

# Marko J Tadjer

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

80 papers	3,295 citations	26 h-index	56 g-index
83 ext. papers	4,065 ext. citations	3.8 avg, IF	5.62 L-index

#	Paper	IF	Citations
80	A review of band structure and material properties of transparent conducting and semiconducting oxides: Ga <sub>2</sub> O <sub>3</sub> , Al <sub>2</sub> O <sub>3</sub> , In <sub>2</sub> O <sub>3</sub> , ZnO, SnO <sub>2</sub> , CdO, NiO, CuO, and Sc <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Reviews</i> , <b>2022</b> , 9, 011315	17.3	27
79	Thermal effects in Ga <sub>2</sub> O <sub>3</sub> rectifiers and MOSFETs borrowing from GaN <b>2022</b> , 441-467		
78	Reduced-stress nanocrystalline diamond films for heat spreading in electronic devices <b>2022</b> , 275-294		
77	A perspective on the electro-thermal co-design of ultra-wide bandgap lateral devices. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 170501	3.4	8
76	Two-step growth of EGa <sub>2</sub> O <sub>3</sub> films on (100) diamond via low pressure chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 023411	2.9	6
75	Steady-state methods for measuring in-plane thermal conductivity of thin films for heat spreading applications. <i>Review of Scientific Instruments</i> , <b>2021</b> , 92, 044907	1.7	2
74	Engineering the Spectral and Spatial Dispersion of Thermal Emission via Polariton-Phonon Strong Coupling. <i>Nano Letters</i> , <b>2021</b> , 21, 1831-1838	11.5	16
73	Design of Ga <sub>2</sub> O <sub>3</sub> modulation doped field effect transistors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2021</b> , 39, 023412	2.9	4
72	Collective Phonon-Polaritonic Modes in Silicon Carbide Subarrays.. <i>ACS Nano</i> , <b>2021</b> ,	16.7	4
71	Band offset determination for amorphous Al <sub>2</sub> O <sub>3</sub> deposited on bulk AlN and atomic-layer epitaxial AlN on sapphire. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 182103	3.4	1
70	Narrowband Polaritonic Thermal Emitters Driven by Waste Heat. <i>ACS Omega</i> , <b>2020</b> , 5, 10900-10908	3.9	16
69	Integration of polycrystalline Ga <sub>2</sub> O <sub>3</sub> on diamond for thermal management. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 062105	3.4	42
68	Electrical Properties 4. <i>Springer Series in Materials Science</i> , <b>2020</b> , 443-459	0.9	
67	Diodes 1. <i>Springer Series in Materials Science</i> , <b>2020</b> , 661-688	0.9	
66	Structural and electronic properties of Si- and Sn-doped (001) EGa <sub>2</sub> O <sub>3</sub> annealed in nitrogen and oxygen atmospheres. <i>Journal Physics D: Applied Physics</i> , <b>2020</b> , 53, 504002	3	10
65	Structural transition and recovery of Ge implanted EGa <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2020</b> , 117, 152101	3.4	18
64	Band Offsets of Insulating & Semiconducting Oxides on (Al <sub>x</sub> Ga <sub>1-x</sub> )O <sub>3</sub> . <i>ECS Transactions</i> , <b>2019</b> , 92, 79-88	1	5

63	High Performance $\beta$ -Ga <sub>2</sub> O <sub>3</sub> Nano-Membrane Field Effect Transistors on a High Thermal Conductivity Diamond Substrate. <i>IEEE Journal of the Electron Devices Society</i> , <b>2019</b> , 7, 914-918	2.3	24
62	Controlling the threshold voltage of $\beta$ Ga <sub>2</sub> O <sub>3</sub> field-effect transistors via remote fluorine plasma treatment. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 8855-8860	7.1	13
61	Thermoreflectance Temperature Mapping of Ga <sub>2</sub> O <sub>3</sub> Schottky Barrier Diodes. <i>ECS Transactions</i> , <b>2019</b> , 89, 3-7	1	3
60	GaN-On-Diamond HEMT Technology With TAVG = 176°C at PDC,max = 56 W/mm Measured by Transient Thermoreflectance Imaging. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 881-884	4.4	28
59	Tunable Thermal Energy Transport across Diamond Membranes and Diamond-Si Interfaces by Nanoscale Graphoepitaxy. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 18517-18527	9.5	30
58	Damage Recovery and Dopant Diffusion in Si and Sn Ion Implanted $\beta$ Ga <sub>2</sub> O <sub>3</sub> . <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, Q3133-Q3139	2	20
57	Valence and Conduction Band Offsets for InN and III-Nitride Ternary Alloys on (001) Bulk $\beta$ Ga <sub>2</sub> O <sub>3</sub> . <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, Q3154-Q3158	2	9
56	Thermal conductance across $\beta$ Ga <sub>2</sub> O <sub>3</sub> -diamond van der Waals heterogeneous interfaces. <i>APL Materials</i> , <b>2019</b> , 7, 031118	5.7	63
55	Editors' ChoiceReviewTheory and Characterization of Doping and Defects in $\beta$ Ga <sub>2</sub> O <sub>3</sub> . <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, Q3187-Q3194	2	89
54	Vertical Ga <sub>2</sub> O <sub>3</sub> Schottky Barrier Diodes With Small-Angle Beveled Field Plates: A Baliga Figure-of-Merit of 0.6 GW/cm <sup>2</sup> . <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1399-1402	4.4	84
53	Defect Characterization of Multicycle Rapid Thermal Annealing Processed p-GaN for Vertical Power Devices. <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, P70-P76	2	6
52	Lateral GaN JFET Devices on Large Area Engineered Substrates. <i>ECS Journal of Solid State Science and Technology</i> , <b>2019</b> , 8, Q226-Q229	2	2
51	Ohmic contacts to gallium oxide <b>2019</b> , 211-230		4
50	Electrical characterization of ALD HfO <sub>2</sub> high-k dielectrics on (201) $\beta$ Ga <sub>2</sub> O <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2018</b> , 112, 042107	3.4	38
49	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
48	(Invited) Fabrication and Characterization of $\beta$ Ga <sub>2</sub> O <sub>3</sub> Heterojunction Rectifiers. <i>ECS Transactions</i> , <b>2018</b> , 85, 21-26	1	9
47	Electrothermal Evaluation of AlGaN/GaN Membrane High Electron Mobility Transistors by Transient Thermoreflectance. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 922-930	2.3	7
46	Heterostructure WSe-GaO Junction Field-Effect Transistor for Low-Dimensional High-Power Electronics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 29724-29729	9.5	60

45	High resistivity halide vapor phase homoepitaxial $\text{EGa}_2\text{O}_3$ films co-doped by silicon and nitrogen. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 192102	3.4	27
44	Cheap Ultra-Wide Bandgap Power Electronics? Gallium Oxide May Hold the Answer. <i>Electrochemical Society Interface</i> , <b>2018</b> , 27, 49-52	3.6	18
43	A Tri-Layer PECVD $\text{SiN}$ Passivation Process for Improved $\text{AlGaIn}/\text{GaIn}$ HEMT Performance. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, P58-P61	2	9
42	Thermionic Emission Analysis of $\text{TiN}$ and $\text{Pt}$ Schottky Contacts to $\text{EGa}_2\text{O}_3$ . <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, P165-P168	2	31
41	Quasi-Two-Dimensional $\text{h-BN}/\text{EGaO}$ Heterostructure Metal-Insulator-Semiconductor Field-Effect Transistor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 21322-21327	9.5	71
40	Dry Etching of High Aspect Ratio $4\text{H-SiC}$ Microstructures. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, P207-P210	2	9
39	Vertical $\text{GaIn}$ Junction Barrier Schottky Diodes. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, Q10-Q12	2	18
38	Band Alignments of Atomic Layer Deposited $\text{ZrO}_2$ and $\text{HfO}_2$ High-k Dielectrics with $(-201)$ $\text{EGa}_2\text{O}_3$ . <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, Q3052-Q3055	2	57
37	Solar-Blind Metal-Semiconductor-Metal Photodetectors Based on an Exfoliated $\text{EGa}_2\text{O}_3$ Micro-Flake. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, Q79-Q83	2	65
36	Deep reactive ion etching of $4\text{H-SiC}$ via cyclic $\text{SF}_6/\text{O}_2$ segments. <i>Journal of Micromechanics and Microengineering</i> , <b>2017</b> , 27, 095004	2	12
35	Electrothermal evaluation of thick $\text{GaIn}$ epitaxial layers and $\text{AlGaIn}/\text{GaIn}$ high-electron-mobility transistors on large-area engineered substrates. <i>Applied Physics Express</i> , <b>2017</b> , 10, 126501	2.4	10
34	Optical characterization and thermal properties of CVD diamond films for integration with power electronics. <i>Solid-State Electronics</i> , <b>2017</b> , 136, 12-17	1.7	13
33	Vertical $\text{GaIn}$ Junction Barrier Schottky Rectifiers by Selective Ion Implantation. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1097-1100	4.4	96
32	Nanocrystalline diamond capped $\text{AlGaIn}/\text{GaIn}$ high electron mobility transistors via a sacrificial gate process. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 893-897	1.6	17
31	Selective p-type Doping of $\text{GaInSi}$ by $\text{Mg}$ Ion Implantation and Multicycle Rapid Thermal Annealing. <i>ECS Journal of Solid State Science and Technology</i> , <b>2016</b> , 5, P124-P127	2	32
30	Structural, Optical, and Electrical Characterization of Monoclinic $\text{EGa}_2\text{O}_3$ Grown by MOVPE on Sapphire Substrates. <i>Journal of Electronic Materials</i> , <b>2016</b> , 45, 2031-2037	1.9	92
29	Effect of Reduced Extended Defect Density in MOCVD Grown $\text{AlGaIn}/\text{GaIn}$ HEMTs on Native $\text{GaIn}$ Substrates. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 28-30	4.4	38
28	Electrical and Thermal Stability of ALD-Deposited $\text{TiN}$ Transition Metal Nitride Schottky Gates for $\text{AlGaIn}/\text{GaIn}$ HEMTs. <i>ECS Journal of Solid State Science and Technology</i> , <b>2016</b> , 5, Q204-Q207	2	5

27	In search of quantum-limited contact resistance: understanding the intrinsic and extrinsic effects on the graphene-metal interface. <i>2D Materials</i> , <b>2016</b> , 3, 025013	5.9	10
26	Homoepitaxial growth of $\beta$ -Ga <sub>2</sub> O <sub>3</sub> thin films by low pressure chemical vapor deposition. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 182105	3.4	145
25	Heteroepitaxy of N-type $\beta$ -Ga <sub>2</sub> O <sub>3</sub> thin films on sapphire substrate by low pressure chemical vapor deposition. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 132103	3.4	96
24	Enhancement mode AlGaIn/GaN MOS high-electron-mobility transistors with ZrO <sub>2</sub> gate dielectric deposited by atomic layer deposition. <i>Applied Physics Express</i> , <b>2016</b> , 9, 071003	2.4	21
23	Impact of Surface Passivation on the Dynamic ON-Resistance of Proton-Irradiated AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 545-548	4.4	23
22	Editors' Choice Communication: (001) $\beta$ -Ga <sub>2</sub> O <sub>3</sub> MOSFET with +2.9 V Threshold Voltage and HfO <sub>2</sub> Gate Dielectric. <i>ECS Journal of Solid State Science and Technology</i> , <b>2016</b> , 5, P468-P470	2	106
21	Elimination of Basal Plane Dislocations in Epitaxial 4H-SiC via Multicycle Rapid Thermal Annealing. <i>Materials Science Forum</i> , <b>2015</b> , 821-823, 297-302	0.4	1
20	Thermal etching of nanocrystalline diamond films. <i>Diamond and Related Materials</i> , <b>2015</b> , 59, 116-121	3.5	8
19	MnO <sub>2</sub> -Based Electrochemical Supercapacitors on Flexible Carbon Substrates. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 1188-1193	1.9	14
18	Thermionic-Field Emission Barrier Between Nanocrystalline Diamond and Epitaxial 4H-SiC. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1173-1175	4.4	2
17	Large-Signal RF Performance of Nanocrystalline Diamond Coated AlGaIn/GaN High Electron Mobility Transistors. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1013-1015	4.4	24
16	Proton Radiation-Induced Void Formation in Ni/Au-Gated AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1194-1196	4.4	23
15	Impact of Intrinsic Stress in Diamond Capping Layers on the Electrical Behavior of AlGaIn/GaN HEMTs. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 3149-3156	2.9	25
14	Atomic Layer Epitaxy AlN for Enhanced AlGaIn/GaN HEMT Passivation. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 1115-1117	4.4	39
13	Nanocrystalline Diamond-Gated AlGaIn/GaN HEMT. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 1382-1384	4.4	13
12	GaN Power Transistors with Integrated Thermal Management. <i>ECS Transactions</i> , <b>2013</b> , 58, 279-286	1	3
11	Degradation of dynamic ON-resistance of AlGaIn/GaN HEMTs under proton irradiation <b>2013</b> ,		12
10	. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 23-25	4.4	83

9	Comparative Study of Ohmic Contact Metallizations to Nanocrystalline Diamond Films. <i>Materials Science Forum</i> , <b>2010</b> , 645-648, 733-735	0.4	4
8	On the high curvature coefficient rectifying behavior of nanocrystalline diamond heterojunctions to 4H-SiC. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 193510	3.4	6
7	Technique for the dry transfer of epitaxial graphene onto arbitrary substrates. <i>ACS Nano</i> , <b>2010</b> , 4, 1108-1116	16.7	163
6	Electrical and Optical Characterization of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs with In Situ and Ex Situ Deposited SiN <sub>x</sub> Layers. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2452-2458	1.9	22
5	An AlN/Ultrathin AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT Structure for Enhancement-Mode Operation Using Selective Etching. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 1251-1253	4.4	24
4	Influence of Shockley Stacking Fault Expansion and Contraction on the Electrical Behavior of 4H-SiC DMOSFETs and MPS diodes. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1069, 1		1
3	Thermal Annealing and Propagation of Shockley Stacking Faults in 4H-SiC PiN Diodes. <i>Journal of Electronic Materials</i> , <b>2007</b> , 36, 318-323	1.9	26
2	Influence of Shockley stacking fault propagation and contraction on electrical behavior of 4H-SiC pin diodes and DMOSFETs <b>2007</b> ,		1
1	Nanocrystalline diamond films as UV-semitransparent Schottky contacts to 4H-SiC. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 163508	3.4	18