Gregor Hlawacek

List of Publications by Year
in descending order

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96 papers	2,204 citations	218677 26 h-index	254184 43 g-index
99 all docs	99 docs citations	99 times ranked	2495 citing authors

#	Article	IF	Citations
1	Quantitative nanoscale imaging using transmission He ion channelling contrast: Proof-of-concept and application to study isolated crystalline defects. Ultramicroscopy, 2022, 233, 113439.	1.9	2
2	Atomistic Simulations of Defect Production in Monolayer and Bulk Hexagonal Boron Nitride under Low- and High-Fluence Ion Irradiation. Nanomaterials, 2021, 11, 1214.	4.1	7
3	Revealing Inflammatory Indications Induced by Titanium Alloy Wear Debris in Periprosthetic Tissue by Label-Free Correlative High-Resolution Ion, Electron and Optical Microspectroscopy. Materials, 2021, 14, 3048.	2.9	6
4	In-situ Correlative Analysis of electrical and magnetic properties of Ion-beam treated surfaces by combination of AFM and FIB. Microscopy and Microanalysis, 2021, 27, 1020-1020.	0.4	0
5	Controlled and deterministic creation of synthetic antiferromagnetic domains by focused ion beam irradiation. Applied Physics Letters, 2021, 119, .	3.3	3
6	Transmission ion microscopy and time-of-flight spectroscopy. Microscopy and Microanalysis, 2021, 27, 1930-1932.	0.4	0
7	Superconducting properties of in-plane W-C nanowires grown by He⁺ focused ion beam induced deposition. Nanotechnology, 2021, 32, 085301.	2.6	8
8	npSCOPE: A New Multimodal Instrument for In Situ Correlative Analysis of Nanoparticles. Analytical Chemistry, 2021, 93, 14417-14424.	6.5	11
9	Channeling effects in gold nanoclusters under He ion irradiation: insights from molecular dynamics simulations. Nanotechnology, 2020, 31, 035302.	2.6	11
10	Imaging and milling resolution of light ion beams from helium ion microscopy and FIBs driven by liquid metal alloy ion sources. Beilstein Journal of Nanotechnology, 2020, 11, 1742-1749.	2.8	11
11	Freestanding and Supported MoS₂ Monolayers under Cluster Irradiation: Insights from Molecular Dynamics Simulations. ACS Applied Materials & Interfaces, 2020, 12, 37454-37463.	8.0	16
12	Helium Ion Microscopy for Reduced Spin Orbit Torque Switching Currents. Nano Letters, 2020, 20, 7036-7042.	9.1	12
13	Photoluminescence and Raman Spectroscopy Study on Color Centers of Helium Ion-Implanted 4Hâ€“SiC. Nanomanufacturing and Metrology, 2020, 3, 205-217.	3.0	17
14	Visualization and Chemical Characterization of the Cathode Electrolyte Interphase Using He-Ion Microscopy and In Situ Time-of-Flight Secondary Ion Mass Spectrometry. ACS Applied Energy Materials, 2020, 3, 8822-8832.	5.1	16
15	An atomic force microscope integrated with a helium ion microscope for correlative nanoscale characterization. Beilstein Journal of Nanotechnology, 2020, 11, 1272-1279.	2.8	8
16	Scanning transmission imaging in the helium ion microscope using a microchannel plate with a delay line detector. Beilstein Journal of Nanotechnology, 2020, 11, 1854-1864.	2.8	13
17	In-situ Characterization of MoS₂ Based Field Effect Transistors during Ion Irradiation. Microscopy and Microanalysis, 2020, 26, 294-296.	0.4	1
18	Morphology modification of Si nanopillars under ion irradiation at elevated temperatures: plastic deformation and controlled thinning to 10 nm. Semiconductor Science and Technology, 2020, 35, 015021.	2.0	9

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19	Strain Anisotropy and Magnetic Domains in Embedded Nanomagnets. Small, 2019, 15, e1904738.	10.0	30
20	Stationary beam full-field transmission helium ion microscopy using sub-50 keV He⁺: Projected images and intensity patterns. Beilstein Journal of Nanotechnology, 2019, 10, 1648-1657.	2.8	10
21	Nanomagnets: Strain Anisotropy and Magnetic Domains in Embedded Nanomagnets (Small 52/2019). Small, 2019, 15, 1970287.	10.0	1
22	Time-of-flight secondary ion mass spectrometry in the helium ion microscope. Ultramicroscopy, 2019, 198, 10-17.	1.9	21
23	Ion Microscopy. Springer Handbooks, 2019, , 677-714.	0.6	3
24	Bio-recycling of metals: Recycling of technical products using biological applications. Biotechnology Advances, 2018, 36, 1048-1062.	11.7	114
25	Time of Flight Backscatter and Secondary Ion Spectrometry in a Helium Ion Microscope. Microscopy and Microanalysis, 2018, 24, 802-803.	0.4	1
26	Site-controlled formation of single Si nanocrystals in a buried SiO₂ matrix using ion beam mixing. Beilstein Journal of Nanotechnology, 2018, 9, 2883-2892.	2.8	14
27	Supported Two-Dimensional Materials under Ion Irradiation: The Substrate Governs Defect Production. ACS Applied Materials & Interfaces, 2018, 10, 30827-30836.	8.0	76
28	Imaging Structure and Magnetisation in New Ways Using 4D STEM. Microscopy and Microanalysis, 2018, 24, 180-181.	0.4	1
29	Electronic transport in helium-ion-beam etched encapsulated graphene nanoribbons. Carbon, 2017, 119, 419-425.	10.3	26
30	Noble gas ion beams in materials science for future applications and devices. MRS Bulletin, 2017, 42, 660-666.	3.5	23
31	Developing Rapid and Advanced Visualisation of Magnetic Structures Using 2-D Pixelated STEM Detectors. Microscopy and Microanalysis, 2016, 22, 530-531.	0.4	3
32	Tailoring magnetic nanostructures with neon in the ion microscope. Microscopy and Microanalysis, 2016, 22, 1716-1717.	0.4	2
33	Nanometer Scale Time of Flight Back Scattering Spectrometry in the Helium Ion Microscope. Microscopy and Microanalysis, 2016, 22, 618-619.	0.4	1
34	Backscattering Spectrometry in the Helium Ion Microscope: Imaging Elemental Compositions on the nm Scale. Nanoscience and Technology, 2016, , 265-295.	1.5	5
35	Channeling and Backscatter Imaging. Nanoscience and Technology, 2016, , 205-224.	1.5	4
36	Ionoluminescence. Nanoscience and Technology, 2016, , 325-351.	1.5	5

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37	Nanometer scale elemental analysis in the helium ion microscope using time of flight spectrometry. Ultramicroscopy, 2016, 162, 91-97.	1.9	44
38	Visualization of steps and surface reconstructions in Helium Ion Microscopy with atomic precision. Ultramicroscopy, 2016, 162, 17-24.	1.9	9
39	Focused Helium and Neon Ion Beam Modification of High-T C Superconductors and Magnetic Materials. Nanoscience and Technology, 2016, , 415-445.	1.5	5
40	HIM of Biological Samples. Nanoscience and Technology, 2016, , 173-185.	1.5	6
41	Direct Depth- and Lateral- Imaging of Nanoscale Magnets Generated by Ion Impact. Scientific Reports, 2015, 5, 16786.	3.3	35
42	Threshold and efficiency for perforation of 1 nm thick carbon nanomembranes with slow highly charged ions. 2D Materials, 2015, 2, 035009.	4.4	21
43	Backscattered helium spectroscopy in the helium ion microscope: Principles, resolution and applications. Nuclear Instruments & Methods in Physics Research B, 2015, 344, 44-49.	1.4	15
44	Investigation of ionoluminescence of semiconductor materials using helium ion microscopy. Journal of Luminescence, 2015, 157, 321-326.	3.1	14
45	Helium ion microscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	1.2	170
46	Creation and physical aspects of luminescent patterns using helium ion microscopy. Journal of Applied Physics, 2014, 115, .	2.5	11
47	A high resolution ionoluminescence study of defect creation and interaction. Journal of Physics Condensed Matter, 2014, 26, 165401.	1.8	15
48	To see or not to see: Imaging surfactant coated nano-particles using HIM and SEM. Ultramicroscopy, 2013, 135, 89-94.	1.9	30
49	Modified energetics and growth kinetics on H-terminated GaAs (110). Journal of Chemical Physics, 2013, 139, 164712.	3.0	2
50	Nucleation and growth of thin films of rod-like conjugated molecules. Journal of Physics Condensed Matter, 2013, 25, 143202.	1.8	50
51	Ehrlich-Schwoebel Barriers and Island Nucleation in Organic Thin-Film Growth. Springer Series in Materials Science, 2013, , 79-106.	0.6	6
52	In-situ Observation of Organic Thin Film Growth on Graphene. Springer Series in Materials Science, 2013, , 107-139.	0.6	6
53	Digging gold: keV He⁺ ion interaction with Au. Beilstein Journal of Nanotechnology, 2013, 4, 453-460.	2.8	37
54	Substrate selected polymorphism of epitaxially aligned tetraphenyl-porphyrin thin films. Physical Chemistry Chemical Physics, 2012, 14, 262-272.	2.8	17

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55	Nanoscale Patterning of Organosilane Molecular Thin Films from the Gas Phase and Its Applications: Fabrication of Multifunctional Surfaces and Large Area Molecular Templates for Site-Selective Material Deposition. Langmuir, 2012, 28, 3045-3052.	3.5	25
56	The influence of substrate temperature on growth of para-sexiphenyl thin films on Ir{111} supported graphene studied by LEEM. Surface Science, 2012, 606, 475-480.	1.9	21
57	Cobalt induced nanocrystals on Ge(001). Surface Science, 2012, 606, 924-927.	1.9	12
58	Surface modifications by gas plasma control osteogenic differentiation of MC3T3-E1 cells. Acta Biomaterialia, 2012, 8, 2969-2977.	8.3	36
59	Subsurface analysis of semiconductor structures with helium ion microscopy. Microelectronics Reliability, 2012, 52, 2104-2109.	1.7	15
60	Channeling in helium ion microscopy: Mapping of crystal orientation. Beilstein Journal of Nanotechnology, 2012, 3, 501-506.	2.8	38
61	Imaging ultra thin layers with helium ion microscopy: Utilizing the channeling contrast mechanism. Beilstein Journal of Nanotechnology, 2012, 3, 507-512.	2.8	33
62	Structural, electrical and magnetic measurements on oxide layers grown on 316L exposed to liquid leadâ€“bismuth eutectic. Journal of Nuclear Materials, 2012, 421, 140-146.	2.7	18
63	Smooth Growth of Organic Semiconductor Films on Graphene for High-Efficiency Electronics. Nano Letters, 2011, 11, 333-337.	9.1	58
64	Diffusion and submonolayer growth of para-sexiphenyl on Ir(111) and Ir(111)-supported graphene. IBM Journal of Research and Development, 2011, 55, 15:1-15:7.	3.1	15
65	Microstructure and Phase Behavior of a Quinquethiophene-Based Self-Assembled Monolayer as a Function of Temperature. Journal of Physical Chemistry C, 2011, 115, 22925-22930.	3.1	21
66	Determination of critical island size inpara-sexiphenyl islands on SiO2using capture-zone scaling. EPJ Applied Physics, 2011, 55, 23902.	0.7	24
67	Initial stages of apara-hexaphenyl film growth on amorphous mica. Physical Review B, 2011, 83, .	3.2	65
68	Photoreactive molecular layers containing aryl ester units: Preparation, UV patterning and post-exposure modification. Materials Chemistry and Physics, 2010, 119, 287-293.	4.0	12
69	Morphology characterization and friction coefficient determination of sputtered V2O5 films. Thin Solid Films, 2010, 519, 1416-1420.	1.8	9
70	Hierarchy of adhesion forces in patterns of photoreactive surface layers. Journal of Chemical Physics, 2009, 130, 044703.	3.0	6
71	Structure, Stresses and Stress Relaxation of TiN/Ag Nanocomposite Films. Journal of Nanoscience and Nanotechnology, 2009, 9, 3606-3610.	0.9	4
72	Rubrene On Mica: From The Early Growth Stage To Late Crystallization. Springer Proceedings in Physics, 2009, , 55-60.	0.2	1

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73	Synthesisâ€“structure relations for reactive magnetron sputtered V2O5 films. Surface and Coatings Technology, 2008, 202, 1551-1555.	4.8	22
74	Characterization of Phospholipid Bilayers on Tiâ€6Alâ€4V and Tiâ€6Alâ€7Nb. Advanced Engineering Materials, 2008, 10, B47.	3.5	5
75	Synthesis of a Photosensitive Thiocyanate-Functionalized Trialkoxysilane and Its Application in Patterned Surface Modifications. Chemistry of Materials, 2008, 20, 2009-2015.	6.7	15
76	Characterization of Step-Edge Barriers in Organic Thin-Film Growth. Science, 2008, 321, 108-111.	12.6	190
77	Controlling molecular orientation of OMBE grown 6P thin films on mica(001). Surface Science, 2007, 601, 2584-2587.	1.9	12
78	Influence of surface temperature and surface modifications on the initial layer growth of para-hexaphenyl on mica (001). Surface Science, 2007, 601, 2152-2160.	1.9	65
79	The influence of substrate temperature on the structure and morphology of sexiphenyl thin films on Au(111). Applied Physics A: Materials Science and Processing, 2007, 87, 103-111.	2.3	20
80	The epitaxial sexiphenyl (001) monolayer on TiO2(110): A grazing incidence X-ray diffraction study. Surface Science, 2006, 600, 4645-4649.	1.9	26
81	Spontaneous rearrangement of para-sexiphenyl crystallites into nano-fibers. Applied Physics A: Materials Science and Processing, 2006, 82, 665-669.	2.3	46
82	Diffusion versus sticking anisotropy: Anisotropic growth of organic molecular films. Surface Science, 2006, 600, L313-L317.	1.9	26
83	Self-organization of Nanostructures in Inorganic and Organic Semiconductor Systems. Advanced Engineering Materials, 2006, 8, 1057-1065.	3.5	23
84	Para-sexiphenyl thin films grown by hot wall epitaxy on KCl(001) substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1660-1663.	2.1	13
85	Coherent random lasing in the deep blue from self-assembled organic nanofibers. Journal of Applied Physics, 2006, 99, 034305.	2.5	42
86	Structure and morphology of quaterphenyl thin films on Au(111)â€”The influence of surface contamination by carbon. Journal of Crystal Growth, 2005, 283, 397-403.	1.5	16
87	Self-organization of para-sexiphenyl on crystalline substrates. Physica Status Solidi A, 2005, 202, 2376-2385.	1.7	21
88	Organic thin films grown by hot wall epitaxy on inorganic substrates. Physica Status Solidi (B): Basic Research, 2005, 242, 1877-1882.	1.5	4
89	Self Assembly of Anisotropic Organic Molecules: Diffusion versus Sticking Anisotropy. Materials Research Society Symposia Proceedings, 2005, 901, 1.	0.1	0
90	Oriented Sexiphenyl Single Crystal Nanoneedles on TiO2 (110). Advanced Materials, 2004, 16, 2159-2162.	21.0	89

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91	Structure and morphology of sexiphenyl thin films grown on aluminium (111). Organic Electronics, 2004, 5, 45-51.	2.6	29
92	Morphology and growth kinetics of organic thin films deposited by hot wall epitaxy. Organic Electronics, 2004, 5, 23-27.	2.6	29
93	Growth kinetics, structure, and morphology of para-quaterphenyl thin films on gold(111). Journal of Chemical Physics, 2004, 121, 2272-2277.	3.0	36
94	Pattern formation in para-quaterphenyl film growth on gold substrates. Synthetic Metals, 2004, 146, 383-386.	3.9	21
95	Morphology and growth kinetics of organic thin films deposited by hot wall epitaxy. Organic Electronics, 2004, 5, 23-27.	2.6	0
96	Molecular alignments in sexiphenyl thin films epitaxially grown on muscovite. Thin Solid Films, 2003, 443, 108-114.	1.8	56