Henrique L. Gomes

List of Publications by Year
in descending order

116	2,619	236612	214527
papers	citations	25 h-index	47 g-index

120	120	120	3227
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamics of Threshold Voltage Shifts in Organic and Amorphous Silicon Fieldâ€Effect Transistors. Advanced Materials, 2007, 19, 2785-2789.	11.1	223
2	Gate-bias stress in amorphous oxide semiconductors thin-film transistors. Applied Physics Letters, 2009, 95, .	1.5	213
3	Bias-induced threshold voltages shifts in thin-film organic transistors. Applied Physics Letters, 2004, 84, 3184-3186.	1.5	189
4	Reproducible resistive switching in nonvolatile organic memories. Applied Physics Letters, 2007, 91, .	1.5	126
5	Effect of oxygen on the electrical characteristics of field effect transistors formed from electrochemically deposited films of poly(3-methylthiophene). Journal Physics D: Applied Physics, 1991, 24, 2032-2038.	1.3	91
6	Electrical characterization of the rectifying contact between aluminium and electrodeposited poly(3-methylthiophene). Journal Physics D: Applied Physics, 1995, 28, 2554-2568.	1.3	90
7	Electrical instabilities in organic semiconductors caused by trapped supercooled water. Applied Physics Letters, 2006, 88, 082101.	1.5	85
8	All-inkjet-printed thin-film transistors: manufacturing process reliability by root cause analysis. Scientific Reports, 2016, 6, 33490.	1.6	78
9	Electronic transport in field-effect transistors of sexithiophene. Journal of Applied Physics, 2004, 96, 5277-5283.	1.1	74
10	Up-scaling of the manufacturing of all-inkjet-printed organic thin-film transistors: Device performance and manufacturing yield of transistor arrays. Organic Electronics, 2016, 30, 237-246.	1.4	74
11	Electrochemical noise and impedance of Au electrode/electrolyte interfaces enabling extracellular detection of glioma cell populations. Scientific Reports, 2016, 6, 34843.	1.6	66
12	Improving positive and negative bias illumination stress stability in parylene passivated IGZO transistors. Applied Physics Letters, 2016, 109, .	1.5	58
13	Interface state mapping in a Schottky barrier of the organic semiconductor terrylene. Organic Electronics, 2002, 3, 43-51.	1.4	50
14	Electrical characterization of organic based transistors: stability issues. Polymers for Advanced Technologies, 2005, 16, 227-231.	1.6	48
15	Analysis of deep levels in a phenylenevinylene polymer by transient capacitance methods. Applied Physics Letters, 1999, 74, 1144-1146.	1.5	44
16	Memristors Using Solution-Based IGZO Nanoparticles. ACS Omega, 2017, 2, 8366-8372.	1.6	38
17	Switching in polymeric resistance random-access memories (RRAMS). Organic Electronics, 2008, 9, 119-128.	1.4	36
18	Ultra-Low Power Sensor Devices for Monitoring Physical Activity and Respiratory Frequency in Farmed Fish. Frontiers in Physiology, 2019, 10, 667.	1.3	32

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19	Ultralow Power Microfuses for Writeâ€Once Readâ€Many Organic Memory Elements. Advanced Materials, 2008, 20, 3750-3753.	11.1	31
20	Trap states as an explanation for the Meyerâ€“Neldel rule in semiconductors. Organic Electronics, 2005, 6, 137-141.	1.4	28
21	Thin-film field-effect transistors: The effects of traps on the bias and temperature dependence of field-effect mobility, including the Meyerâ€“Neldel rule. Organic Electronics, 2006, 7, 592-599.	1.4	28
22	Insight into the sensing mechanism of an impedance based electronic tongue for honey botanic origin discrimination. Sensors and Actuators B: Chemical, 2019, 285, 24-33.	4.0	27
23	Electronic levels in MEH-PPV. Synthetic Metals, 2000, 111-112, 535-537.	2.1	25
24	Modeling electrical characteristics of thin-film field-effect transistors. Synthetic Metals, 2006, 156, 1316-1326.	2.1	25
25	Resistive switching in nanostructured thin films. Applied Physics Letters, 2009, 94, .	1.5	25
26	All-inkjet printed organic transistors: Dielectric surface passivation techniques for improved operational stability and lifetime. Microelectronics Reliability, 2015, 55, 1192-1195.	0.9	25
27	Strategies to Optimize Biosensors Based on Impedance Spectroscopy to Detect Phytic Acid Using Layer-by-Layer Films. Analytical Chemistry, 2010, 82, 3239-3246.	3.2	24
28	Minority-carrier effects in poly-phenylenevinylene as studied by electrical characterization. Journal of Applied Physics, 2001, 89, 1713.	1.1	22
29	Extracellular electrical recording of pH-triggered bursts in C6 glioma cell populations. Science Advances, 2016, 2, e1600516.	4.7	22
30	Modeling electrical characteristics of thin-film field-effect transistors. Synthetic Metals, 2006, 156, 1305-1315.	2.1	21
31	An electrical method to measure low-frequency collective and synchronized cell activity using extracellular electrodes. Sensing and Bio-Sensing Research, 2016, 10, 1-8.	2.2	21
32	Neuromorphic Organic Devices that Specifically Discriminate Dopamine from Its Metabolites by Nonspecific Interactions. Advanced Functional Materials, 2020, 30, 2002141.	7.8	21
33	Study of trap states in zinc oxide (ZnO) thin films for electronic applications. Journal of Non-Crystalline Solids, 2008, 354, 2519-2522.	1.5	20
34	Inkjet printed metal insulator semiconductor (MIS) diodes for organic and flexible electronic application. Flexible and Printed Electronics, 2017, 2, 015003.	1.5	19
35	Voltage- and light-induced hysteresis effects at the high-k dielectricâ€"poly(3-hexylthiophene) interface. Applied Physics Letters, 2007, 90, 103513.	1.5	18
36	Dynamics of charge carrier trapping in NO2 sensors based on ZnO field-effect transistors. Sensors and Actuators B: Chemical, 2012, 171-172, 1172-1179.	4.0	18

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37	Trapping of electrons in metal oxide-polymer memory diodes in the initial stage of electroforming. Applied Physics Letters, 2010, 97, .	1.5	17
38	Lithium fluoride injection layers can form quasi-Ohmic contacts for both holes and electrons. Applied Physics Letters, 2014, 105, 123302.	1.5	17
39	Controlling the crack formation in inkjet-printed silver nanoparticle thin-films for high resolution patterning using intense pulsed light treatment. Nanotechnology, 2017, 28, 495301.	1.3	17
40	The role of the electrode configuration on the electrical properties of small-molecule semiconductor thin-films. Organic Electronics, 2017, 49, 107-113.	1.4	17
41	Charge transport in poly(3-methylthiophene) schottky barrier diodes. Synthetic Metals, 1993, 57, 4076-4081.	2.1	16
42	Electrical characterization of CVD diamondâ€“n+ silicon junctions. Diamond and Related Materials, 2001, 10, 858-862.	1.8	16
43	Low-Frequency Diffusion Noise in Resistive-Switching Memories Based on Metalâ€“Oxide Polymer Structure. IEEE Transactions on Electron Devices, 2012, 59, 2483-2487.	1.6	16
44	Ultrasensitive gold micro-structured electrodes enabling the detection of extra-cellular long-lasting potentials in astrocytes populations. Scientific Reports, 2017, 7, 14284.	1.6	16
45	Determining carrier mobility with a metalâ€“insulatorâ€“semiconductor structure. Organic Electronics, 2008, 9, 735-739.	1.4	15
46	Potential up-scaling of inkjet-printed devices for logical circuits in flexible electronics. AIP Conference Proceedings, 2015, , .	0.3	15
47	Bioelectrical Signal Detection Using Conducting Polymer Electrodes and the Displacement Current Method. IEEE Sensors Journal, 2017, 17, 3961-3966.	2.4	15
48	Ultra-low noise PEDOT:PSS electrodes on bacterial cellulose: A sensor to access bioelectrical signals in non-electrogenic cells. Organic Electronics, 2020, 85, 105882.	1.4	15
49	Determination of deep and shallow levels in conjugated polymers by electrical methods. Physica B: Condensed Matter, 1999, 273-274, 923-926.	1.3	14
50	Intrinsic and extrinsic resistive switching in a planar diode based on silver oxide nanoparticles. Thin Solid Films, 2012, 522, 407-411.	0.8	14
51	Low frequency electric current noise in glioma cell populations. Journal of Materials Chemistry B, 2015, 3, 5035-5039.	2.9	14
52	Cartilage acidic protein 1 promotes increased cell viability, cell proliferation and energy metabolism in primary human dermal fibroblasts. Biochimie, 2020, 171-172, 72-78.	1.3	14
53	Microelectrical characterisation of diamond films: an attempt to understand the structural influence on electrical transport phenomena. Diamond and Related Materials, 2000, 9, 1061-1065.	1.8	13
54	Switching dynamics in non-volatile polymer memories. Organic Electronics, 2008, 9, 829-833.	1.4	13

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55	Opto-electronic characterization of electron traps upon forming polymer oxide memory diodes. Applied Physics Letters, 2011, 99, .	1.5	13
56	Novel flexible inkjet-printed Metal-Insulator-Semiconductor organic diode employing silver electrodes. Organic Electronics, 2018, 62, 335-341.	1.4	13
57	Interface Properties and Capacitanceâ€“Voltage Behaviour of Diamond Devices Prepared by Microwave-Assisted CVD. Physica Status Solidi A, 1999, 174, 165-170.	1.7	12
58	Electrical AC behaviour of MPCVD diamond Schottky diodes. Diamond and Related Materials, 2001, 10, 615-619.	1.8	12
59	The effect of water related traps on the reliability of organic based transistors. Journal of Non-Crystalline Solids, 2006, 352, 1761-1764.	1.5	12
60	DLTS investigation of acceptor states in P3MeT Schottky barrier diodes. Synthetic Metals, 1997, 85, 1341-1342.	2.1	11
61	Detection of explosive vapors using organic thin-film transistors. , 0, , .		11
62	Low-frequency noise as a diagnostic tool for OLED reliability. , 2013, , .		11
63	The role of internal structure in the anomalous switching dynamics of metal-oxide/polymer resistive random access memories. Journal of Applied Physics, 2013, 113, .	1.1	11
64	Influence of the metal center on the morphology of coordination compounds thin films. Synthetic Metals, 1999, 101, 140-141.	2.1	10
65	Metal contacts in thin-film transistors. Organic Electronics, 2007, 8, 300-304.	1.4	10
66	Role of Hole Injection in Electroforming of LiF-Polymer Memory Diodes. Journal of Physical Chemistry C, 2012, 116, 12443-12447.	1.5	10
67	Unipolar resistive switching in metal oxide/organic semiconductor non-volatile memories as a critical phenomenon. Journal of Applied Physics, 2015, 118, .	1.1	10
68	Operational stability of solution based zinc tin oxide/SiO₂ thin film transistors under gate bias stress. APL Materials, 2015, 3, 062804.	2.2	10
69	Electrical conduction of LiF interlayers in organic diodes. Journal of Applied Physics, 2015, 117, .	1.1	10
70	Anomalous temperature dependence of the current in a metal-oxide-polymer resistive switching diode. Journal Physics D: Applied Physics, 2011, 44, 025103.	1.3	9
71	Sudden death of organic light-emitting diodes. Organic Electronics, 2015, 20, 89-96.	1.4	9
72	Extracellular Electrophysiological Measurements of Cooperative Signals in Astrocytes Populations. Frontiers in Neural Circuits, 2017, 11, 80.	1.4	9

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73	Spatially-resolved photocapacitance measurements to study defects in a-Si:H based pâ€“iâ€“n particle detectors. Thin Solid Films, 2008, 516, 5118-5121.	0.8	8
74	Whole organic electronic synapses for dopamine detection. , 2016, , .		8
75	Small signal analysis of MPCVD diamond Schottky diodes. Diamond and Related Materials, 2019, 93, 131-138.	1.8	8
76	Detection of Chloroform with a Sensor Array Consisting of Electrochemically Deposited Polythiophenes Films: Processes Governing the Electrical Response. Sensor Letters, 2007, 5, 374-379.	0.4	8
77	Extracellular electrophysiological based sensor to monitor cancer cells cooperative migration and cell-cell connections. Biosensors and Bioelectronics, 2019, 145, 111708.	5.3	7
78	Photoconductivity and electrical properties of diamond films grown by MPCVD. Diamond and Related Materials, 1998, 7, 892-898.	1.8	5
79	Magnetic and transport properties of diluted granular multilayers. Journal of Applied Physics, 2009, 106, 113910.	1.1	5
80	Relation between the electroforming voltage in alkali halide-polymer diodes and the bandgap of the alkali halide. Applied Physics Letters, 2014, 105, 233502.	1.5	5
81	Resistive switching of silicon-silver thin film devices in flexible substrates. Nanotechnology, 2020, 31, 135702.	1.3	5
82	Influence of Fabrication Conditions on the Electrical Behaviour of Polymer Schottky Diodes. Synthetic Metals, 1997, 85, 1351-1352.	2.1	4
83	A microelectrode impedance method to measure interaction of cells. , 0, , .		4
84	Reversible post-breakdown conduction in aluminum oxide-polymer capacitors. Applied Physics Letters, 2013, 102, 153509.	1.5	4
85	Ultrasensitive bioelectronic devices based on conducting polymers for electrophysiology studies. Chemical Papers, 2018, 72, 1597-1603.	1.0	4
86	Photocurrents in P3MeT Schottky barrier diodes. Synthetic Metals, 1999, 101, 431-432.	2.1	3
87	Electrical study of impurity states in conjugated polymers. Synthetic Metals, 1999, 101, 496-497.	2.1	3
88	Electrical Characterization of Vacuum Deposited and Solution Processed DH4T Thin Film Transistors. Materials Research Society Symposia Proceedings, 2003, 771, 1031.	0.1	3
89	Modeling electrical characteristics of thin-film field-effect transistors. Synthetic Metals, 2008, 158, 473-478.	2.1	3
90	Non-volatile memory device using a polymer modified nanocrystal. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1552-1555.	1.7	3

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91	Performance assessment of polymer based electrodes for in vitro electrophysiological sensing: the role of the electrode impedance. Proceedings of SPIE, 2016, , .	0.8	3
92	High Electrical Anisotropic Multilayered Selfâ€Assembled Organic Films Based on Graphene Oxide and PEDOT:PSS. Advanced Electronic Materials, 2021, 7, 2100255.	2.6	3
93	UV and visible photoconductivity of undoped diamond films: morphology and related electrical transport phenomena. Diamond and Related Materials, 2000, 9, 1621-1625.	1.8	2
94	Electrical properties of thin-films wide-band gap semiconductor TiO2prepared by CVD. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, NA-NA.	0.8	2
95	Electrochemically Gated Graphene Field-Effect Transistor for Extracellular Cell Signal Recording. IFIP Advances in Information and Communication Technology, 2016, , 558-564.	0.5	2
96	Transient electrical behavior of an electrode/electrolyte interface based on a surface micro-structured with gold mushroom shapes. Journal of Applied Physics, 2018, 124, .	1.1	2
97	Neuromorphic Organic Devices: Neuromorphic Organic Devices that Specifically Discriminate Dopamine from Its Metabolites by Nonspecific Interactions (Adv. Funct. Mater. 28/2020). Advanced Functional Materials, 2020, 30, 2070187.	7.8	2
98	Electrical Characterization of Semiconducting Polymers. Acta Physica Polonica A, 1998, 94, 545-548.	0.2	2
99	Study of Defects in Diamond Films by Electrical Measurements. Materials Science Forum, 1997, 258-263, 793-798.	0.3	1
100	Electrical characterization of pn-junctions of PPV and silicon. Synthetic Metals, 2001, 121, 1535-1536.	2.1	1
101	Organic Materials for Active Layers in Transistors: Study of the Electrical Stability Properties. Materials Science Forum, 2006, 514-516, 33-37.	0.3	1
102	Planar Non-Volatile Memory based on Metal Nanoparticles. Materials Research Society Symposia Proceedings, 2011, 1337, 145.	0.1	1
103	Inkjet-Printed Organic Electronics: Operational Stability and Reliability Issues. ECS Transactions, 2013, 53, 1-10.	0.3	1
104	Title: Inkjet-printed rectifying metal-insulator-semiconductor (MIS) diodes for flexible electronic applications. Materials Research Society Symposia Proceedings, 2014, 1628, 1.	0.1	1
105	Resistive Switching in Metal Oxide/Organic Semiconductor Nonvolatile Memories. , 0, , .		1
106	Dynamic Behavior of Resistive Random Access Memories (RRAMS) Based on Plastic Semiconductor. International Federation for Information Processing, 2012, , 535-540.	0.4	1
107	Meta-stability effects in organic based transistors. , 2005, 5940, 112.		0
108	Photocapacitance measurements in irradiated a-Si:H based detectors. Journal of Non-Crystalline Solids, 2008, 354, 2176-2180.	1.5	0

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109	Confocal Scanning Raman Spectroscopy (CSRS) Of An Operating Organic Light-Emitting Diode. , 2010, , .		0
110	Switching speed in Resistive Random Access Memories (RRAMS) based on plastic semiconductor. Materials Research Society Symposia Proceedings, 2011, 1337, 27.	0.1	0
111	Doping Distribution Of An Operating Organic Light-Emitting Diode: A Raman Map Analysis. , 2011, , .		0
112	Charge trapping at the polymer-metal oxide interface as a first step in the electroforming of organic-inorganic memory diodes. Proceedings of SPIE, 2015, , .	0.8	0
113	(Invited) Electro-Optical Techniques to Measure Traps in Organic-Based Devices: Why the Methods Originally Developed for Silicon-Based Devices Must be Modified. ECS Meeting Abstracts, 2021, MA2021-01, 1045-1045.	0.0	0
114	High Electrical Anisotropic Multilayered Selfâ€Assembled Organic Films Based on Graphene Oxide and PEDOT:PSS (Adv. Electron. Mater. 8/2021). Advanced Electronic Materials, 2021, 7, 2170033.	2.6	0
115	Electroforming Process in Metal-Oxide-Polymer Resistive Switching Memories. International Federation for Information Processing, 2012, , 527-534.	0.4	0
116	New Electronic Memory Device Concepts Based on Metal Oxide-Polymer Nanostructures Planer Diodes. International Federation for Information Processing, 2012, , 521-526.	0.4	0