

Francisco Fabregat-Santiago

List of Publications by Year in descending order

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122
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16728
citing authors

#	ARTICLE	IF	CITATIONS
1	C ₆₀ Thin Films in Perovskite Solar Cells: Efficient or Limiting Charge Transport Layer?. ACS Applied Energy Materials, 2022, 5, 1646-1655.	5.1	6
2	Role of Pd in the Electrochemical Hydrogenation of Nitrobenzene Using CuPd Electrodes. Advanced Sustainable Systems, 2022, 6, .	5.3	16
3	Direct Observation of the Chemical Transformations in BiVO ₄ Photoanodes upon Prolonged Light-Aging Treatments. Solar Rrl, 2022, 6, .	5.8	5
4	Experimental Characterization and Statistical Analysis of Water-Based Gold Nanofluids for Solar Applications: Optical Properties and Photothermal Conversion Efficiency. Solar Rrl, 2022, 6, .	5.8	6
5	Pencil graphite rods decorated with nickel and nickel-iron as low-cost oxygen evolution reaction electrodes. Sustainable Energy and Fuels, 2021, 5, 3929-3938.	4.9	7
6	Combining Modulated Techniques for the Analysis of Photosensitive Devices. Small Methods, 2021, 5, e2100661.	8.6	22
7	Revealing the contribution of singlet oxygen in the photoelectrochemical oxidation of benzyl alcohol. Sustainable Energy and Fuels, 2021, 5, 956-962.	4.9	18
8	Tuning the selectivity of biomass oxidation over oxygen evolution on NiO(OH) electrodes. Green Chemistry, 2021, 23, 8061-8068.	9.0	20
9	Negative Capacitance and Inverted Hysteresis: Matching Features in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2020, 11, 8417-8423.	4.6	63
10	Improved Stability of Inverted and Flexible Perovskite Solar Cells with Carbon Electrode. ACS Applied Energy Materials, 2020, 3, 5126-5134.	5.1	95
11	Co-adsorbing effect of bile acids containing bulky amide groups at 3-position on the photovoltaic performance in dye-sensitized solar cells. Solar Energy, 2019, 189, 94-102.	6.1	4
12	TiO ₂ Nanotubes for Solar Water Splitting: Vacuum Annealing and Zr Doping Enhance Water Oxidation Kinetics. ACS Omega, 2019, 4, 16095-16102.	3.5	24
13	Effect of Environmental Humidity on the Electrical Properties of Lead Halide Perovskites. Journal of Physical Chemistry C, 2019, 123, 2011-2018.	3.1	20
14	In-situ Biofilm Quantification in Bioelectrochemical Systems by using Optical Coherence Tomography. ChemSusChem, 2018, 11, 2171-2178.	6.8	30
15	Impedance Spectroscopy in Molecular Devices. Green Chemistry and Sustainable Technology, 2018, , 353-384.	0.7	4
16	Quantification of bio-anode capacitance in bioelectrochemical systems using Electrochemical Impedance Spectroscopy. Journal of Power Sources, 2018, 400, 533-538.	7.8	50
17	Electron trapping induced electrostatic adsorption of cations: a general factor leading to photoactivity decay of nanostructured TiO ₂ . Journal of Materials Chemistry A, 2017, 5, 6455-6464.	10.3	29
18	Surface Polarization Model for the Dynamic Hysteresis of Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2017, 8, 915-921.	4.6	122

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19	Hydrazine sensors development based on a glassy carbon electrode modified with a nanostructured TiO ₂ films by electrochemical approach. <i>Mikrochimica Acta</i> , 2017, 184, 2123-2129.	5.0	53
20	Electron injection and scaffold effects in perovskite solar cells. <i>Journal of Materials Chemistry C</i> , 2017, 5, 634-644.	5.5	58
21	Stability of dye-sensitized solar cells under extended thermal stress. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 22546-22554.	2.8	28
22	Deleterious Effect of Negative Capacitance on the Performance of Halide Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2017, 2, 2007-2013.	17.4	65
23	Overcoming Charge Collection Limitation at Solid/Liquid Interface by a Controllable Crystal Deficient Overlayer. <i>Advanced Energy Materials</i> , 2017, 7, 1600923.	19.5	61
24	Carbon Counter-Electrode-Based Quantum-Dot-Sensitized Solar Cells with Certified Efficiency Exceeding 11%. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3103-3111.	4.6	169
25	Surface Recombination and Collection Efficiency in Perovskite Solar Cells from Impedance Analysis. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 5105-5113.	4.6	346
26	Electron-Transfer Kinetics through Interfaces between Electron-Transport and Ion-Transport Layers in Solid-State Dye-Sensitized Solar Cells Utilizing Solid Polymer Electrolyte. <i>Journal of Physical Chemistry C</i> , 2016, 120, 2494-2500.	3.1	13
27	Exploring Graphene Quantum Dots/TiO ₂ interface in photoelectrochemical reactions: Solar to fuel conversion. <i>Electrochimica Acta</i> , 2016, 187, 249-255.	5.2	79
28	Impedance spectroscopic analysis of high-performance dye sensitized solar cells based on nano-clay electrolytes. <i>Electrochimica Acta</i> , 2016, 197, 77-83.	5.2	8
29	Analysis of bio-anode performance through electrochemical impedance spectroscopy. <i>Bioelectrochemistry</i> , 2015, 106, 64-72.	4.6	45
30	Competitive Photoelectrochemical Methanol and Water Oxidation with Hematite Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 7653-7660.	8.0	56
31	Enhanced Carrier Transport Distance in Colloidal PbS Quantum-Dot-Based Solar Cells Using ZnO Nanowires. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27265-27274.	3.1	65
32	EFFECT OF THE CHROMOPHORES STRUCTURES ON THE PERFORMANCE OF SOLID-STATE DYE SENSITIZED SOLAR CELLS. <i>Nano</i> , 2014, 09, 1440005.	1.0	7
33	Diffusion-Recombination Impedance Model for Solar Cells with Disorder and Nonlinear Recombination. <i>ChemElectroChem</i> , 2014, 1, 289-296.	3.4	105
34	Role of the Selective Contacts in the Performance of Lead Halide Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 680-685.	4.6	583
35	General Working Principles of CH ₃ NH ₃ PbX ₃ Perovskite Solar Cells. <i>Nano Letters</i> , 2014, 14, 888-893.	9.1	786
36	Panchromatic Solar-to-H ₂ Conversion by a Hybrid Quantum Dots-Dye Dual Absorber Tandem Device. <i>Journal of Physical Chemistry C</i> , 2014, 118, 891-895.	3.1	27

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37	Chemical Effects of Tin Oxide Nanoparticles in Polymer Electrolytes-Based Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 16510-16517.	3.1	56
38	A perspective on the production of dye-sensitized solar modules. <i>Energy and Environmental Science</i> , 2014, 7, 3952-3981.	30.8	381
39	Understanding the Role of Underlayers and Overlayers in Thin Film Hematite Photoanodes. <i>Advanced Functional Materials</i> , 2014, 24, 7681-7688.	14.9	289
40	Mechanism of carrier accumulation in perovskite thin-absorber solar cells. <i>Nature Communications</i> , 2013, 4, 2242.	12.8	760
41	Selective contacts drive charge extraction in quantum dot solids via asymmetry in carrier transfer kinetics. <i>Nature Communications</i> , 2013, 4, 2272.	12.8	56
42	Hole conductivity and acceptor density of p-type CuGaO ₂ nanoparticles determined by impedance spectroscopy: The effect of Mg doping. <i>Electrochimica Acta</i> , 2013, 113, 570-574.	5.2	43
43	Harnessing Infrared Photons for Photoelectrochemical Hydrogen Generation. A PbS Quantum Dot Based "Quasi-Artificial Leaf". <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 141-146.	4.6	101
44	Temperature effects in dye-sensitized solar cells. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 2328.	2.8	111
45	Three dimensional-TiO ₂ nanotube array photoanode architectures assembled on a thin hollow nanofibrous backbone and their performance in quantum dot-sensitized solar cells. <i>Chemical Communications</i> , 2013, 49, 2810.	4.1	48
46	Interpretation of Cyclic Voltammetry Measurements of Thin Semiconductor Films for Solar Fuel Applications. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 1334-1339.	4.6	69
47	Elucidating Capacitance and Resistance Terms in Confined Electroactive Molecular Layers. <i>Analytical Chemistry</i> , 2013, 85, 411-417.	6.5	58
48	Water Oxidation at Hematite Photoelectrodes with an Iridium-Based Catalyst. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3826-3833.	3.1	128
49	Quantum Dot Based Heterostructures for Unassisted Photoelectrochemical Hydrogen Generation. <i>Advanced Energy Materials</i> , 2013, 3, 176-182.	19.5	101
50	Design and characterization of alkoxy-wrapped push-pull porphyrins for dye-sensitized solar cells. <i>Chemical Communications</i> , 2012, 48, 4368.	4.1	108
51	Analysis of the Origin of Open Circuit Voltage in Dye Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 1629-1634.	4.6	208
52	Enhanced diffusion through porous nanoparticle optical multilayers. <i>Journal of Materials Chemistry</i> , 2012, 22, 1751-1757.	6.7	22
53	Interfacial engineering of quantum dot-sensitized TiO ₂ fibrous electrodes for futuristic photoanodes in photovoltaic applications. <i>Journal of Materials Chemistry</i> , 2012, 22, 14228.	6.7	32
54	The combination of a polymer-carbon composite electrode with a high-absorptivity ruthenium dye achieves an efficient dye-sensitized solar cell based on a thiolate-disulfide redox couple. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 7131.	2.8	35

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55	Electrochemical and photoelectrochemical investigation of water oxidation with hematite electrodes. <i>Energy and Environmental Science</i> , 2012, 5, 7626.	30.8	451
56	From Flat to Nanostructured Photovoltaics: Balance between Thickness of the Absorber and Charge Screening in Sensitized Solar Cells. <i>ACS Nano</i> , 2012, 6, 873-880.	14.6	170
57	Photoelectrochemical and Impedance Spectroscopic Investigation of Water Oxidation with $\alpha\text{-Co}^{\text{II}}$ -Coated Hematite Electrodes. <i>Journal of the American Chemical Society</i> , 2012, 134, 16693-16700.	13.7	635
58	Carrier density and interfacial kinetics of mesoporous TiO ₂ in aqueous electrolyte determined by impedance spectroscopy. <i>Journal of Electroanalytical Chemistry</i> , 2012, 668, 119-125.	3.8	54
59	Water Oxidation at Hematite Photoelectrodes: The Role of Surface States. <i>Journal of the American Chemical Society</i> , 2012, 134, 4294-4302.	13.7	895
60	Impedance Spectroscopy Analysis of the Effect of TiO ₂ Blocking Layers on the Efficiency of Dye Sensitized Solar Cells. <i>Journal of Physical Chemistry C</i> , 2012, 116, 12415-12421.	3.1	73
61	Identifying charge and mass transfer resistances of an oxygen reducing biocathode. <i>Energy and Environmental Science</i> , 2011, 4, 5035.	30.8	107
62	Dye versus Quantum Dots in Sensitized Solar Cells: Participation of Quantum Dot Absorber in the Recombination Process. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 3032-3035.	4.6	139
63	Origin of efficiency enhancement in Nb ₂ O ₅ coated titanium dioxide nanorod based dye sensitized solar cells. <i>Energy and Environmental Science</i> , 2011, 4, 3414.	30.8	75
64	SiO ₂ Aerogel Templated, Porous TiO ₂ Photoanodes for Enhanced Performance in Dye-Sensitized Solar Cells Containing a Ni(III)/(IV) Bis(dicarbollide) Shuttle. <i>Journal of Physical Chemistry C</i> , 2011, 115, 11257-11264.	3.1	38
65	Platinum-coated nanostructured oxides for active catalytic electrodes. <i>Catalysis Communications</i> , 2011, 14, 58-61.	3.3	4
66	Joint Photophysical and Electrical Analyses on the Influence of Conjugation Order in D- π -A Photosensitizers of Mesoscopic Titania Solar Cells. <i>Journal of Physical Chemistry C</i> , 2011, 115, 14425-14430.	3.1	37
67	Modeling and characterization of extremely thin absorber (eta) solar cells based on ZnO nanowires. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 7162.	2.8	45
68	Characterization of nanostructured hybrid and organic solar cells by impedance spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 9083.	2.8	1,084
69	Doping saturation in dye-sensitized solar cells based on ZnO:Ga nanostructured photoanodes. <i>Electrochimica Acta</i> , 2011, 56, 6503-6509.	5.2	36
70	Bandgap Modulation in Efficient <i>n</i> -Type Thiophene Absorbers for Dye Solar Cell Sensitization. <i>ChemPhysChem</i> , 2010, 11, 245-250.	2.1	35
71	Energetic factors governing injection, regeneration and recombination in dye solar cells with phthalocyanine sensitizers. <i>Energy and Environmental Science</i> , 2010, 3, 1985.	30.8	125
72	Quantification of the Effects of Recombination and Injection in the Performance of Dye-Sensitized Solar Cells Based on <i>N</i> -Substituted Carbazole Dyes. <i>Journal of Physical Chemistry C</i> , 2010, 114, 19840-19848.	3.1	120

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73	Impedance spectroscopy study of solid-state dye-sensitized solar cells with varying Spiro-OMeTAD concentration. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1211, 1.	0.1	0
74	Recombination in Quantum Dot Sensitized Solar Cells. <i>Accounts of Chemical Research</i> , 2009, 42, 1848-1857.	15.6	747
75	Impedance spectroscopy of thin-film CdTe/CdS solar cells under varied illumination. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	68
76	Near-IR sensitization of wide band gap oxide semiconductor by axially anchored Si-naphthalocyanines. <i>Energy and Environmental Science</i> , 2009, 2, 529.	30.8	57
77	Electron Lifetime in Dye-Sensitized Solar Cells: Theory and Interpretation of Measurements. <i>Journal of Physical Chemistry C</i> , 2009, 113, 17278-17290.	3.1	694
78	Electron Transport in Dye-Sensitized Solar Cells Based on ZnO Nanotubes: Evidence for Highly Efficient Charge Collection and Exceptionally Rapid Dynamics. <i>Journal of Physical Chemistry A</i> , 2009, 113, 4015-4021.	2.5	255
79	Surface Passivation of Nanoporous TiO ₂ via Atomic Layer Deposition of ZrO ₂ for Solid-State Dye-Sensitized Solar Cell Applications. <i>Journal of Physical Chemistry C</i> , 2009, 113, 18385-18390.	3.1	141
80	Electron Transport and Recombination in Solid-State Dye Solar Cell with Spiro-OMeTAD as Hole Conductor. <i>Journal of the American Chemical Society</i> , 2009, 131, 558-562.	13.7	424
81	Influence of alumina coating on transport and recombination in DSSCs with 1-methylbenzimidazole as electrolyte additives. <i>Proceedings of SPIE</i> , 2009, , .	0.8	0
82	A review of recent results on electrochemical determination of the density of electronic states of nanostructured metal-oxide semiconductors and organic hole conductors. <i>Inorganica Chimica Acta</i> , 2008, 361, 684-698.	2.4	276
83	Factors determining the photovoltaic performance of a CdSe quantum dot sensitized solar cell: the role of the linker molecule and of the counter electrode. <i>Nanotechnology</i> , 2008, 19, 424007.	2.6	237
84	Injection and Recombination in Dye-Sensitized Solar Cells with a Broadband Absorbance Metal-Free Sensitizer Based on Oligothiophenylvinylene. <i>Journal of Physical Chemistry C</i> , 2008, 112, 18623-18627.	3.1	20
85	High Carrier Density and Capacitance in TiO ₂ Nanotube Arrays Induced by Electrochemical Doping. <i>Journal of the American Chemical Society</i> , 2008, 130, 11312-11316.	13.7	368
86	Correlation between Photovoltaic Performance and Impedance Spectroscopy of Dye-Sensitized Solar Cells Based on Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2007, 111, 6550-6560.	3.1	870
87	Effect of Energy Disorder in Interfacial Kinetics of Dye-Sensitized Solar Cells with Organic Hole Transport Material. <i>Journal of Physical Chemistry B</i> , 2006, 110, 19406-19411.	2.6	71
88	Chemical capacitance of nanoporous-nanocrystalline TiO ₂ in a room temperature ionic liquid. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 1827-1833.	2.8	99
89	Characteristics of High Efficiency Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry B</i> , 2006, 110, 25210-25221.	2.6	1,015
90	Implications of the Negative Capacitance Observed at Forward Bias in Nanocomposite and Polycrystalline Solar Cells. <i>Nano Letters</i> , 2006, 6, 640-650.	9.1	217

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91	Determination of carrier density of ZnO nanowires by electrochemical techniques. Applied Physics Letters, 2006, 89, 203117.	3.3	277
92	Determination of electron and hole energy levels in mesoporous nanocrystalline TiO ₂ solid-state dye solar cell. Synthetic Metals, 2006, 156, 944-948.	3.9	62
93	Three-Channel Transmission Line Impedance Model for Mesoscopic Oxide Electrodes Functionalized with a Conductive Coating. Journal of Physical Chemistry B, 2006, 110, 11284-11290.	2.6	103
94	Impedance spectroscopy study of dye-sensitized solar cells with undoped spiro-OMeTAD as hole conductor. Journal of Applied Physics, 2006, 100, 034510.	2.5	59
95	Influence of electrolyte in transport and recombination in dye-sensitized solar cells studied by impedance spectroscopy. Solar Energy Materials and Solar Cells, 2005, 87, 117-131.	6.2	1,107
96	Relaxation processes in the coloration of amorphous WO ₃ thin films studied by combined impedance and electro-optical measurements. Journal of Applied Physics, 2004, 96, 853-859.	2.5	34
97	Charging and diffusional aspects of Li ⁺ insertion in electrochromic α -WO ₃ . Solid State Ionics, 2004, 175, 521-525.	2.7	21
98	Analysis of cyclic voltammograms of electrochromic α -WO ₃ films from voltage-dependent equilibrium capacitance measurements. Journal of Electroanalytical Chemistry, 2004, 565, 329-334.	3.8	26
99	Dynamic behaviour of viologen-activated nanostructured TiO ₂ : correlation between kinetics of charging and coloration. Electrochimica Acta, 2004, 49, 745-752.	5.2	25
100	The origin of slow electron recombination processes in dye-sensitized solar cells with alumina barrier coatings. Journal of Applied Physics, 2004, 96, 6903-6907.	2.5	190
101	Electronic conductivity in nanostructured TiO ₂ films permeated with electrolyte. Physica Status Solidi A, 2003, 196, R4-R6.	1.7	97
102	Cyclic Voltammetry Studies of Nanoporous Semiconductors. Capacitive and Reactive Properties of Nanocrystalline TiO ₂ Electrodes in Aqueous Electrolyte. Journal of Physical Chemistry B, 2003, 107, 758-768.	2.6	372
103	Mott-Schottky Analysis of Nanoporous Semiconductor Electrodes in Dielectric State Deposited on SnO ₂ (F) Conducting Substrates. Journal of the Electrochemical Society, 2003, 150, E293.	2.9	218
104	Determination of the humidity of soil by monitoring the conductivity with indium tin oxide glass electrodes. Applied Physics Letters, 2002, 80, 2785-2787.	3.3	10
105	Decoupling of Transport, Charge Storage, and Interfacial Charge Transfer in the Nanocrystalline TiO ₂ /Electrolyte System by Impedance Methods. Journal of Physical Chemistry B, 2002, 106, 334-339.	2.6	285
106	Anomalous transport on polymeric porous film electrodes in the dopant-induced insulator-to-conductor transition analyzed by electrochemical impedance. Applied Physics Letters, 2001, 78, 1885-1887.	3.3	25
107	Dynamic Processes in the Coloration of WO ₃ by Lithium Insertion. Journal of the Electrochemical Society, 2001, 148, E302.	2.9	45
108	Switching behaviour in lightly doped polymeric porous film electrodes. Improving distributed impedance models for mixed conduction conditions. Journal of Electroanalytical Chemistry, 2001, 508, 48-58.	3.8	43

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109	Application of a distributed impedance model in the analysis of conducting polymer films. <i>Electrochemistry Communications</i> , 2000, 2, 601-605.	4.7	98
110	The role of instrumentation in the process of modeling real capacitors. <i>IEEE Transactions on Education</i> , 2000, 43, 439-442.	2.4	4
111	Nature of the Schottky-type barrier of highly dense SnO ₂ systems displaying nonohmic behavior. <i>Journal of Applied Physics</i> , 2000, 88, 6545-6548.	2.5	99
112	Doubling Exponent Models for the Analysis of Porous Film Electrodes by Impedance. Relaxation of TiO ₂ Nanoporous in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , 2000, 104, 2287-2298.	2.6	335
113	Effect of trap density on the dielectric response of varistor ceramics. <i>Solid-State Electronics</i> , 1999, 43, 2123-2127.	1.4	32
114	Anomalous transport effects in the impedance of porous film electrodes. <i>Electrochemistry Communications</i> , 1999, 1, 429-435.	4.7	195
115	Theoretical models for ac impedance of finite diffusion layers exhibiting low frequency dispersion. <i>Journal of Electroanalytical Chemistry</i> , 1999, 475, 152-163.	3.8	228
116	Frequency dispersion in electrochromic devices and conducting polymer electrodes: A generalized transmission line approach. <i>Ionics</i> , 1999, 5, 44-51.	2.4	14
117	Modelling the electric potential distribution in the dark in nanoporous semiconductor electrodes. <i>Journal of Solid State Electrochemistry</i> , 1999, 3, 337-347.	2.5	99
118	Structural and electrical conductivity studies on rutile solid solutions [Fe _x Ti _{1-2x} M _x O ₂ (M=Nb, Ta)]. <i>Journal of Materials Science</i> , 1998, 33, 4235-4238.	3.7	7
119	Grain boundary role in the electrical properties of La _{1-x} Sr _x Co _{0.8} Fe _{0.2} O ₃ perovskites. <i>Solid State Ionics</i> , 1998, 107, 203-211.	2.7	14