâ€"Dye Dual Absorber Tandem Device. Journal of Physical Chemistry C, 2014, 118, 891-895.	3.1	27
64	Effect of nitrogen on supersolidus sintering of modified M35M high speed steel. Powder Metallurgy, 1999, 42, 353-357.	1.7	26
65	Electropolymerized polyaniline: A promising hole selective contact in organic photoelectrochemical cells. Chemical Engineering Science, 2016, 154, 143-149.	3.8	26
66	Separating bulk and surface processes in NiO_x electrocatalysts for water oxidation. Sustainable Energy and Fuels, 2020, 4, 5024-5030.	4.9	26
67	Effects of microstructural heterogeneity on the mechanical properties of pressed soft magnetic composite bodies. Journal of Alloys and Compounds, 2006, 419, 299-305.	5.5	24
68	TiO₂ Nanotubes for Solar Water Splitting: Vacuum Annealing and Zr Doping Enhance Water Oxidation Kinetics. ACS Omega, 2019, 4, 16095-16102.	3.5	24
69	Efficient and Stable Blue- and Red-Emitting Perovskite Nanocrystals through Defect Engineering: PbX₂ Purification. Chemistry of Materials, 2021, 33, 8745-8757.	6.7	24
70	Intensity-Modulated Photocurrent Spectroscopy for Solar Energy Conversion Devices: What Does a Negative Value Mean?. ACS Energy Letters, 2020, 5, 187-191.	17.4	23
71	Microstructural characterisation of vacuum sintered T42 powder metallurgy high-speed steel after heat treatments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 499, 360-367.	5.6	22
72	Influence of cysteine adsorption on the performance of CdSe quantum dots sensitized solar cells. Materials Chemistry and Physics, 2010, 124, 709-712.	4.0	22

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73	Ultrafast characterization of the electron injection from CdSe quantum dots and dye N719 co-sensitizers into TiO2 using sulfide based ionic liquid for enhanced long term stability. Electrochimica Acta, 2013, 100, 35-43.	5.2	20
74	Modulating the interaction between gold and TiO₂nanowires for enhanced solar driven photoelectrocatalytic hydrogen generation. Physical Chemistry Chemical Physics, 2015, 17, 19371-19378.	2.8	16
75	Direct Hydrogen Evolution from Saline Water Reduction at Neutral pH using Organic Photocathodes. ChemSusChem, 2016, 9, 3062-3066.	6.8	16
76	Hierarchical Ti-Based MOF with Embedded RuO₂ Nanoparticles: a Highly Efficient Photoelectrode for Visible Light Water Oxidation. ACS Sustainable Chemistry and Engineering, 2020, 8, 18366-18376.	6.7	16
77	Solution-Processed Ni-Based Nanocomposite Electrocatalysts: An Approach to Highly Efficient Electrochemical Water Splitting. ACS Applied Energy Materials, 2021, 4, 5255-5264.	5.1	16
78	Role of Pd in the Electrochemical Hydrogenation of Nitrobenzene Using CuPd Electrodes. Advanced Sustainable Systems, 2022, 6, .	5.3	16
79	Chemical reactivity of PVD-coated WCâ€“Co tools with steel. Applied Surface Science, 2007, 253, 3547-3556.	6.1	15
80	Cobalt Hexacyanoferrate as a Selective and High Current Density Formate Oxidation Electrocatalyst. ACS Applied Energy Materials, 2020, 3, 9198-9207.	5.1	15
81	Laser-Reduced BiVO₄ for Enhanced Photoelectrochemical Water Splitting. ACS Applied Materials & Interfaces, 2022, 14, 33200-33210.	8.0	15
82	Computer aided design of PM high speed steels for vacuum and nitrogen atmospheres. Powder Metallurgy, 2003, 46, 209-218.	1.7	14
83	Self-supported ultra-active NiO-based electrocatalysts for the oxygen evolution reaction by solution combustion. Journal of Materials Chemistry A, 2021, 9, 12700-12710.	10.3	14
84	Development of powder metallurgy T42 high speed steel for structural applications. Journal of Materials Processing Technology, 2008, 202, 521-527.	6.3	13
85	Effect of the heat treatment prior to extrusion on the direct hot-extrusion of aluminium powder compacts. Journal of Alloys and Compounds, 2009, 467, 191-201.	5.5	13
86	Electrophoretic deposition of antimonene for photoelectrochemical applications. Applied Materials Today, 2020, 20, 100714.	4.3	11
87	Unprecedented solar water splitting of dendritic nanostructured Bi2O3 films by combined oxygen vacancy formation and Na2MoO4 doping. International Journal of Hydrogen Energy, 2021, 46, 23702-23714.	7.1	11
88	Pushâ€Pull Electronic Effects in Surfaceâ€Active Sites Enhance Electrocatalytic Oxygen Evolution on Transition Metal Oxides. ChemSusChem, 2021, 14, 1595-1601.	6.8	10
89	Influence of the green density on the dewaxing behaviour of uniaxially pressed powder compacts. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 430, 277-284.	5.6	9
90	Resonant vibration analysis for temperature dependence of elastic properties of bulk metallic glass. Journal of Materials Research, 2007, 22, 533-537.	2.6	9

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91	Analysis of Photoelectrochemical Systems by Impedance Spectroscopy. , 2016, , 281-321.		9
92	Recent Advances in Material Characterization Using the Impulse Excitation Technique (IET). Key Engineering Materials, 2007, 333, 235-238.	0.4	8
93	A low temperature aqueous formate fuel cell using cobalt hexacyanoferrate as a non-noble metal oxidation catalyst. Sustainable Energy and Fuels, 2020, 4, 6227-6233.	4.9	8
94	Interfacial Engineering at Quantum Dot-Sensitized TiO₂ Photoelectrodes for Ultrahigh Photocurrent Generation. ACS Applied Materials & Interfaces, 2021, 13, 6208-6218.	8.0	7
95	Exploiting the synergistic catalytic effects of <scp>CoPi</scp> nanostructures on Zrâ€doped highly ordered <scp> TiO ₂ </scp> nanotubes for efficient solar water oxidation. International Journal of Energy Research, 2022, 46, 12608-12622.	4.5	7
96	Improving the Back Surface Field on an Amorphous Silicon Carbide Thinâ€Film Photocathode for Solar Water Splitting. ChemSusChem, 2018, 11, 1797-1804.	6.8	6
97	Lead Sulfide Nanocubes for Solar Energy Storage. Energy Technology, 2020, 8, 2000301.	3.8	5
98	Switchable All Inorganic Halide Perovskite Nanocrystalline Photoelectrodes for Solarâ€Driven Organic Transformations. Solar Rrl, 2022, 6, 2100723.	5.8	5
99	Application of Halide Perovskite Nanocrystals in Solarâ€Driven Photo(electro)Catalysis. Solar Rrl, 2022, 6, .	5.8	5
100	Direct Observation of the Chemical Transformations in BiVO₄ Photoanodes upon Prolonged Lightâ€Aging Treatments. Solar Rrl, 2022, 6, .	5.8	5
101	Improved solar water splitting performance of BiVO4 photoanode by the synergistic effect of Zr-Mo co-doping and FeOOH Co-catalyst layer. Materials Letters, 2022, 325, 132799.	2.6	5
102	Impedance Spectroscopy in Molecular Devices. Green Chemistry and Sustainable Technology, 2018, , 353-384.	0.7	4
103	An integrated photoanode based on non-critical raw materials for robust solar water splitting. Materials Advances, 2020, 1, 1202-1211.	5.4	4
104	Multifunctional approach to improve water oxidation performance with MOF-based photoelectrodes. Applied Materials Today, 2021, 24, 101159.	4.3	4
105	Sintering of modified M35MHV HSS under diferent nitrogen pressures. Powder Metallurgy, 2001, 44, 211-220.	1.7	3
106	Facile Surfactant-Assisted Synthesis of BiVO4 Nanoparticulate Films for Solar Water Splitting. Catalysts, 2021, 11, 1244.	3.5	1
107	PHOTOELECTROCHEMICAL TOOLS FOR THE ASSESSMENT OF ENERGY CONVERSION DEVICES. , 2018, , 361-395.		0
108	Direct Observation of the Chemical Transformations in BiVO₄ Photoanodes upon Prolonged Lightâ€Aging Treatments. Solar Rrl, 2022, 6, .	5.8	0