Nikolaos Vlachopoulos

List of Publications by Year
in descending order

67 papers	4,524 citations	125106 35 h-index	120465 65 g-index
69 all docs	69 docs citations	69 times ranked	6129 citing authors

#	Article	IF	Citations
1	Molecularly Engineered Low-Cost Organic Hole-Transporting Materials for Perovskite Solar Cells: The Substituent Effect on Non-fused Three-Dimensional Systems. ACS Applied Energy Materials, 2022, 5, 3156-3165.	2.5	2
2	Experimental and theoretical study of organic sensitizers for solid-state dye-sensitized solar cells (s-DSSCs). Journal of Photochemistry and Photobiology A: Chemistry, 2022, 428, 113890.	2.0	6
3	New approaches in component design for dye-sensitized solar cells. Sustainable Energy and Fuels, 2021, 5, 367-383.	2.5	32
4	Rapid hybrid perovskite film crystallization from solution. Chemical Society Reviews, 2021, 50, 7108-7131.	18.7	77
5	The Rise of Dyeâ€Sensitized Solar Cells: From Molecular Photovoltaics to Emerging Solidâ€State Photovoltaic Technologies. Helvetica Chimica Acta, 2021, 104, e2000230.	1.0	18
6	A molecular photosensitizer achieves a Voc of 1.24â€‰V enabling highly efficient and stable dye-sensitized solar cells with copper(II/I)-based electrolyte. Nature Communications, 2021, 12, 1777.	5.8	196
7	Microbial bioelectrochemical cells for hydrogen generation based on irradiated semiconductor photoelectrodes. JPhys Energy, 2021, 3, 032012.	2.3	1
8	Solid-state dye-sensitized solar cells using polymeric hole conductors. RSC Advances, 2021, 11, 39570-39581.	1.7	9
9	Effect of TiO2 Photoanodes Morphology and Dye Structure on Dye-Regeneration Kinetics Investigated by Scanning Electrochemical Microscopy. Electrochem, 2020, 1, 329-343.	1.7	1
10	Directly Photoexcited Oxides for Photoelectrochemical Water Splitting. ChemSusChem, 2019, 12, 4337-4352.	3.6	15
11	Blocking the Charge Recombination with Diiodide Radicals by TiO₂ Compact Layer in Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2019, 166, B3203-B3208.	1.3	10
12	Diverging surface reactions at TiO₂- or ZnO-based photoanodes in dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2019, 21, 13047-13057.	1.3	20
13	Dye sensitized photoelectrolysis cells. Chemical Society Reviews, 2019, 48, 3705-3722.	18.7	133
14	Metal Coordination Complexes as Redox Mediators in Regenerative Dye-Sensitized Solar Cells. Inorganics, 2019, 7, 30.	1.2	79
15	Toward an alternative approach for the preparation of low-temperature titanium dioxide blocking underlayers for perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 10729-10738.	5.2	13
16	Beyond the Limitations of Dye-Sensitized Solar Cells. , 2019, , 285-323.		6
17	A tandem redox system with a cobalt complex and 2-azaadamantane-<i>N</i>-oxyl for fast dye regeneration and open circuit voltages exceeding 1 V. Journal of Materials Chemistry A, 2019, 7, 10998-11006.	5.2	8
18	Photoelectrochemical Cells Based on Dye Sensitization for Electricity and Fuel Production. Chimia, 2019, 73, 894.	0.3	12

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19	Electrochemically polymerized poly (3, 4-phenylenedioxythiophene) as efficient and transparent counter electrode for dye sensitized solar cells. Electrochimica Acta, 2019, 300, 482-488.	2.6	38
20	New covalently bonded dye/hole transporting material for better charge transfer in solid-state dye-sensitized solar cells. Electrochimica Acta, 2018, 269, 163-171.	2.6	7
21	New-generation integrated devices based on dye-sensitized and perovskite solar cells. Energy and Environmental Science, 2018, 11, 476-526.	15.6	364
22	Photobatteries and Photocapacitors. Green Chemistry and Sustainable Technology, 2018, , 281-325.	0.4	4
23	The Importance of Pendant Groups on Triphenylamineâ€Based Hole Transport Materials for Obtaining Perovskite Solar Cells with over 20% Efficiency. Advanced Energy Materials, 2018, 8, 1701209.	10.2	134
24	Interfacial Engineering of Metal Oxides for Highly Stable Halide Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800367.	1.9	39
25	Dye-Sensitized Solar Cells. , 2018, , 183-239.		6
26	Incorporation of Counter Ions in Organic Molecules: New Strategy in Developing Dopantâ€Free Hole Transport Materials for Efficient Mixedâ€Ion Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1602736.	10.2	72
27	Impact of Local Electric Fields on Charge-Transfer Processes at the TiO₂/Dye/Electrolyte Interface. ACS Energy Letters, 2017, 2, 161-167.	8.8	18
28	Perovskite solar cell â€“ electrochemical double layer capacitor interplay. Electrochimica Acta, 2017, 258, 825-833.	2.6	18
29	Additives, Hole Transporting Materials and Spectroscopic Methods to Characterize the Properties of Perovskite Films. Chimia, 2017, 71, 754.	0.3	4
30	Constructive Effects of Alkyl Chains: A Strategy to Design Simple and Nonâ€Spiro Hole Transporting Materials for Highâ€Efficiency Mixedâ€Ion Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1502536.	10.2	72
31	Efficient Blueâ€Colored Solidâ€State Dyeâ€Sensitized Solar Cells: Enhanced Charge Collection by Using an in Situ Photoelectrochemically Generated Conducting Polymer Hole Conductor. ChemPhysChem, 2016, 17, 1441-1445.	1.0	21
32	The effect of mesoporous TiO2 pore size on the performance of solid-state dye sensitized solar cells based on photoelectrochemically polymerized Poly(3,4-ethylenedioxythiophene) hole conductor. Electrochimica Acta, 2016, 210, 23-31.	2.6	8
33	Studies on the Interfacial Electric Field and Stark Effect at the TiO₂/Dye/Electrolyte Interface. Journal of Physical Chemistry C, 2016, 120, 22215-22224.	1.5	9
34	The Role of 3D Molecular Structural Control in New Hole Transport Materials Outperforming <i>Spiro</i>â€OMeTAD in Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1601062.	10.2	87
35	Copper Bipyridyl Redox Mediators for Dye-Sensitized Solar Cells with High Photovoltage. Journal of the American Chemical Society, 2016, 138, 15087-15096.	6.6	239
36	Strategy to Boost the Efficiency of Mixed-Ion Perovskite Solar Cells: Changing Geometry of the Hole Transporting Material. ACS Nano, 2016, 10, 6816-6825.	7.3	127

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37	Physicochemical identity and charge storage properties of battery-type nickel oxide material and its composites with activated carbon. Electrochimica Acta, 2016, 194, 480-488.	2.6	36
38	Efficient solid-state dye sensitized solar cells: The influence of dye molecular structures for the in-situ photoelectrochemically polymerized PEDOT as hole transporting material. Nano Energy, 2016, 19, 455-470.	8.2	52
39	Efficient dye regeneration at low driving force achieved in triphenylamine dye LEG4 and TEMPO redox mediator based dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2015, 17, 15868-15875.	1.3	58
40	3,4-Ethylenedioxythiophene-based cobalt complex: an efficient co-mediator in dye-sensitized solar cells with poly(3,4-ethylenedioxythiophene) counter-electrode. Electrochimica Acta, 2015, 179, 237-240.	2.6	13
41	Photoelectrochemical Polymerization of EDOT for Solid State Dye Sensitized Solar Cells: Role of Dye and Solvent. Electrochimica Acta, 2015, 179, 220-227.	2.6	16
42	Carbon nanotube film replacing silver in high-efficiency solid-state dye solar cells employing polymer hole conductor. Journal of Solid State Electrochemistry, 2015, 19, 3139-3144.	1.2	12
43	ZnO@Ag2S coreâ€“shell nanowire arrays for environmentally friendly solid-state quantum dot-sensitized solar cells with panchromatic light capture and enhanced electron collection. Physical Chemistry Chemical Physics, 2015, 17, 12786-12795.	1.3	35
44	Matrix-Assisted Laser Desorption/Ionization Mass Spectrometric Analysis of Poly(3,4-ethylenedioxythiophene) in Solid-State Dye-Sensitized Solar Cells: Comparison of <i>In Situ</i> Photoelectrochemical Polymerization in Aqueous Micellar and Organic Media. Analytical Chemistry, 2015, 87, 3942-3948.	3.2	17
45	Dye-sensitized Solar Cells: New Approaches with Organic Solid-state Hole Conductors. Chimia, 2015, 69, 41.	0.3	13
46	Direct light-induced polymerization of cobalt-based redox shuttles: an ultrafast way towards stable dye-sensitized solar cells. Chemical Communications, 2015, 51, 16308-16311.	2.2	73
47	The combination of a new organic Dâ€“Ï€â€“A dye with different organic hole-transport materials for efficient solid-state dye-sensitized solar cells. Journal of Materials Chemistry A, 2015, 3, 4420-4427.	5.2	45
48	Integrated Design of Organic Hole Transport Materials for Efficient Solidâ€State Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2015, 5, 1401185.	10.2	59
49	Solidâ€State Dyeâ€Sensitized Solar Cells Based on Poly(3,4â€ethylenedioxypyrrole) and Metalâ€Free Organic Dyes. ChemPhysChem, 2014, 15, 1043-1047.	1.0	24
50	Combination of Asymmetric Supercapacitor Utilizing Activated Carbon and Nickel Oxide with Cobalt Polypyridyl-Based Dye-Sensitized Solar Cell. Electrochimica Acta, 2014, 143, 390-397.	2.6	61
51	Poly(3,4-ethylenedioxythiophene) Hole-Transporting Material Generated by Photoelectrochemical Polymerization in Aqueous and Organic Medium for All-Solid-State Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2014, 118, 16591-16601.	1.5	48
52	Carbazoleâ€Based Holeâ€Transport Materials for Efficient Solidâ€State Dyeâ€Sensitized Solar Cells and Perovskite Solar Cells. Advanced Materials, 2014, 26, 6629-6634.	11.1	369
53	PEDOT counter electrodes for dye-sensitized solar cells prepared by aqueous micellar electrodeposition. Electrochimica Acta, 2013, 107, 45-51.	2.6	131
54	A quasi-liquid polymer-based cobalt redox mediator electrolyte for dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 17419.	1.3	38

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55	Neutral, Polaron, and Bipolaron States in PEDOT Prepared by Photoelectrochemical Polymerization and the Effect on Charge Generation Mechanism in the Solid-State Dye-Sensitized Solar Cell. Journal of Physical Chemistry C, 2013, 117, 22484-22491.	1.5	52
56	Integration of solid-state dye-sensitized solar cell with metal oxide charge storage material into photoelectrochemical capacitor. Journal of Power Sources, 2013, 234, 91-99.	4.0	83
57	Incompletely solvated ionic liquid mixtures as electrolyte solvents for highly stable dye-sensitized solar cells. RSC Advances, 2013, 3, 1896-1901.	1.7	30
58	New Approach for Preparation of Efficient Solid-State Dye-Sensitized Solar Cells by Photoelectrochemical Polymerization in Aqueous Micellar Solution. Journal of Physical Chemistry Letters, 2013, 4, 4026-4031.	2.1	29
59	Development of an organic redox couple and organic dyes for aqueous dye-sensitized solar cells. Energy and Environmental Science, 2012, 5, 9752.	15.6	55
60	Effect of Cation on Dye Regeneration Kinetics of N719-Sensitized TiO2 Films in Acetonitrile-Based and Ionic-Liquid-Based Electrolytes Investigated by Scanning Electrochemical Microscopy. Journal of Physical Chemistry C, 2012, 116, 4316-4323.	1.5	39
61	Liquid electrolytes for dye-sensitized solar cells. Dalton Transactions, 2011, 40, 10289.	1.6	156
62	Electrochemical aspects of display technology based on nanostructured titanium dioxide with attached viologen chromophores. Electrochimica Acta, 2008, 53, 4065-4071.	2.6	47
63	The geometry of nanometer-sized electrodes and its influence on electrolytic currents and metal deposition processes in scanning tunneling and scanning electrochemical microscopy. Surface Science, 2005, 597, 181-195.	0.8	37
64	Redox regulation in ruthenium(II) polypyridyl complexes and their application in solar energy conversion. Journal of the Chemical Society Dalton Transactions, 1997, , 4571-4578.	1.1	74
65	Conversion of Light into Electricity with Trinuclear Ruthenium Complexes Adsorbed on Textured TiO2Films. Helvetica Chimica Acta, 1990, 73, 1788-1803.	1.0	194
66	cis-Diaquabis(2,2'-bipyridyl-4,4'-dicarboxylate)ruthenium(II) sensitizes wide band gap oxide semiconductors very efficiently over a broad spectral range in the visible. Journal of the American Chemical Society, 1988, 110, 3686-3687.	6.6	179
67	Very efficient visible light energy harvesting and conversion by spectral sensitization of high surface area polycrystalline titanium dioxide films. Journal of the American Chemical Society, 1988, 110, 1216-1220.	6.6	542