

# Marcel Himmerlich

## List of Publications by Year in descending order

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89  
papers

1,727  
citations

279487

23  
h-index

315357

38  
g-index

91  
all docs

91  
docs citations

91  
times ranked

2524  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electronic Structure of the Surface of the Ionic Liquid [EMIM][Tf <sub>2</sub> N] Studied by Metastable Impact Electron Spectroscopy (MIES), UPS, and XPS. <i>Langmuir</i> , 2006, 22, 7120-7123.	1.6	187
2	Temperature-Dependent Electronic and Vibrational Structure of the 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)amide Room-Temperature Ionic Liquid Surface: A Study with XPS, UPS, MIES, and HREELS. <i>Journal of Physical Chemistry B</i> , 2007, 111, 4801-4806.	1.2	98
3	Spatiotemporal Photopatterning on Polycarbonate Surface through Visible Light Responsive Polymer Bound DASA Compounds. <i>ACS Macro Letters</i> , 2015, 4, 1273-1277.	2.3	83
4	AlGa <sub>N</sub> /Ga <sub>N</sub> biosensor: effect of device processing steps on the surface properties and biocompatibility. <i>Sensors and Actuators B: Chemical</i> , 2007, 123, 740-748.	4.0	67
5	Improved adhesion at titanium surfaces via laser-induced surface oxidation and roughening. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 558, 755-760.	2.6	55
6	Raman Spectroscopy of Amorphous Carbon Prepared by Pulsed Arc Discharge in Various Gas Mixtures. <i>Journal of Spectroscopy</i> , 2013, 2013, 1-6.	0.6	53
7	Effect of dislocations on electrical and electron transport properties of In <sub>N</sub> thin films. I. Strain relief and formation of a dislocation network. <i>Journal of Applied Physics</i> , 2006, 100, 094902.	1.1	44
8	Electrochemical lithiation of thin silicon based layers potentiostatically deposited from ionic liquid. <i>Electrochimica Acta</i> , 2015, 168, 403-413.	2.6	42
9	Morphology and surface electronic structure of MBE grown In <sub>N</sub> . <i>Journal of Crystal Growth</i> , 2007, 306, 6-11.	0.7	41
10	The role of surface electron accumulation and bulk doping for gas-sensing explored with single-crystalline In <sub>2</sub> O <sub>3</sub> thin films. <i>Sensors and Actuators B: Chemical</i> , 2016, 236, 909-916.	4.0	41
11	Surface band bending at nominally undoped and Mg-doped In <sub>N</sub> by Auger Electron Spectroscopy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 59-65.	0.8	39
12	Electronic properties of organic semiconductor blends: Ambipolar mixtures of phthalocyanine and fullerene. <i>Applied Physics Letters</i> , 2007, 90, 212112.	1.5	39
13	GaN(0001) surface states: Experimental and theoretical fingerprints to identify surface reconstructions. <i>Physical Review B</i> , 2013, 88, .	1.1	37
14	The role of Si as surfactant and donor in molecular-beam epitaxy of AlN. <i>Journal of Applied Physics</i> , 2005, 98, 093508.	1.1	36
15	Changes of the near-surface chemical composition of the 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide room temperature ionic liquid under the influence of irradiation. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 1174-1181.	1.3	33
16	A Comparative Study on the Electronic Structure of the 1-Ethyl-3-Methylimidazolium Bis(trifluoromethylsulfonyl)amide RT-Ionic Liquid by Electron Spectroscopy and First Principles Calculations. <i>Zeitschrift Fur Physikalische Chemie</i> , 2006, 220, 1407-1416.	1.4	31
17	Effect of Annealing on the Properties of Indium-Tin Oxynitride Films as Ohmic Contacts for GaN-Based Optoelectronic Devices. <i>ACS Applied Materials &amp; Interfaces</i> , 2009, 1, 1451-1456.	4.0	30
18	Multiple stress degradation analysis of the active layer in organic photovoltaics. <i>Solar Energy Materials and Solar Cells</i> , 2014, 120, 654-668.	3.0	30

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19	Investigations of MBE grown InN and the influence of sputtering on the surface composition. Surface Science, 2004, 566-568, 849-855.	0.8	29
20	Confirmation of intrinsic electron gap states at nonpolar GaN(1-100) surfaces combining photoelectron and surface optical spectroscopy. Applied Physics Letters, 2014, 104, .	1.5	28
21	Interaction of GaN(0001) $\sqrt{2} \times \sqrt{2}$ surfaces with H <sub>2</sub> O. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 169-172.	0.8	27
22	Processing Strategies for High-Performance Schottky Contacts on n-Type Oxide Semiconductors: Insights from In <sub>2</sub> O <sub>3</sub> . ACS Applied Materials & Interfaces, 2019, 11, 27073-27087.	4.0	26
23	Surface properties of stoichiometric and defect-rich indium oxide films grown by MOCVD. Journal of Applied Physics, 2012, 111, .	1.1	23
24	Morphology, Crystal Structure and Charge Transport in Donor-Acceptor Block Copolymer Thin Films. ACS Applied Materials & Interfaces, 2015, 7, 12309-12318.	4.0	23
25	Role of surface microgeometries on electron escape probability and secondary electron yield of metal surfaces. Scientific Reports, 2020, 10, 250.	1.6	23
26	Morphology controlled open circuit voltage in polymer solar cells. Physica Status Solidi - Rapid Research Letters, 2011, 5, 247-249.	1.2	22
27	Birefringence and refractive indices of wurtzite GaN in the transparency range. Applied Physics Letters, 2015, 107, 092104.	1.5	22
28	Surface states and electronic structure of polar and nonpolar InN - An <i>in situ</i> photoelectron spectroscopy study. Applied Physics Letters, 2013, 102, .	1.5	21
29	Optimization of the secondary electron yield of laser-structured copper surfaces at room and cryogenic temperature. Physical Review Accelerators and Beams, 2020, 23, .	0.6	21
30	Electronic structure of GaN(0001) $\sqrt{2} \times \sqrt{2}$ thin films grown by PAMBE. Physica Status Solidi - Rapid Research Letters, 2008, 2, 212-214.	1.2	20
31	Characterization of as-grown and adsorbate-covered N-polar InN surfaces using <i>in situ</i> photoelectron spectroscopy. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 45-49.	0.8	20
32	Effect of surface oxidation on electron transport in InN thin films. Journal of Applied Physics, 2007, 101, 123705.	1.1	19
33	Surface composition and electronic properties of indium tin oxide and oxynitride films. Surface Science, 2007, 601, 4082-4086.	0.8	18
34	PAMBE growth and <i>in situ</i> characterisation of clean (2 $\times$ 2) and ( $\sqrt{3} \times \sqrt{3}$ ) R30° reconstructed InN(0001) thin films. Physica Status Solidi (B): Basic Research, 2009, 246, 1173-1176.	0.7	18
35	Consequences of plasma oxidation and vacuum annealing on the chemical properties and electron accumulation of In <sub>2</sub> O <sub>3</sub> surfaces. Journal of Applied Physics, 2016, 120, .	1.1	18
36	Secondary electron yield reduction by femtosecond pulse laser-induced periodic surface structuring. Surfaces and Interfaces, 2021, 25, 101179.	1.5	17

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37	Modification of the Active Layer/PEDOT:PSS Interface by Solvent Additives Resulting in Improvement of the Performance of Organic Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 11068-11081.	4.0	16
38	Cryogenic surface resistance of copper: Investigation of the impact of surface treatments for secondary electron yield reduction. Physical Review Accelerators and Beams, 2019, 22, .	0.6	16
39	Adsorption and desorption of hydrogen at nonpolar GaN surfaces: Kinetics and impact on surface vibrational and electronic properties. Physical Review B, 2017, 95, 085411.	1.1	15
40	Towards Understanding the Cross-Sensitivity of In <sub>2</sub> O <sub>3</sub> Based Ozone Sensors: Effects of O <sub>3</sub> , O <sub>2</sub> and H <sub>2</sub> O Adsorption at In <sub>2</sub> O <sub>3</sub> (111) Surfaces. Physica Status Solidi (B): Basic Research, 2018, 255, 1700324.	0.7	15
41	Effects of X-ray radiation on the surface chemical composition of plasma deposited thin fluorocarbon films. Polymer Degradation and Stability, 2008, 93, 700-706.	2.7	12
42	High Temperature Graphene Formation on Capped and Uncapped SiC. Materials Science Forum, 0, 679-680, 785-788.	0.3	12
43	An Electrochemical and Photoelectron Spectroscopy Study of a Low Temperature Liquid Metal Battery Based on an Ionic Liquid Electrolyte. Journal of the Electrochemical Society, 2016, 163, A2488-A2493.	1.3	12
44	Effects of Plasma Parameter on Morphological and Electrical Properties of Superconducting Nb-N Deposited by MO-PEALD. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-7.	1.1	12
45	Tuning of Surface Properties of AlGaIn/GaN Sensors for Nanodroplets and Picodroplets. IEEE Sensors Journal, 2006, 6, 881-886.	2.4	11
46	Changes in the valence band structure of as-grown InN(0001) surfaces upon exposure to oxygen and water. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1037-1040.	0.8	11
47	Thermal Functionalization of GaN Surfaces with 1-Alkenes. Langmuir, 2013, 29, 6296-6301.	1.6	11
48	Valence band offsets at oxide/InN interfaces determined by X-ray photoelectron spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 685-688.	0.8	10
49	Reduction of electron accumulation at InN(0001) surfaces via saturation of surface states by potassium and oxygen as donor- or acceptor-type adsorbates. Journal of Applied Physics, 2014, 115, 043716.	1.1	10
50	Interaction of indium oxide nanoparticle film surfaces with ozone, oxygen and water. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 831-838.	0.8	10
51	Correlation between structural and electrical properties of InN thin films prepared by molecular beam epitaxy. Superlattices and Microstructures, 2006, 40, 289-294.	1.4	9
52	Electronic properties of C60/InP(001) heterostructures. Journal of Physics Condensed Matter, 2006, 18, 9841-9848.	0.7	9
53	N-type conductivity and properties of carbon-doped InN(0001) films grown by molecular beam epitaxy. Journal of Applied Physics, 2013, 113, 033501.	1.1	9
54	Influence of plasma treatments on the properties of GaN/AlGaIn/GaN HEMT structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1096-1098.	0.8	8

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55	Two-dimensional electron gas of the $\text{O}_3$ surface: Enhanced thermopower, electrical transport properties, and reduction by adsorbates or compensating acceptor doping. <i>Physical Review B</i> , 2020, 102.	1.1	8
56	Synthesis, surface chemical analysis, lifetime studies and degradation mechanisms of Cs-K-Sb photocathodes. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2021, 986, 164724.	0.7	8
57	Electron-phonon-plasmon interaction in MBE-grown indium nitride – A high resolution electron energy loss spectroscopy (HREELS) study. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 173-176.	0.8	7
58	Preparation and characterization of poly(L-histidine)/poly(L-glutamic acid) multilayer on silicon with nanometer-sized surface structures. <i>Journal of Colloid and Interface Science</i> , 2012, 386, 252-259.	5.0	7
59	Anisotropic optical constants, birefringence, and dichroism of wurtzite GaN between 0.6 eV and 6 eV. <i>Journal of Applied Physics</i> , 2017, 122, 045706.	1.1	7
60	Nanocrystalline AlN:Si field emission arrays for vacuum electronics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 1839-1844.	0.8	6
61	Electron transport properties of indium oxide – indium nitride metal-oxide-semiconductor heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 495-498.	0.8	6
62	Comprehensive surface analysis of GaN-capped AlGaN/GaN high electron mobility transistors: Influence of growth method. <i>Journal of Applied Physics</i> , 2011, 110, 083527.	1.1	6
63	Electrical Conductivity and Gas-sensing Properties of Mg-doped and Undoped Single-crystalline In <sub>2</sub> O <sub>3</sub> Thin Films: Bulk vs. Surface. <i>Procedia Engineering</i> , 2015, 120, 79-82.	1.2	6
64	Hydrogen adsorbed at N-polar InN: Significant changes in the surface electronic properties. <i>Physical Review B</i> , 2015, 91, .	1.1	6
65	Surface composition of [BMP][Tf <sub>2</sub> N] and [PMLm][Tf <sub>2</sub> N] in the presence of NbF <sub>5</sub> and TaF <sub>5</sub> . A photoelectron spectroscopy study. <i>Journal of Molecular Liquids</i> , 2017, 226, 78-84.	2.3	6
66	Effects of Potassium Adsorption and Potassium-Water Coadsorption on the Chemical and Electronic Properties of n-Type GaN(0001) Surfaces. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4250-4260.	1.5	6
67	The impact of H <sub>2</sub> and N <sub>2</sub> on the material properties and secondary electron yield of sputtered amorphous carbon films for anti-multipacting applications. <i>Applied Surface Science</i> , 2021, 542, 148552.	3.1	6
68	Beam-induced surface modifications as a critical source of heat loads in the Large Hadron Collider. <i>Communications Physics</i> , 2021, 4, .	2.0	6
69	Properties and electrochemical characteristics of boron-doped multi-walled carbon nanotubes. <i>Chemical Physics Letters</i> , 2015, 639, 217-224.	1.2	5
70	Influence of intermediate layers on the surface condition of laser crystallized silicon thin films and solar cell performance. <i>Journal of Applied Physics</i> , 2016, 119, 045306.	1.1	5
71	PEDOT coating applied on thick film gold electrodes for increased miniaturization capability. <i>Progress in Organic Coatings</i> , 2019, 135, 545-554.	1.9	5
72	Angle-resolved photoelectron spectroscopy study of the GaN(0001)-2 $\times$ 2 surface. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1881-1883.	0.8	4

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73	Impact of potassium and water on the electronic properties of InN(0001) surfaces. Physica Status Solidi C: Current Topics in Solid State Physics, 2014, 11, 428-431.	0.8	3
74	Surface properties and biocompatibility of thick film materials used in ceramic bioreactors. Materialia, 2019, 5, 100213.	1.3	3
75	Microgravimetric and Spectroscopic Analysis of Solid <sup>2</sup> Electrolyte Interphase Formation in Presence of Additives. ChemPhysChem, 2019, 20, 655-664.	1.0	3
76	Energy-resolved secondary-electron emission of candidate beam screen materials for electron cloud mitigation at the Large Hadron Collider. Physical Review Accelerators and Beams, 2020, 23, .	0.6	3
77	Determination of the valence band offsets at HfO <sub>2</sub> /InN(0001) and InN/In <sub>0.3</sub> Ga <sub>0.7</sub> N(0001) heterojunctions using X-ray photoelectron spectroscopy. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1335-1337.	0.8	2
78	Plasma affected 2DEG properties on GaN/AlGaIn/GaN HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 938-941.	0.8	2
79	Corona Assisted Ga Based Nanowire Growth on 3C-SiC(111)/Si(111) Pseudosubstrates. Materials Science Forum, 0, 897, 642-645.	0.3	2
80	Stability and lifetime study of carbon nanotubes as cold electron field emitters for electron cooling in the CERN extra low energy antiproton ring. Physical Review Accelerators and Beams, 2021, 24, .	0.6	2
81	Doping efficiency and segregation of Si in AlN grown by molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1420-1424.	0.8	1
82	Impact of Device Technology Processes on the Surface Properties and Biocompatibility of Group III Nitride Based Sensors. Materialwissenschaft Und Werkstofftechnik, 2006, 37, 919-923.	0.5	1
83	Seebeck ozone sensors. , 2013, , .		1
84	Atomic surface structure of MOVPE-prepared GaP(1 1 1)B. Applied Surface Science, 2020, 534, 147346.	3.1	1
85	Thermal decomposition of indium phosphide: monitoring of metallic cluster growth. , 0, , .		0
86	Electrical and optical properties of In <sub>2</sub> O <sub>3</sub> nanoparticles prepared by MOCVD. , 2008, , .		0
87	Fuchs's Kliever phonons of H-covered and clean GaN(11 $\bar{0}0$ ). Surface Science, 2018, 667, 31-37.	0.8	0
88	Controlled adsorption of titanium(IV) oxide particles on electroplated zinc coatings to improve the corrosion resistance of chromium(VI)-free conversion layers. Materialwissenschaft Und Werkstofftechnik, 2019, 50, 412-420.	0.5	0
89	Real-time Observation of Evolution Dynamics of Ge Nanostructures on Si Surfaces by Photoelectron Emission Microscopy. Applied Science and Convergence Technology, 2007, 16, 145-152.	0.3	0