

# Patrick Carey

## List of Publications by Citations

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33  
papers

1,565  
citations

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h-index

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g-index

34  
ext. papers

1,992  
ext. citations

3.2  
avg, IF

4.92  
L-index

#	Paper	IF	Citations
33	A review of Ga <sub>2</sub> O <sub>3</sub> materials, processing, and devices. <i>Applied Physics Reviews</i> , <b>2018</b> , 5, 011301	17.3	1114
32	Band alignment of Al <sub>2</sub> O <sub>3</sub> with (001) Ga <sub>2</sub> O <sub>3</sub> . <i>Vacuum</i> , <b>2017</b> , 142, 52-57	3.7	47
31	Band offsets in ITO/Ga <sub>2</sub> O <sub>3</sub> heterostructures. <i>Applied Surface Science</i> , <b>2017</b> , 422, 179-183	6.7	35
30	Ohmic contacts on n-type Ga <sub>2</sub> O <sub>3</sub> using AZO/Ti/Au. <i>AIP Advances</i> , <b>2017</b> , 7, 095313	1.5	32
29	Valence and conduction band offsets in AZO/Ga <sub>2</sub> O <sub>3</sub> heterostructures. <i>Vacuum</i> , <b>2017</b> , 141, 103-108	3.7	29
28	Hydrogen plasma treatment of Ga <sub>2</sub> O <sub>3</sub> : Changes in electrical properties and deep trap spectra. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 032101	3.4	29
27	Improvement of Ohmic contacts on Ga <sub>2</sub> O <sub>3</sub> through use of ITO-interlayers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2017</b> , 35, 061201	1.3	27
26	Operation Up to 500 °C of Al <sub>0.85</sub> Ga <sub>0.15</sub> N/Al <sub>0.7</sub> Ga <sub>0.3</sub> N High Electron Mobility Transistors. <i>IEEE Journal of the Electron Devices Society</i> , <b>2019</b> , 7, 444-452	2.3	27
25	Band alignment of atomic layer deposited SiO <sub>2</sub> and HfSiO <sub>4</sub> with (001) Ga <sub>2</sub> O <sub>3</sub> . <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 071101	1.4	27
24	Vertical geometry 33.2 A, 4.8 MW cm <sup>2</sup> Ga <sub>2</sub> O <sub>3</sub> field-plated Schottky rectifier arrays. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 232106	3.4	26
23	Defects at the surface of Ga <sub>2</sub> O <sub>3</sub> produced by Ar plasma exposure. <i>APL Materials</i> , <b>2019</b> , 7, 061102	5.7	25
22	Conduction and valence band offsets of LaAlO <sub>3</sub> with (001) Ga <sub>2</sub> O <sub>3</sub> . <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2017</b> , 35, 041201	1.3	24
21	Rapid detection of cardiac troponin I using antibody-immobilized gate-pulsed AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistor structures. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 202104	3.4	19
20	Zika virus detection using antibody-immobilized disposable cover glass and AlGa <sub>N</sub> /Ga <sub>N</sub> high electron mobility transistors. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 032101	3.4	18
19	Comparison of Dual-Stack Dielectric Field Plates on Ga <sub>2</sub> O <sub>3</sub> Schottky Rectifiers. <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, Q3221-Q3225	2	16
18	Extreme Temperature Operation of Ultra-Wide Bandgap AlGa <sub>N</sub> High Electron Mobility Transistors. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2019</b> , 32, 473-477	2.6	13
17	Novel Coatings to Minimize Bacterial Adhesion and Promote Osteoblast Activity for Titanium Implants. <i>Journal of Functional Biomaterials</i> , <b>2020</b> , 11,	4.8	7

16	Antibacterial Properties of Charged TiN Surfaces for Dental Implant Application. <i>ChemistrySelect</i> , <b>2019</b> , 4, 9185-9189	1.8	6
15	Fast SARS-CoV-2 virus detection using disposable cartridge strips and a semiconductor-based biosensor platform. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2021</b> , 39, 033202	1.3	6
14	Fast Cerebrospinal Fluid Detection Using Inexpensive Modular Packaging with Disposable Testing Strips. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, B708-B712	3.9	5
13	Effects of Hydrogen Plasma Treatment Condition on Electrical Properties of EGa <sub>2</sub> O <sub>3</sub> . <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, P661-P666	2	4
12	Review Opportunities for Rapid, Sensitive Detection of Troponin and Cerebral Spinal Fluid Using Semiconductor Sensors. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 037507	3.9	4
11	Rapid Electrochemical Detection for SARS-CoV-2 and Cardiac Troponin I Using Low-Cost, Disposable and Modular Biosensor System <b>2020</b> ,		4
10	Vertical EGa <sub>2</sub> O <sub>3</sub> Schottky rectifiers with 750 V reverse breakdown voltage at 600 K. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 305103	3	4
9	Hydroxyapatite Formation on Coated Titanium Implants Submerged in Simulated Body Fluid. <i>Materials</i> , <b>2020</b> , 13,	3.5	3
8	A Two-Electrode, Double-Pulsed Sensor Readout Circuit for Cardiac Troponin I Measurement. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , <b>2020</b> , 14, 1362-1370	5.1	3
7	Alpha Particle Irradiation of High Aluminum Content AlGa <sub>N</sub> Polarization Doped Field Effect Transistors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 035008	2	2
6	Proton Irradiation of High Aluminum Content AlGa <sub>N</sub> Polarization Doped Field Effect Transistors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 025003	2	2
5	Nanosensor networks for health-care applications <b>2020</b> , 405-417		2
4	Band alignments of dielectrics on (1101) EGa <sub>2</sub> O <sub>3</sub> <b>2019</b> , 287-311		2
3	Digital biosensor for human cerebrospinal fluid detection with single-use sensing strips. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2022</b> , 40, 023202	1.3	1
2	Neutron Irradiation of AlGa <sub>N</sub> Polarization Doped Field Effect Transistors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 065007	2	1
1	High temperature operation to 500 °C of AlGa <sub>N</sub> graded polarization-doped field-effect transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2020</b> , 38, 033202	1.3	1