# Juan Bisquert

## List of Publications by Citations



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|---|---|---|---|
| 418 papers | 45,317 citations | 106 h-index | 204 g-index |
| 440 ext. papers | 48,482 ext. citations | 8 avg, IF | 7.92 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 418 | Theory of the Impedance of Electron Diffusion and Recombination in a Thin Layer. *Journal of Physical Chemistry B*, **2002**, 106, 325-333 | 3.4 | 1091 |
| 417 | Determination of the electron lifetime in nanocrystalline dye solar cells by open-circuit voltage decay measurements. *ChemPhysChem*, **2003**, 4, 859-64 | 3.2 | 1067 |
| 416 | 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 | 6.4 | 1034 |
| 415 | Defect migration in methylammonium lead iodide and its role in perovskite solar cell operation. *Energy and Environmental Science*, **2015**, 8, 2118-2127 | 35.4 | 1003 |
| 414 | Characterization of nanostructured hybrid and organic solar cells by impedance spectroscopy. *Physical Chemistry Chemical Physics*, **2011**, 13, 9083-118 | 3.6 | 985 |
| 413 | Characteristics of high efficiency dye-sensitized solar cells. *Journal of Physical Chemistry B*, **2006**, 110, 25210-21 | 3.4 | 965 |
| 412 | Low-temperature processed electron collection layers of graphene/TiO2 nanocomposites in thin film perovskite solar cells. *Nano Letters*, **2014**, 14, 724-30 | 11.5 | 917 |
| 411 | Correlation between Photovoltaic Performance and Impedance Spectroscopy of Dye-Sensitized Solar Cells Based on Ionic Liquids. *Journal of Physical Chemistry C*, **2007**, 111, 6550-6560 | 3.8 | 821 |
| 410 | Determination of rate constants for charge transfer and the distribution of semiconductor and electrolyte electronic energy levels in dye-sensitized solar cells by open-circuit photovoltage decay method. *Journal of the American Chemical Society*, **2004**, 126, 13550-9 | 16.4 | 817 |
| 409 | Water oxidation at hematite photoelectrodes: the role of surface states. *Journal of the American Chemical Society*, **2012**, 134, 4294-302 | 16.4 | 722 |
| 408 | Recombination in quantum dot sensitized solar cells. *Accounts of Chemical Research*, **2009**, 42, 1848-57 | 24.3 | 706 |
| 407 | Mechanism of carrier accumulation in perovskite thin-absorber solar cells. *Nature Communications*, **2013**, 4, 2242 | 17.4 | 702 |
| 406 | General working principles of CH3NH3PbX3 perovskite solar cells. *Nano Letters*, **2014**, 14, 888-93 | 11.5 | 696 |
| 405 | Electron Lifetime in Dye-Sensitized Solar Cells: Theory and Interpretation of Measurements. *Journal of Physical Chemistry C*, **2009**, 113, 17278-17290 | 3.8 | 650 |
| 404 | Chemical capacitance of nanostructured semiconductors: its origin and significance for nanocomposite solar cells. *Physical Chemistry Chemical Physics*, **2003**, 5, 5360 | 3.6 | 641 |
| 403 | Modeling high-efficiency quantum dot sensitized solar cells. *ACS Nano*, **2010**, 4, 5783-90 | 16.7 | 574 |
| 402 | Titanium dioxide nanomaterials for photovoltaic applications. *Chemical Reviews*, **2014**, 114, 10095-130 | 68.1 | 567 |

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| 401 | Slow Dynamic Processes in Lead Halide Perovskite Solar Cells. Characteristic Times and Hysteresis. *Journal of Physical Chemistry Letters*, **2014**, 5, 2357-63 | 6.4 | 556 |
| 400 | Photoinduced Giant Dielectric Constant in Lead Halide Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 2390-4 | 6.4 | 551 |
| 399 | Physical Chemical Principles of Photovoltaic Conversion with Nanoparticulate, Mesoporous Dye-Sensitized Solar Cells. *Journal of Physical Chemistry B*, **2004**, 108, 8106-8118 | 3.4 | 539 |
| 398 | Photoelectrochemical and impedance spectroscopic investigation of water oxidation with "Co-Pi"-coated hematite electrodes. *Journal of the American Chemical Society*, **2012**, 134, 16693-700 | 16.4 | 536 |
| 397 | High-efficiency "green" quantum dot solar cells. *Journal of the American Chemical Society*, **2014**, 136, 9203-10 | 16.4 | 502 |
| 396 | Charge carrier mobility and lifetime of organic bulk heterojunctions analyzed by impedance spectroscopy. *Organic Electronics*, **2008**, 9, 847-851 | 3.5 | 477 |
| 395 | Interpretation of the Time Constants Measured by Kinetic Techniques in Nanostructured Semiconductor Electrodes and Dye-Sensitized Solar Cells. *Journal of Physical Chemistry B*, **2004**, 108, 2313-2322 | 3.4 | 445 |
| 394 | Breakthroughs in the Development of Semiconductor-Sensitized Solar Cells. *Journal of Physical Chemistry Letters*, **2010**, 1, 3046-3052 | 6.4 | 435 |
| 393 | Electrochemical and photoelectrochemical investigation of water oxidation with hematite electrodes. *Energy and Environmental Science*, **2012**, 5, 7626 | 35.4 | 388 |
| 392 | Electron transport and recombination in solid-state dye solar cell with spiro-OMeTAD as hole conductor. *Journal of the American Chemical Society*, **2009**, 131, 558-62 | 16.4 | 386 |
| 391 | Control of I-V hysteresis in CH3NH3PbI3 perovskite solar cell. *Journal of Physical Chemistry Letters*, **2015**, 6, 4633-9 | 6.4 | 379 |
| 390 | Core/shell colloidal quantum dot exciplex states for the development of highly efficient quantum-dot-sensitized solar cells. *Journal of the American Chemical Society*, **2013**, 135, 15913-22 | 16.4 | 379 |
| 389 | Capacitive Dark Currents, Hysteresis, and Electrode Polarization in Lead Halide Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 1645-52 | 6.4 | 371 |
| 388 | Improving the performance of colloidal quantum-dot-sensitized solar cells. *Nanotechnology*, **2009**, 20, 295204 | 3.4 | 358 |
| 387 | Interfacial Degradation of Planar Lead Halide Perovskite Solar Cells. *ACS Nano*, **2016**, 10, 218-24 | 16.7 | 357 |
| 386 | High carrier density and capacitance in TiO2 nanotube arrays induced by electrochemical doping. *Journal of the American Chemical Society*, **2008**, 130, 11312-6 | 16.4 | 343 |
| 385 | Cyclic Voltammetry Studies of Nanoporous Semiconductors. Capacitive and Reactive Properties of Nanocrystalline TiO2 Electrodes in Aqueous Electrolyte. *Journal of Physical Chemistry B*, **2003**, 107, 758-768 | 3.4 | 342 |
| 384 | Theory of the electrochemical impedance of anomalous diffusion. *Journal of Electroanalytical Chemistry*, **2001**, 499, 112-120 | 4.1 | 339 |

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| 383 | Properties of Contact and Bulk Impedances in Hybrid Lead Halide Perovskite Solar Cells Including Inductive Loop Elements. *Journal of Physical Chemistry C*, **2016**, 120, 8023-8032 | 3.8 | 333 |
| 382 | Boosting power conversion efficiencies of quantum-dot-sensitized solar cells beyond 8% by recombination control. *Journal of the American Chemical Society*, **2015**, 137, 5602-9 | 16.4 | 330 |
| 381 | Impedance of constant phase element (CPE)-blocked diffusion in film electrodes. *Journal of Electroanalytical Chemistry*, **1998**, 452, 229-234 | 4.1 | 329 |
| 380 | A perspective on the production of dye-sensitized solar modules. *Energy and Environmental Science*, **2014**, 7, 3952-3981 | 35.4 | 325 |
| 379 | Doubling Exponent Models for the Analysis of Porous Film Electrodes by Impedance. Relaxation of TiO2Nanoporous in Aqueous Solution. *Journal of Physical Chemistry B*, **2000**, 104, 2287-2298 | 3.4 | 311 |
| 378 | CdSe Quantum Dot-Sensitized TiO2 Electrodes: Effect of Quantum Dot Coverage and Mode of Attachment. *Journal of Physical Chemistry C*, **2009**, 113, 4208-4214 | 3.8 | 306 |
| 377 | Impact of Capacitive Effect and Ion Migration on the Hysteretic Behavior of Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 4693-700 | 6.4 | 285 |
| 376 | Surface Recombination and Collection Efficiency in Perovskite Solar Cells from Impedance Analysis. *Journal of Physical Chemistry Letters*, **2016**, 7, 5105-5113 | 6.4 | 284 |
| 375 | Simultaneous determination of carrier lifetime and electron density-of-states in P3HT:PCBM organic solar cells under illumination by impedance spectroscopy. *Solar Energy Materials and Solar Cells*, **2010**, 94, 366-375 | 6.4 | 283 |
| 374 | Simulation of Steady-State Characteristics of Dye-Sensitized Solar Cells and the Interpretation of the Diffusion Length. *Journal of Physical Chemistry Letters*, **2010**, 1, 450-456 | 6.4 | 278 |
| 373 | A review of recent results on electrochemical determination of the density of electronic states of nanostructured metal-oxide semiconductors and organic hole conductors. *Inorganica Chimica Acta*, **2008**, 361, 684-698 | 2.7 | 263 |
| 372 | Decoupling of Transport, Charge Storage, and Interfacial Charge Transfer in the Nanocrystalline TiO2/Electrolyte System by Impedance Methods. *Journal of Physical Chemistry B*, **2002**, 106, 334-339 | 3.4 | 261 |
| 371 | Determination of carrier density of ZnO nanowires by electrochemical techniques. *Applied Physics Letters*, **2006**, 89, 203117 | 3.4 | 260 |
| 370 | Understanding the Role of Underlayers and Overlayers in Thin Film Hematite Photoanodes. *Advanced Functional Materials*, **2014**, 24, 7681-7688 | 15.6 | 258 |
| 369 | Analysis of the Mechanisms of Electron Recombination in Nanoporous TiO2 Dye-Sensitized Solar Cells. Nonequilibrium Steady-State Statistics and Interfacial Electron Transfer via Surface States. *Journal of Physical Chemistry B*, **2002**, 106, 8774-8782 | 3.4 | 243 |
| 368 | Quantum dot-sensitized solar cells. *Chemical Society Reviews*, **2018**, 47, 7659-7702 | 58.5 | 243 |
| 367 | Design of injection and recombination in quantum dot sensitized solar cells. *Journal of the American Chemical Society*, **2010**, 132, 6834-9 | 16.4 | 241 |
| 366 | Electron transport in dye-sensitized solar cells based on ZnO nanotubes: evidence for highly efficient charge collection and exceptionally rapid dynamics. *Journal of Physical Chemistry A*, **2009**, 113, 4015-21 | 2.8 | 240 |

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| 365 | 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 | 3.4 | 225 |
| 364 | Ionic Reactivity at Contacts and Aging of Methylammonium Lead Triiodide Perovskite Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1502246 | 21.8 | 225 |
| 363 | Influence of the boundaries in the impedance of porous film electrodes. *Physical Chemistry Chemical Physics*, **2000**, 2, 4185-4192 | 3.6 | 224 |
| 362 | Band engineering in core/shell ZnTe/CdSe for photovoltage and efficiency enhancement in exciplex quantum dot sensitized solar cells. *ACS Nano*, **2015**, 9, 908-15 | 16.7 | 211 |
| 361 | Theoretical models for ac impedance of finite diffusion layers exhibiting low frequency dispersion. *Journal of Electroanalytical Chemistry*, **1999**, 475, 152-163 | 4.1 | 199 |
| 360 | Mott-Schottky Analysis of Nanoporous Semiconductor Electrodes in Dielectric State Deposited on SnO[sub 2](F) Conducting Substrates. *Journal of the Electrochemical Society*, **2003**, 150, E293 | 3.9 | 197 |
| 359 | Impedance spectroscopy characterisation of highly efficient silicon solar cells under different light illumination intensities. *Energy and Environmental Science*, **2009**, 2, 678 | 35.4 | 196 |
| 358 | Light-Induced Space-Charge Accumulation Zone as Photovoltaic Mechanism in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 525-8 | 6.4 | 194 |
| 357 | Physical electrochemistry of nanostructured devices. *Physical Chemistry Chemical Physics*, **2008**, 10, 49-72 | 3.6 | 191 |
| 356 | Implications of the negative capacitance observed at forward bias in nanocomposite and polycrystalline solar cells. *Nano Letters*, **2006**, 6, 640-50 | 11.5 | 185 |
| 355 | Amorphous TiO2 Buffer Layer Boosts Efficiency of Quantum Dot Sensitized Solar Cells to over 9%. *Chemistry of Materials*, **2015**, 27, 8398-8405 | 9.6 | 184 |
| 354 | Energy Band Alignment between Anatase and Rutile TiO2. *Journal of Physical Chemistry Letters*, **2013**, 4, 4182-4187 | 6.4 | 184 |
| 353 | 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 | 179 |
| 352 | Controlled carbon nitride growth on surfaces for hydrogen evolution electrodes. *Angewandte Chemie - International Edition*, **2014**, 53, 3654-8 | 16.4 | 170 |
| 351 | Anomalous transport effects in the impedance of porous film electrodes. *Electrochemistry Communications*, **1999**, 1, 429-435 | 5.1 | 168 |
| 350 | Open-circuit voltage limit caused by recombination through tail states in bulk heterojunction polymer-fullerene solar cells. *Applied Physics Letters*, **2010**, 96, 113301 | 3.4 | 167 |
| 349 | Polarization Switching and Light-Enhanced Piezoelectricity in Lead Halide Perovskites. *Journal of Physical Chemistry Letters*, **2015**, 6, 1408-13 | 6.4 | 165 |
| 348 | Hole Transport and Recombination in All-Solid Sb2S3-Sensitized TiO2 Solar Cells Using CuSCN As Hole Transporter. *Journal of Physical Chemistry C*, **2012**, 116, 1579-1587 | 3.8 | 162 |

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| 347 | Interpretation of electron diffusion coefficient in organic and inorganic semiconductors with broad distributions of states. *Physical Chemistry Chemical Physics*, **2008**, 10, 3175-94 | 3.6 | 162 |
| 346 | Theory of Impedance and Capacitance Spectroscopy of Solar Cells with Dielectric Relaxation, Drift-Diffusion Transport, and Recombination. *Journal of Physical Chemistry C*, **2014**, 118, 18983-18991 | 3.8 | 160 |
| 345 | From flat to nanostructured photovoltaics: balance between thickness of the absorber and charge screening in sensitized solar cells. *ACS Nano*, **2012**, 6, 873-80 | 16.7 | 156 |
| 344 | Chemical Diffusion Coefficient of Electrons in Nanostructured Semiconductor Electrodes and Dye-Sensitized Solar Cells. *Journal of Physical Chemistry B*, **2004**, 108, 2323-2332 | 3.4 | 155 |
| 343 | Carbon Counter-Electrode-Based Quantum-Dot-Sensitized Solar Cells with Certified Efficiency Exceeding 11. *Journal of Physical Chemistry Letters*, **2016**, 7, 3103-11 | 6.4 | 154 |
| 342 | Electrical field profile and doping in planar lead halide perovskite solar cells. *Applied Physics Letters*, **2014**, 105, 133902 | 3.4 | 151 |
| 341 | Inverted Solution Processable OLEDs Using a Metal Oxide as an Electron Injection Contact.. *Advanced Functional Materials*, **2008**, 18, 145-150 | 15.6 | 151 |
| 340 | Negative capacitance caused by electron injection through interfacial states in organic light-emitting diodes. *Chemical Physics Letters*, **2006**, 422, 184-191 | 2.5 | 149 |
| 339 | Influence of Charge Transport Layers on Open-Circuit Voltage and Hysteresis in Perovskite Solar Cells. *Joule*, **2018**, 2, 788-798 | 27.8 | 147 |
| 338 | Operating Modes of Sandwiched Light-Emitting Electrochemical Cells. *Advanced Functional Materials*, **2011**, 21, 1581-1586 | 15.6 | 145 |
| 337 | A sulfide/polysulfide-based ionic liquid electrolyte for quantum dot-sensitized solar cells. *Journal of the American Chemical Society*, **2011**, 133, 20156-9 | 16.4 | 143 |
| 336 | On Voltage, Photovoltage, and Photocurrent in Bulk Heterojunction Organic Solar Cells. *Journal of Physical Chemistry Letters*, **2011**, 2, 1950-1964 | 6.4 | 139 |
| 335 | Device Physics of Hybrid Perovskite Solar cells: Theory and Experiment. *Advanced Energy Materials*, **2018**, 8, 1702772 | 21.8 | 138 |
| 334 | PEDOT Nanotube Arrays as High Performing Counter Electrodes for Dye Sensitized Solar Cells. Study of the Interactions Among Electrolytes and Counter Electrodes. *Advanced Energy Materials*, **2011**, 1, 781-784 | 21.8 | 137 |
| 333 | Surface Passivation of Nanoporous TiO2 via Atomic Layer Deposition of ZrO2 for Solid-State Dye-Sensitized Solar Cell Applications. *Journal of Physical Chemistry C*, **2009**, 113, 18385-18390 | 3.8 | 137 |
| 332 | Tunable hysteresis effect for perovskite solar cells. *Energy and Environmental Science*, **2017**, 10, 2383-2391 | 35.4 | 135 |
| 331 | Interfacial band-edge energetics for solar fuels production. *Energy and Environmental Science*, **2015**, 8, 2851-2862 | 35.4 | 134 |
| 330 | Photovoltaic efficiency limits and material disorder. *Energy and Environmental Science*, **2012**, 5, 6022 | 35.4 | 134 |

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| 329 | Dye versus Quantum Dots in Sensitized Solar Cells: Participation of Quantum Dot Absorber in the Recombination Process. *Journal of Physical Chemistry Letters*, **2011**, 2, 3032-3035 | 6.4 | 134 |
| 328 | Unravelling the role of vacancies in lead halide perovskite through electrical switching of photoluminescence. *Nature Communications*, **2018**, 9, 5113 | 17.4 | 129 |
| 327 | Analysis of the kinetics of ion intercalation. *Electrochimica Acta*, **2002**, 47, 2435-2449 | 6.7 | 127 |
| 326 | Influence of the Intermediate Density-of-States Occupancy on Open-Circuit Voltage of Bulk Heterojunction Solar Cells with Different Fullerene Acceptors. *Journal of Physical Chemistry Letters*, **2010**, 1, 2566-2571 | 6.4 | 126 |
| 325 | Guanidinium thiocyanate selective Ostwald ripening induced large grain for high performance perovskite solar cells. *Nano Energy*, **2017**, 41, 476-487 | 17.1 | 124 |
| 324 | Dynamic Phenomena at Perovskite/Electron-Selective Contact Interface as Interpreted from Photovoltage Decays. *CheM*, **2016**, 1, 776-789 | 16.2 | 124 |
| 323 | Lead-Free Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 904-905 | 20.1 | 121 |
| 322 | Water Oxidation at Hematite Photoelectrodes with an Iridium-Based Catalyst. *Journal of Physical Chemistry C*, **2013**, 117, 3826-3833 | 3.8 | 121 |
| 321 | Energetic factors governing injection, regeneration and recombination in dye solar cells with phthalocyanine sensitizers. *Energy and Environmental Science*, **2010**, 3, 1985 | 35.4 | 121 |
| 320 | Fermi Level of Surface States in TiO2 Nanoparticles. *Nano Letters*, **2003**, 3, 945-949 | 11.5 | 119 |
| 319 | Equivalent Circuit of Electrons and Holes in Thin Semiconductor Films for Photoelectrochemical Water Splitting Applications. *Journal of Physical Chemistry Letters*, **2012**, 3, 2517-22 | 6.4 | 116 |
| 318 | Role of ZnO Electron-Selective Layers in Regular and Inverted Bulk Heterojunction Solar Cells. *Journal of Physical Chemistry Letters*, **2011**, 2, 407-411 | 6.4 | 114 |
| 317 | Real-Time Observation of Iodide Ion Migration in Methylammonium Lead Halide Perovskites. *Small*, **2017**, 13, 1701711 | 11 | 113 |
| 316 | Kinetic and material properties of interfaces governing slow response and long timescale phenomena in perovskite solar cells. *Energy and Environmental Science*, **2019**, 12, 2054-2079 | 35.4 | 112 |
| 315 | Physical aspects of ferroelectric semiconductors for photovoltaic solar energy conversion. *Physics Reports*, **2016**, 653, 1-40 | 27.7 | 112 |
| 314 | Quantification of the Effects of Recombination and Injection in the Performance of Dye-Sensitized Solar Cells Based on N-Substituted Carbazole Dyes. *Journal of Physical Chemistry C*, **2010**, 114, 19840-19848 | 3.8 | 108 |
| 313 | Beyond the quasistatic approximation: Impedance and capacitance of an exponential distribution of traps. *Physical Review B*, **2008**, 77, | 3.3 | 106 |
| 312 | Analysis of the kinetics of ion intercalation. Two state model describing the coupling of solid state ion diffusion and ion binding processes. *Electrochimica Acta*, **2002**, 47, 3977-3988 | 6.7 | 106 |

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| 311 | Band unpinning and photovoltaic model for P3HT:PCBM organic bulk heterojunctions under illumination. *Chemical Physics Letters*, **2008**, 465, 57-62 | 2.5 | 105 |
| 310 | Design and characterization of alkoxy-wrapped push-pull porphyrins for dye-sensitized solar cells. *Chemical Communications*, **2012**, 48, 4368-70 | 5.8 | 104 |
| 309 | How the charge-neutrality level of interface states controls energy level alignment in cathode contacts of organic bulk-heterojunction solar cells. *ACS Nano*, **2012**, 6, 3453-60 | 16.7 | 104 |
| 308 | Cooperative kinetics of depolarization in CH3NH3PbI3 perovskite solar cells. *Energy and Environmental Science*, **2015**, 8, 910-915 | 35.4 | 102 |
| 307 | Illumination intensity dependence of the photovoltage in nanostructured TiO2 dye-sensitized solar cells. *Journal of Physical Chemistry B*, **2005**, 109, 15915-26 | 3.4 | 102 |
| 306 | Elucidating Operating Modes of Bulk-Heterojunction Solar Cells from Impedance Spectroscopy Analysis. *Journal of Physical Chemistry Letters*, **2013**, 4, 877-86 | 6.4 | 101 |
| 305 | Controlled Carbon Nitride Growth on Surfaces for Hydrogen Evolution Electrodes. *Angewandte Chemie*, **2014**, 126, 3728-3732 | 3.6 | 100 |
| 304 | Changes from Bulk to Surface Recombination Mechanisms between Pristine and Cycled Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 681-688 | 20.1 | 99 |
| 303 | Fluorine Treatment of TiO2 for Enhancing Quantum Dot Sensitized Solar Cell Performance. *Journal of Physical Chemistry C*, **2011**, 115, 14400-14407 | 3.8 | 99 |
| 302 | Three-channel transmission line impedance model for mesoscopic oxide electrodes functionalized with a conductive coating. *Journal of Physical Chemistry B*, **2006**, 110, 11284-90 | 3.4 | 99 |
| 301 | Inductive Loop in the Impedance Response of Perovskite Solar Cells Explained by Surface Polarization Model. *Journal of Physical Chemistry Letters*, **2017**, 8, 1402-1406 | 6.4 | 96 |
| 300 | Surface Polarization Model for the Dynamic Hysteresis of Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2017**, 8, 915-921 | 6.4 | 95 |
| 299 | Diffusion Recombination Impedance Model for Solar Cells with Disorder and Nonlinear Recombination. *ChemElectroChem*, **2014**, 1, 289-296 | 4.3 | 93 |
| 298 | Electronic conductivity in nanostructured TiO2 films permeated with electrolyte. *Physica Status Solidi A*, **2003**, 196, R4-R6 | | 93 |
| 297 | Modelling the electric potential distribution in the dark in nanoporous semiconductor electrodes. *Journal of Solid State Electrochemistry*, **1999**, 3, 337-347 | 2.6 | 93 |
| 296 | Direct Correlation between Ultrafast Injection and Photoanode Performance in Quantum Dot Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2010**, 114, 22352-22360 | 3.8 | 92 |
| 295 | Impedance analysis of galvanostatically synthesized polypyrrole films. Correlation of ionic diffusion and capacitance parameters with the electrode morphology. *Electrochimica Acta*, **2002**, 47, 4263-4272 | 6.7 | 92 |
| 294 | Chemical capacitance of nanoporous-nanocrystalline TiO2 in a room temperature ionic liquid. *Physical Chemistry Chemical Physics*, **2006**, 8, 1827-33 | 3.6 | 91 |

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| 293 | Effect of Organic and Inorganic Passivation in Quantum-Dot-Sensitized Solar Cells. *Journal of Physical Chemistry Letters*, **2013**, 4, 1519-25 | 6.4 | 90 |
| 292 | Quantum Dot Based Heterostructures for Unassisted Photoelectrochemical Hydrogen Generation. *Advanced Energy Materials*, **2013**, 3, 176-182 | 21.8 | 90 |
| 291 | Nature of the Schottky-type barrier of highly dense SnO2 systems displaying nonohmic behavior. *Journal of Applied Physics*, **2000**, 88, 6545-6548 | 2.5 | 90 |
| 290 | Photoanodes based on nanostructured WO3 for water splitting. *ChemPhysChem*, **2012**, 13, 3025-34 | 3.2 | 89 |
| 289 | Effect of humidity on the ac conductivity of nanoporous TiO2. *Journal of Applied Physics*, **2003**, 94, 5261 | 2.5 | 89 |
| 288 | Identifying charge and mass transfer resistances of an oxygen reducing biocathode. *Energy and Environmental Science*, **2011**, 4, 5035 | 35.4 | 88 |
| 287 | Fractional diffusion in the multiple-trapping regime and revision of the equivalence with the continuous-time random walk. *Physical Review Letters*, **2003**, 91, 010602 | 7.4 | 87 |
| 286 | Application of a distributed impedance model in the analysis of conducting polymer films. *Electrochemistry Communications*, **2000**, 2, 601-605 | 5.1 | 87 |
| 285 | Theory of the impedance of charge transfer via surface states in dye-sensitized solar cells. *Journal of Electroanalytical Chemistry*, **2010**, 646, 43-51 | 4.1 | 85 |
| 284 | Photosensitization of TiO2Layers with CdSe Quantum Dots: Correlation between Light Absorption and Photoinjection. *Journal of Physical Chemistry C*, **2007**, 111, 14889-14892 | 3.8 | 85 |
| 283 | Quantification of Ionic Diffusion in Lead Halide Perovskite Single Crystals. *ACS Energy Letters*, **2018**, 3, 1477-1481 | 20.1 | 84 |
| 282 | Hopping Transport of Electrons in Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2007**, 111, 17163-17168 | 3.8 | 80 |
| 281 | Classification of solar cells according to mechanisms of charge separation and charge collection. *Physical Chemistry Chemical Physics*, **2015**, 17, 4007-14 | 3.6 | 78 |
| 280 | Porphyrin Dyes with High Injection and Low Recombination for Highly Efficient Mesoscopic Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2011**, 115, 10898-10902 | 3.8 | 77 |
| 279 | Influence of the Potassium Chloride Concentration on the Physical Properties of Electrodeposited ZnO Nanowire Arrays. *Journal of Physical Chemistry C*, **2008**, 112, 16318-16323 | 3.8 | 75 |
| 278 | Photoelectrochemical behavior of nanostructured TiO(2) thin-film electrodes in contact with aqueous electrolytes containing dissolved pollutants: a model for distinguishing between direct and indirect interfacial hole transfer from photocurrent measurements. *Journal of Physical Chemistry B*, **2005**, 109, 3371-80 | 3.4 | 75 |
| 277 | A high-capacity Li[Ni0.8Co0.06Mn0.14]O2 positive electrode with a dual concentration gradient for next-generation lithium-ion batteries. *Journal of Materials Chemistry A*, **2015**, 3, 22183-22190 | 13 | 74 |
| 276 | Solution-processed small molecule:fullerene bulk-heterojunction solar cells: impedance spectroscopy deduced bulk and interfacial limits to fill-factors. *Physical Chemistry Chemical Physics*, **2013**, 15, 16456-62 | 3.6 | 74 |

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| 275 | Charge transfer processes at the semiconductor/electrolyte interface for solar fuel production: insight from impedance spectroscopy. *Journal of Materials Chemistry A*, **2016**, 4, 2873-2879 | 13 | 73 |
| 274 | Photovoltage Behavior in Perovskite Solar Cells under Light-Soaking Showing Photoinduced Interfacial Changes. *ACS Energy Letters*, **2017**, 2, 950-956 | 20.1 | 72 |
| 273 | High reduction of interfacial charge recombination in colloidal quantum dot solar cells by metal oxide surface passivation. *Nanoscale*, **2015**, 7, 5446-56 | 7.7 | 72 |
| 272 | Origin of efficiency enhancement in Nb2O5 coated titanium dioxide nanorod based dye sensitized solar cells. *Energy and Environmental Science*, **2011**, 4, 3414 | 35.4 | 71 |
| 271 | Distinction between Capacitive and Noncapacitive Hysteretic Currents in Operation and Degradation of Perovskite Solar Cells. *ACS Energy Letters*, **2016**, 1, 683-688 | 20.1 | 70 |
| 270 | Interplay of Optical, Morphological, and Electronic Effects of ZnO Optical Spacers in Highly Efficient Polymer Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400805 | 21.8 | 69 |
| 269 | High Open Circuit Voltage Quantum Dot Sensitized Solar Cells Manufactured with ZnO Nanowire Arrays and Si/ZnO Branched Hierarchical Structures. *Journal of Physical Chemistry Letters*, **2011**, 2, 1984-1990 | 6.4 | 68 |
| 268 | Temperature Effects on the Photovoltaic Performance of Planar Structure Perovskite Solar Cells. *Chemistry Letters*, **2015**, 44, 1557-1559 | 1.7 | 67 |
| 267 | Polymer/Perovskite Amplifying Waveguides for Active Hybrid Silicon Photonics. *Advanced Materials* , **2015**, 27, 6157-62 | 24 | 67 |
| 266 | Dilemmas of dye-sensitized solar cells. *ChemPhysChem*, **2011**, 12, 1633-6 | 3.2 | 67 |
| 265 | Flatband Potential of F:SnO2 in a TiO2 Dye-Sensitized Solar Cell: An Interference Reflection Study. *Journal of Physical Chemistry B*, **2003**, 107, 9397-9403 | 3.4 | 67 |
| 264 | Dynamics of Charge Separation and Trap-Limited Electron Transport in TiO2 Nanostructures. *Journal of Physical Chemistry C*, **2007**, 111, 13997-14000 | 3.8 | 66 |
| 263 | Effect of energy disorder in interfacial kinetics of dye-sensitized solar cells with organic hole transport material. *Journal of Physical Chemistry B*, **2006**, 110, 19406-11 | 3.4 | 66 |
| 262 | Determination of the Electron Diffusion Length in Dye-Sensitized Solar Cells by Random Walk Simulation: Compensation Effects and Voltage Dependence. *Journal of Physical Chemistry C*, **2010**, 114, 8552-8558 | 3.8 | 65 |
| 261 | Electrodeposition and impedance spectroscopy characterization of ZnO nanowire arrays. *Physica Status Solidi (A) Applications and Materials Science*, **2008**, 205, 2345-2350 | 1.6 | 65 |
| 260 | Current-Voltage Characteristics of Bulk Heterojunction Organic Solar Cells: Connection Between Light and Dark Curves. *Advanced Energy Materials*, **2011**, 1, 1073-1078 | 21.8 | 64 |
| 259 | Tailoring Crystal Structure of FA0.83Cs0.17PbI3 Perovskite Through Guanidinium Doping for Enhanced Performance and Tunable Hysteresis of Planar Perovskite Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1806479 | 15.6 | 64 |
| 258 | Exploring Graphene Quantum Dots/TiO2 interface in photoelectrochemical reactions: Solar to fuel conversion. *Electrochimica Acta*, **2016**, 187, 249-255 | 6.7 | 60 |

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