Maria Vasilopoulou

List of Publications by Year
in descending order

98 papers	3,417 citations	126907 33 h-index	155660 55 g-index
98 all docs	98 docs citations	98 times ranked	4382 citing authors

#	Article	IF	Citations
1	The Influence of Hydrogenation and Oxygen Vacancies on Molybdenum Oxides Work Function and Gap States for Application in Organic Optoelectronics. Journal of the American Chemical Society, 2012, 134, 16178-16187.	13.7	340
2	Perovskite light-emitting diodes. Nature Electronics, 2022, 5, 203-216.	26.0	268
3	Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells. Energy and Environmental Science, 2021, 14, 2906-2953.	30.8	170
4	Advances in solution-processed near-infrared light-emitting diodes. Nature Photonics, 2021, 15, 656-669.	31.4	136
5	Molecular materials as interfacial layers and additives in perovskite solar cells. Chemical Society Reviews, 2020, 49, 4496-4526.	38.1	130
6	Old Metal Oxide Clusters in New Applications: Spontaneous Reduction of Keggin and Dawson Polyoxometalate Layers by a Metallic Electrode for Improving Efficiency in Organic Optoelectronics. Journal of the American Chemical Society, 2015, 137, 6844-6856.	13.7	115
7	Reduction of Tungsten Oxide: A Path Towards Dual Functionality Utilization for Efficient Anode and Cathode Interfacial Layers in Organic Lightâ€Emitting Diodes. Advanced Functional Materials, 2011, 21, 1489-1497.	14.9	99
8	Fiberâ€Shaped Electronic Devices. Advanced Energy Materials, 2021, 11, 2101443.	19.5	74
9	Efficient colloidal quantum dot light-emitting diodes operating in the second near-infrared biological window. Nature Photonics, 2020, 14, 50-56.	31.4	72
10	Annealing-free highly crystalline solution-processed molecular metal oxides for efficient single-junction and tandem polymer solar cells. Energy and Environmental Science, 2015, 8, 2448-2463.	30.8	68
11	Intrinsic Defects and H Doping in WO3. Scientific Reports, 2017, 7, 40882.	3.3	65
12	Solution processable tungsten polyoxometalate as highly effective cathode interlayer for improved efficiency and stability polymer solar cells. Solar Energy Materials and Solar Cells, 2013, 114, 205-213.	6.2	63
13	Surface passivation effect by fluorine plasma treatment on ZnO for efficiency and lifetime improvement of inverted polymer solar cells. Journal of Materials Chemistry A, 2016, 4, 11844-11858.	10.3	62
14	High efficiency blue organic light-emitting diodes with below-bandgap electroluminescence. Nature Communications, 2021, 12, 4868.	12.8	62
15	Suppressing the Photocatalytic Activity of Zinc Oxide Electron-Transport Layer in Nonfullerene Organic Solar Cells with a Pyrene-Bodipy Interlayer. ACS Applied Materials & Interfaces, 2020, 12, 21961-21973.	8.0	57
16	High performance organic light emitting diodes using substoichiometric tungsten oxide as efficient hole injection layer. Organic Electronics, 2012, 13, 796-806.	2.6	56
17	Solutionâ€Processed Hydrogen Molybdenum Bronzes as Highly Conductive Anode Interlayers in Efficient Organic Photovoltaics. Advanced Energy Materials, 2014, 4, 1300896.	19.5	56
18	Barrierless hole injection through sub-bandgap occupied states in organic light emitting diodes using substoichiometric MoOx anode interfacial layer. Applied Physics Letters, 2012, 100, .	3.3	54

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19	Inorganic and Hybrid Interfacial Materials for Organic and Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2000910.	19.5	54
20	Atomicâ€Layerâ€Deposited Aluminum and Zirconium Oxides for Surface Passivation of TiO₂ in Highâ€Efficiency Organic Photovoltaics. Advanced Energy Materials, 2014, 4, 1400214.	19.5	52
21	Lithium Doping of ZnO for High Efficiency and Stability Fullerene and Non-fullerene Organic Solar Cells. ACS Applied Energy Materials, 2019, 2, 1663-1675.	5.1	52
22	Reduced molybdenum oxide as an efficient electron injection layer in polymer light-emitting diodes. Applied Physics Letters, 2011, 98, 123301.	3.3	49
23	Role of the Metal-Oxide Work Function on Photocurrent Generation in Hybrid Solar Cells. Scientific Reports, 2018, 8, 3559.	3.3	47
24	Investigating the role of reduced graphene oxide as a universal additive in planar perovskite solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 386, 112141.	3.9	47
25	Large work function shift of organic semiconductors inducing enhanced interfacial electron transfer in organic optoelectronics enabled by porphyrin aggregated nanostructures. Nano Research, 2014, 7, 679-693.	10.4	46
26	Influence of the Oxygen Substoichiometry and of the Hydrogen Incorporation on the Electronic Band Structure of Amorphous Tungsten Oxide Films. Journal of Physical Chemistry C, 2014, 118, 12632-12641.	3.1	46
27	A water soluble inorganic molecular oxide as a novel efficient electron injection layer for hybrid light-emitting diodes (HyLEDs). Organic Electronics, 2010, 11, 887-894.	2.6	45
28	Avoiding ambient air and light induced degradation in high-efficiency polymer solar cells by the use of hydrogen-doped zinc oxide as electron extraction material. Nano Energy, 2017, 34, 500-514.	16.0	45
29	Effect of the Oxygen Sub-Stoichiometry and of Hydrogen Insertion on the Formation of Intermediate Bands within the Gap of Disordered Molybdenum Oxide Films. Journal of Physical Chemistry C, 2013, 117, 18013-18020.	3.1	40
30	A hysteresis-free perovskite transistor with exceptional stability through molecular cross-linking and amine-based surface passivation. Nanoscale, 2020, 12, 7641-7650.	5.6	40
31	Solâ€“gel synthesized, low-temperature processed, reduced molybdenum peroxides for organic optoelectronics applications. Journal of Materials Chemistry C, 2014, 2, 6290.	5.5	38
32	Waterâ€Soluble Lacunary Polyoxometalates with Excellent Electron Mobilities and Hole Blocking Capabilities for High Efficiency Fluorescent and Phosphorescent Organic Light Emitting Diodes. Advanced Functional Materials, 2016, 26, 2655-2665.	14.9	35
33	Surface Modification of ZnO Layers via Hydrogen Plasma Treatment for Efficient Inverted Polymer Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 1194-1205.	8.0	35
34	Defect processes in F and Cl doped anatase TiO2. Scientific Reports, 2019, 9, 19970.	3.3	35
35	Robust Inorganic Hole Transport Materials for Organic and Perovskite Solar Cells: Insights into Materials Electronic Properties and Device Performance. Solar Rrl, 2021, 5, 2000555.	5.8	34
36	Triazine-Substituted Zinc Porphyrin as an Electron Transport Interfacial Material for Efficiency Enhancement and Degradation Retardation in Planar Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 3216-3229.	5.1	33

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37	Preparation of hydrogen, fluorine and chlorine doped and co-doped titanium dioxide photocatalysts: a theoretical and experimental approach. Scientific Reports, 2021, 11, 5700.	3.3	30
38	Enhanced Organic and Perovskite Solar Cell Performance through Modification of the Electron-Selective Contact with a Bodipyâ€“Porphyrin Dyad. ACS Applied Materials & Interfaces, 2020, 12, 1120-1131.	8.0	27
39	Polymeric electrolytes for WO3-based all solid-state electrochromic displays. Microelectronic Engineering, 2006, 83, 1414-1417.	2.4	26
40	Vapor-deposited hydrogenated and oxygen-deficient molybdenum oxide thin films for application in organic optoelectronics. Surface and Coatings Technology, 2013, 230, 202-207.	4.8	26
41	The effect of surface hydrogenation of metal oxides on the nanomorphology and the charge generation efficiency of polymer blend solar cells. Nanoscale, 2014, 6, 13726-13739.	5.6	26
42	Fast Recovery of the High Work Function of Tungsten and Molybdenum Oxides via Microwave Exposure for Efficient Organic Photovoltaics. Journal of Physical Chemistry Letters, 2014, 5, 1871-1879.	4.6	25
43	A silanol-functionalized polyoxometalate with excellent electron transfer mediating behavior to ZnO and TiO₂ cathode interlayers for highly efficient and extremely stable polymer solar cells. Journal of Materials Chemistry C, 2018, 6, 1459-1469.	5.5	25
44	Vacancy formation in MoO₃: hybrid density functional theory and photoemission experiments. Journal of Materials Chemistry C, 2016, 4, 9526-9531.	5.5	24
45	Hydrogen and nitrogen codoping of anatase TiO2 for efficiency enhancement in organic solar cells. Scientific Reports, 2017, 7, 17839.	3.3	24
46	Low Work Function Lacunary Polyoxometalates as Electron Transport Interlayers for Inverted Polymer Solar Cells of Improved Efficiency and Stability. ACS Applied Materials & Interfaces, 2017, 9, 22773-22787.	8.0	23
47	Engineering of Porphyrin Molecules for Use as Effective Cathode Interfacial Modifiers in Organic Solar Cells of Enhanced Efficiency and Stability. ACS Applied Materials & Interfaces, 2018, 10, 20728-20739.	8.0	22
48	Insights into the passivation effect of atomic layer deposited hafnium oxide for efficiency and stability enhancement in organic solar cells. Journal of Materials Chemistry C, 2018, 6, 8051-8059.	5.5	20
49	Observation of large Rashba spinâ€“orbit coupling at room temperature in compositionally engineered perovskite single crystals and application in high performance photodetectors. Materials Today, 2021, 46, 18-27.	14.2	20
50	Optical Modeling of Hybrid Polymer Solar Cells Using a Transmission-Line Model and Comparison With Experimental Results. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1784-1791.	2.9	18
51	Hot-wire vapor deposited tungsten and molybdenum oxide films used for carrier injection/transport in organic optoelectronic devices. Materials Science in Semiconductor Processing, 2013, 16, 1196-1216.	4.0	18
52	Organic solar cells of enhanced efficiency and stability using zinc oxide:zinc tungstate nanocomposite as electron extraction layer. Organic Electronics, 2019, 71, 227-237.	2.6	18
53	All-Organic Sulfonium Salts Acting as Efficient Solution Processed Electron Injection Layer for PLEDs. ACS Applied Materials & Interfaces, 2013, 5, 12346-12354.	8.0	17
54	Multi-electron reduction of Wellsâ€“Dawson polyoxometalate films onto metallic, semiconducting and dielectric substrates. Physical Chemistry Chemical Physics, 2019, 21, 427-437.	2.8	17

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55	Manganese Porphyrin Interface Engineering in Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 7353-7363.	5.1	17
56	Incorporating triphenyl sulfonium salts in polyfluorene PLEDs: an all-organic approach to improved charge injection. Journal of Materials Chemistry, 2011, 21, 9296.	6.7	16
57	Impact of boron and indium doping on the structural, electronic and optical properties of SnO2. Scientific Reports, 2021, 11, 13031.	3.3	16
58	Perovskite Flash Memory with a Single-Layer Nanofloating Gate. Nano Letters, 2020, 20, 5081-5089.	9.1	15
59	Atomic layer deposited zirconium oxide electron injection layer for efficient organic light emitting diodes. Organic Electronics, 2013, 14, 312-319.	2.6	14
60	Dehydration of molybdenum oxide hole extraction layers via microwave annealing for the improvement of efficiency and lifetime in organic solar cells. Journal of Materials Chemistry C, 2016, 4, 7683-7694.	5.5	13
61	Highly conductive, optically transparent, low work-function hydrogen-doped boron-doped ZnO electrodes for efficient ITO-free polymer solar cells. Journal of Materials Chemistry C, 2016, 4, 691-703.	5.5	13
62	Controlling PbI₂ Stoichiometry during Synthesis to Improve the Performance of Perovskite Photovoltaics. Chemistry of Materials, 2021, 33, 554-566.	6.7	13
63	Photoresist etch resistance enhancement using novel polycarbocyclic derivatives as additives. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 141.	1.6	12
64	Theoretical study on the electronic structure of triphenyl sulfonium salts: Electronic excitation and electron transfer processes. Chemical Physics Letters, 2014, 601, 63-68.	2.6	11
65	Functionalized Zinc Porphyrins with Various Peripheral Groups for Interfacial Electron Injection Barrier Control in Organic Light Emitting Diodes. ACS Omega, 2018, 3, 10008-10018.	3.5	11
66	Omnidirectional antireflective properties of porous tungsten oxide films with in-depth variation of void fraction and stoichiometry. Optics Communications, 2012, 285, 5229-5234.	2.1	10
67	Influence of the anion on the optoelectronic characteristics of triphenylsulfonium salts modified polymer light emitting devices. Synthetic Metals, 2013, 181, 37-44.	3.9	9
68	Defect Processes in Halogen Doped SnO2. Applied Sciences (Switzerland), 2021, 11, 551.	2.5	9
69	Effect of triphenylsulfonium triflate addition in wide band-gap polymer light-emitting diodes: improved charge injection, transport and electroplex-induced emission tuning. RSC Advances, 2012, 2, 11786.	3.6	8
70	Organic photovoltaic performance improvement using atomic layer deposited ZnO electron-collecting layers. Solid-State Electronics, 2014, 101, 50-56.	1.4	8
71	Improved Stability of Polymer Solar Cells in Ambient Air via Atomic Layer Deposition of Ultrathin Dielectric Layers. Advanced Materials Interfaces, 2017, 4, 1700231.	3.7	8
72	A carbon-doped tantalum dioxyfluoride as a superior electron transport material for high performance organic optoelectronics. Nano Energy, 2020, 70, 104508.	16.0	8

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73	Plasma induced degradation and surface electronic structure modification of Poly(3-hexylthiophene) films. Polymer Degradation and Stability, 2018, 149, 162-172.	5.8	7
74	Defect passivation in perovskite solar cells using an amino-functionalized BODIPY fluorophore. Sustainable Energy and Fuels, 2022, 6, 2570-2580.	4.9	7
75	Characteristics of MOS diodes fabricated using sputter-deposited W or Cu/W films. Microelectronic Engineering, 2006, 83, 1434-1437.	2.4	6
76	Photo-patternable fluorinated polyhedral oligomeric silsequioxane-functionalized (POSS-F) polymeric materials with ultra low dielectric constants. Materials Chemistry and Physics, 2012, 135, 880-883.	4.0	6
77	Interfacial engineering for organic and perovskite solar cells using molecular materials. Journal Physics D: Applied Physics, 2020, 53, 263001.	2.8	6
78	Photopatterned PLED arrays for biosensing applications. Microelectronic Engineering, 2009, 86, 1511-1514.	2.4	5
79	Emergence of ambient temperature ferroelectricity in meso-tetrakis(1-methylpyridinium-4-yl)porphyrin chloride thin films. Applied Physics Letters, 2013, 103, 022908.	3.3	5
80	Investigation of structural, morphological and electrical properties of APCVD vanadium oxide thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 964-968.	0.8	5
81	Hot-wire vapor deposition of amorphous MoS2 thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 969-974.	0.8	4
82	Photophysics, electronic structure and solar cell performance of a donor-acceptor poly(N-dodecyl-2,7-carbazole-alt-benzothiadiazole) copolymer. Organic Electronics, 2018, 59, 202-212.	2.6	4
83	Structural, Electronic, and Optical Properties of Group 6 Doped Anatase TiO2: A Theoretical Approach. Applied Sciences (Switzerland), 2021, 11, 1657.	2.5	4
84	Investigation of porous hot-wire WO3 thin films for gas sensing application. Microelectronic Engineering, 2012, 90, 51-54.	2.4	3
85	Electrical characteristics of vapor deposited amorphous MoS2 two-terminal structures and back gate thin film transistors with Al, Au, Cu and Ni-Au contacts. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 975-979.	0.8	3
86	Atomic structure and electronic properties of hydrogenated X (=C, Si, Ge, and Sn) doped TiO2: A theoretical perspective. AIP Advances, 2020, 10, .	1.3	3
87	Commercially available chromophores as low-cost efficient electron injection layers for organic light emitting diodes. Journal Physics D: Applied Physics, 2022, 55, 215106.	2.8	3
88	Functionalized BODIPYs as Tailorâ€Made and Universal Interlayers for Efficient and Stable Organic and Perovskite Solar Cells. Advanced Materials Interfaces, 0, , 2102324.	3.7	3
89	PEDOT:PSS:sulfonium salt composite hole injection layers for efficient organic light emitting diodes. Organic Electronics, 2021, 93, 106155.	2.6	2
90	Porous Hot-Wire Metal Oxides Thin Films in Hydrogen Sensing. Procedia Engineering, 2011, 25, 300-303.	1.2	1

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91	Screenâ€printed copper for frontâ€and backâ€side metallization of singleâ€and multiâ€crystalline silicon solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2816-2821.	1.8	1
92	Near-IR organic light emitting diodes based on porphyrin compounds. , 2015, , .		1
93	Coreâ€“shell carbon-polymer quantum dot passivation for near infrared perovskite light emitting diodes. JPhys Photonics, 2022, 4, 034007.	4.6	1
94	Nanostructured Metal Oxides as Cathode Interfacial Layers for Hybrid-Polymer Electronic Devices. Advances in Science and Technology, 2010, 75, 74-78.	0.2	0
95	Anode modification of BHJ organic photovoltaics using copper oxide. , 2015, , .		0
96	Influence of microwave exposure of tungsten oxide hole extraction layers on nanomorphology, optical and electrical properties of organic photovoltaics. , 2015, , .		0
97	Microwave exposure as a fast and cost-effective alternative of oxygen plasma treatment of indium-tin oxide electrode for application in organic solar cells. Journal Physics D: Applied Physics, 2017, 50, 505105.	2.8	0
98	13â€5: QuantumâEDotâ€inâEPerovskite Nearâ€Infrared Lightâ€Emitting Diodes. Digest of Technical Papers SID International Symposium, 2022, 53, 141-144.	0.3	0