

# JÃ©rÃ©me Borme

## List of Publications by Year in descending order

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63  
papers

1,137  
citations

430874

18  
h-index

434195

31  
g-index

66  
all docs

66  
docs citations

66  
times ranked

1849  
citing authors

#	ARTICLE	IF	CITATIONS
1	Attomolar Label-Free Detection of DNA Hybridization with Electrolyte-Gated Graphene Field-Effect Transistors. ACS Sensors, 2019, 4, 286-293.	7.8	146
2	Introduction of Si PERC Rear Contacting Design to Boost Efficiency of Cu(In,Ga)Se <sub>2</sub> Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1644-1649.	2.5	74
3	Direct Observation of Electron Confinement in Epitaxial Graphene Nanoislands. ACS Nano, 2011, 5, 8162-8166.	14.6	63
4	Multi-beam two-photon polymerization for fast large area 3D periodic structure fabrication for bioapplications. Scientific Reports, 2020, 10, 8740.	3.3	63
5	Rear Surface Optimization of CZTS Solar Cells by Use of a Passivation Layer With Nanosized Point Openings. IEEE Journal of Photovoltaics, 2016, 6, 332-336.	2.5	55
6	Passivation of Interfaces in Thin Film Solar Cells: Understanding the Effects of a Nanostructured Rear Point Contact Layer. Advanced Materials Interfaces, 2018, 5, 1701101.	3.7	50
7	Optical Lithography Patterning of SiO <sub>2</sub> Layers for Interface Passivation of Thin Film Solar Cells. Solar Rrl, 2018, 2, 1800212.	5.8	44
8	Graphene field-effect transistor array with integrated electrolytic gates scaled to 200 nm. Journal of Physics Condensed Matter, 2016, 28, 085302.	1.8	40
9	Spin torque nano-oscillator driven by combined spin injection from tunneling and spin Hall current. Communications Physics, 2019, 2, .	5.3	38
10	High power and low critical current density spin transfer torque nano-oscillators using MgO barriers with intermediate thickness. Scientific Reports, 2017, 7, 7237.	3.3	35
11	Highly-ordered silicon nanowire arrays for photoelectrochemical hydrogen evolution: an investigation on the effect of wire diameter, length and inter-wire spacing. Sustainable Energy and Fuels, 2018, 2, 978-982.	4.9	31
12	Functionalization of single-layer graphene for immunoassays. Applied Surface Science, 2019, 480, 709-716.	6.1	29
13	Conformal and continuous deposition of bifunctional cobalt phosphide layers on p-silicon nanowire arrays for improved solar hydrogen evolution. Nano Research, 2018, 11, 4823-4835.	10.4	28
14	Broadband voltage rectifier induced by linear bias dependence in CoFeB/MgO magnetic tunnel junctions. Applied Physics Letters, 2018, 112, .	3.3	28
15	Integration of Magnetoresistive Biochips on a CMOS Circuit. IEEE Transactions on Magnetics, 2012, 48, 3784-3787.	2.1	23
16	Atomic structure and spectroscopy of graphene edges on Ir(111). Physical Review B, 2012, 86, .	3.2	21
17	Rear Optical Reflection and Passivation Using a Nanopatterned Metal/Dielectric Structure in Thin-Film Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1421-1427.	2.5	21
18	A morphological and electronic study of ultrathin rear passivated Cu(In,Ga)Se <sub>2</sub> solar cells. Thin Solid Films, 2019, 671, 77-84.	1.8	21

#	ARTICLE	IF	CITATIONS
19	Wafer scale fabrication of graphene microelectrode arrays for the detection of DNA hybridization. <i>Microelectronic Engineering</i> , 2018, 189, 85-90.	2.4	19
20	Realization of Rectangular Artificial Spin Ice and Direct Observation of High Energy Topology. <i>Scientific Reports</i> , 2017, 7, 13982.	3.3	18
21	Influence of the Electrolyte Salt Concentration on DNA Detection with Graphene Transistors. <i>Biosensors</i> , 2021, 11, 24.	4.7	18
22	Reductive nanometric patterning of graphene oxide paper using electron beam lithography. <i>Carbon</i> , 2018, 129, 63-75.	10.3	17
23	Clean-Room Lithographical Processes for the Fabrication of Graphene Biosensors. <i>Materials</i> , 2020, 13, 5728.	2.9	15
24	High-Performance and Industrially Viable Nanostructured SiO <sub>2</sub> Layers for Interface Passivation in Thin Film Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2000534.	5.8	15
25	Magnetic Response and Spin Polarization of Bulk Cr Tips for In-Field Spin-Polarized Scanning Tunneling Microscopy. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 030208.	1.5	15
26	Magnetic Response and Spin Polarization of Bulk Cr Tips for In-Field Spin-Polarized Scanning Tunneling Microscopy. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 030208.	1.5	14
27	Programmable graphene-based microfluidic sensor for DNA detection. <i>Sensors and Actuators B: Chemical</i> , 2022, 367, 132044.	7.8	13
28	Scanning tunneling spectroscopy of epitaxial graphene nanoisland on Ir(111). <i>Nanoscale Research Letters</i> , 2012, 7, 255.	5.7	12
29	Ultra-Compact 100 Å– 100 μm <sup>2</sup> Footprint Hybrid Device with Spin-Valve Nanosensors. <i>Sensors</i> , 2015, 15, 30311-30318.	3.8	12
30	InGaZnO Thin-Film-Transistor-Based Four-Quadrant High-Gain Analog Multiplier on Glass. <i>IEEE Electron Device Letters</i> , 2016, 37, 419-421.	3.9	12
31	On the Importance of Joint Mitigation Strategies for Front, Bulk, and Rear Recombination in Ultrathin Cu(In,Ga)Se <sub>2</sub> Solar Cells. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 27713-27725.	8.0	11
32	Non-volatile artificial synapse based on a vortex nano-oscillator. <i>Scientific Reports</i> , 2021, 11, 16094.	3.3	11
33	Experimental and theoretical evidences for the ice regime in planar artificial spin ices. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 025301.	1.8	10
34	Efficient ReSe <sub>2</sub> Photodetectors with CVD Single-Crystal Graphene Contacts. <i>Nanomaterials</i> , 2021, 11, 1650.	4.1	10
35	Efficient light extraction in subwavelength GaAs/AlGaAs nanopillars for nanoscale light-emitting devices. <i>Optics Express</i> , 2020, 28, 32302.	3.4	9
36	Wet-Chemical Noncovalent Functionalization of CVD Graphene: Molecular Doping and Its Effect on Electrolyte-Gated Graphene Field-Effect Transistor Characteristics. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4522-4533.	3.1	9

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37	Nanofabrication of 30 nm Devices Incorporating Low Resistance Magnetic Tunnel Junctions. Journal of Nanoscience and Nanotechnology, 2010, 10, 5951-5957.	0.9	8
38	Surface Passivation of III-V GaAs Nanopillars by Low-Frequency Plasma Deposition of Silicon Nitride for Active Nanophotonic Devices. ACS Applied Electronic Materials, 0, , .	4.3	8
39	Template-directed self-organization of colloidal PbTe nanocrystals into pillars, conformal coatings, and self-supported membranes. Nanoscale Advances, 2019, 1, 3049-3055.	4.6	7
40	Tuning magnetic monopole population and mobility in unidirectional array of nanomagnets as a function of lattice parameters. Applied Physics Letters, 2019, 114, .	3.3	7
41	Effects of magnetic monopoles charge on the cracking reversal processes in artificial square ices. Scientific Reports, 2020, 10, 9959.	3.3	7
42	Antiferromagnetic relaxation and induced anisotropy in Fe <sup>2+</sup> -twinned-PtMn bilayers. Physical Review B, 2006, 73, .	3.2	6
43	Switching Fields of Individual Co Nanoislands. IEEE Transactions on Magnetics, 2011, 47, 3351-3354.	2.1	6
44	Magneto-resistive Sensors for Surface Scanning. Smart Sensors, Measurement and Instrumentation, 2013, , 275-299.	0.6	5
45	Laser patterning of amorphous silicon thin films deposited on flexible and rigid substrates. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1717-1727.	1.8	5
46	Interplay of Magnetic Properties and Doping in Epitaxial Films of $\text{REFeO}_3$ Multiferroic Oxides. Small, 2021, 17, e2005700.	10.0	5
47	Impact of MgO Thickness on the Performance of Spin-Transfer Torque Nano-Oscillators. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	4
48	Influence of MgO Tunnel Barrier Thickness on the Output Power of Three-Terminal Spin Hall Nano-Oscillators. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	4
49	Field-effect transistors made of graphene grown on recycled copper foils. Materials Chemistry and Physics, 2020, 256, 123665.	4.0	4
50	Rear surface optimization of CZTS solar cells by use of a passivation layer with nano-sized point openings. , 2015, , .		2
51	Electrochemically Gated Graphene Field-Effect Transistor for Extracellular Cell Signal Recording. IFIP Advances in Information and Communication Technology, 2016, , 558-564.	0.7	2
52	Photovoltaics: Passivation of Interfaces in Thin Film Solar Cells: Understanding the Effects of a Nanostructured Rear Point Contact Layer (Adv. Mater. Interfaces 2/2018). Advanced Materials Interfaces, 2018, 5, 1870007.	3.7	2
53	Chemical Vapour Deposition of Hexagonal Boron Nitride for Two Dimensional Electronics. U Porto Journal of Engineering, 2017, 3, 27-34.	0.4	1
54	Graphene LC oscillator for biosensing applications. , 2021, , .		1

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55	Magnetoresistive-based static tester for actuators. Journal of Applied Physics, 2008, 103, 07F537.	2.5	0
56	Piezoresistor Sensor Fabrication by Direct Laser Writing on Hydrogenated Amorphous Silicon. Materials Research Society Symposia Proceedings, 2014, 1594, 1.	0.1	0
57	Large amplitude Spin Transfer Torque Nano-Oscillators implemented with intermediate thickness MgO barriers in the $10^{-30}$ to $10^{-4}$ m <sup>2</sup> range. , 2015, , .		0
58	Influence of MgO Tunnel Barrier thickness in 3-terminal Spin Hall Nano-Oscillators. , 2018, , .		0
59	Increasing Two-Photon Polymerization Fabrication Speed of 3D Structures for Cell Interaction Studies. , 2019, , .		0
60	Strong Enhancement of Light Extraction Efficiency in Sub-Wavelength AlGaAs/GaAs Vertical-Emitting Nanopillars. , 2019, , .		0
61	Room-temperature Near-infrared Electroluminescence in n-type GaAs Unipolar microLEDs. , 2021, , .		0
62	Highly-efficient GaAs/AlGaAs Nanopillars and NanoLEDs via SiNx Surface Passivation. , 2021, , .		0
63	Room temperature two terminal tunnel magnetoresistance in a lateral graphene transistor. Nanoscale, 2021, 13, 20028-20033.	5.6	0