

Knut MÃ¼ller-Caspary

List of Publications by Year in descending order

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76
papers

2,054
citations

218677

26
h-index

254184

43
g-index

83
all docs

83
docs citations

83
times ranked

2283
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous illumination picosecond imaging using a delay line detector in a transmission electron microscope. <i>Ultramicroscopy</i> , 2022, 233, 113392.	1.9	5
2	Dynamical diffraction of high-energy electrons investigated by focal series momentum-resolved scanning transmission electron microscopy at atomic resolution. <i>Ultramicroscopy</i> , 2022, 233, 113425.	1.9	5
3	Angle-dependence of ADF-STEM intensities for chemical analysis of InGaN/GaN. <i>Ultramicroscopy</i> , 2022, 238, 113535.	1.9	4
4	Angle-resolved STEM using an iris aperture: Scattering contributions and sources of error for the quantitative analysis in Si. <i>Ultramicroscopy</i> , 2021, 221, 113175.	1.9	8
5	Accurate measurement of strain at interfaces in 4D-STEM: A comparison of various methods. <i>Ultramicroscopy</i> , 2021, 221, 113196.	1.9	10
6	Quantitative Characterization of Nanometer-Scale Electric Fields via Momentum-Resolved STEM. <i>Nano Letters</i> , 2021, 21, 2018-2025.	9.1	20
7	Precise measurement of the electron beam current in a TEM. <i>Ultramicroscopy</i> , 2021, 223, 113221.	1.9	8
8	Automated mapping of the crystallographic sample orientation from diffraction patterns in momentum-resolved STEM. <i>Microscopy and Microanalysis</i> , 2021, 27, 1444-1445.	0.4	1
9	Quantitative characterization of nanometer-scale electric fields via momentum-resolved STEM. <i>Microscopy and Microanalysis</i> , 2021, 27, 2206-2207.	0.4	0
10	Live Processing of Momentum-Resolved STEM Data for First Moment Imaging and Ptychography. <i>Microscopy and Microanalysis</i> , 2021, 27, 1078-1092.	0.4	13
11	4D-STEM at interfaces to GaN: Centre-of-mass approach & NBED-disc detection. <i>Ultramicroscopy</i> , 2021, 228, 113321.	1.9	9
12	Coincidence Detection of EELS and EDX Spectral Events in the Electron Microscope. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 9058.	2.5	10
13	High- T_C Interfacial Ferromagnetism in $\text{SrMnO}_3/\text{LaMnO}_3$ Superlattices. <i>Advanced Functional Materials</i> , 2020, 30, 1808270.	14.9	31
14	Direct measurement of electrostatic potentials at the atomic scale: A conceptual comparison between electron holography and scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2020, 210, 112926.	1.9	15
15	Direct Mapping of Electrostatic Potentials by Momentum-resolved STEM and Electron Holography - A Conceptual Comparison. <i>Microscopy and Microanalysis</i> , 2020, 26, 18-20.	0.4	1
16	Quantitative Simulation of Four-dimensional STEM Datasets. <i>Microscopy and Microanalysis</i> , 2020, 26, 250-251.	0.4	0
17	Influence of plasmon excitations on atomic-resolution quantitative 4D scanning transmission electron microscopy. <i>Scientific Reports</i> , 2020, 10, 17890.	3.3	21
18	Atom column detection from simultaneously acquired ABF and ADF STEM images. <i>Ultramicroscopy</i> , 2020, 219, 113046.	1.9	15

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19	Citric Acid Based Carbon Dots with Amine Type Stabilizers: pH-Specific Luminescence and Quantum Yield Characteristics. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8894-8904.	3.1	63
20	LiberTEM: Software platform for scalable multidimensional data processing in transmission electron microscopy. <i>Journal of Open Source Software</i> , 2020, 5, 2006.	4.6	26
21	Matching different symmetries with an atomically sharp interface: Epitaxial BaZrO_3 on Si(001). <i>Physical Review Materials</i> , 2020, 4, .		
22	Self-Assembly of Atomically Thin Chiral Copper Heterostructures Templated by Black Phosphorus. <i>Advanced Functional Materials</i> , 2019, 29, 1903120.	14.9	9
23	Spectroscopic coincidence experiments in transmission electron microscopy. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	19
24	Electrical Polarization in AlN/GaN Nanodisks Measured by Momentum-Resolved 4D Scanning Transmission Electron Microscopy. <i>Physical Review Letters</i> , 2019, 122, 106102.	7.8	31
25	Comparison of first moment STEM with conventional differential phase contrast and the dependence on electron dose. <i>Ultramicroscopy</i> , 2019, 203, 95-104.	1.9	29
26	Influence of distortions of recorded diffraction patterns on strain analysis by nano-beam electron diffraction. <i>Ultramicroscopy</i> , 2019, 196, 74-82.	1.9	15
27	Ultrathin Au-Alloy Nanowires at the Liquid-Liquid Interface. <i>Nano Letters</i> , 2018, 18, 1903-1907.	9.1	31
28	Demonstration of a 2π -programmable phase plate for electrons. <i>Ultramicroscopy</i> , 2018, 190, 58-65.	1.9	80
29	Quantitative HAADF STEM of SiGe in presence of amorphous surface layers from FIB preparation. <i>Ultramicroscopy</i> , 2018, 184, 29-36.	1.9	17
30	Measurement of local crystal lattice strain variations in dealloyed nanoporous gold. <i>Materials Research Letters</i> , 2018, 6, 84-92.	8.7	10
31	Atomic-scale quantification of charge densities in two-dimensional materials. <i>Physical Review B</i> , 2018, 98, .	3.2	36
32	Metal-insulator-transition engineering by modulation tilt-control in perovskite nickelates for room temperature optical switching. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9515-9520.	7.1	56
33	Spatially resolved luminescence properties of non- and semi-polar InGaN quantum wells on GaN microrods. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 355102.	2.8	2
34	Strain analysis from nano-beam electron diffraction: Influence of specimen tilt and beam convergence. <i>Ultramicroscopy</i> , 2018, 190, 45-57.	1.9	17
35	Optimization of NBED simulations for disc-detection measurements. <i>Ultramicroscopy</i> , 2017, 181, 50-60.	1.9	13
36	The microstructure, local indium composition and photoluminescence in green-emitting InGaN/GaN quantum wells. <i>Journal of Microscopy</i> , 2017, 268, 305-312.	1.8	3

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37	Measurement of atomic electric fields and charge densities from average momentum transfers using scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2017, 178, 62-80.	1.9	106
38	Quantitative STEM: Comparative Studies of Composition and Optical Properties of Semiconductor Quantum Structures. <i>Microscopy and Microanalysis</i> , 2017, 23, 1690-1691.	0.4	0
39	STEM Strain Measurement From a Stream of Diffraction Patterns Recorded on a Pixel-Free Delay-Line Detector. <i>Microscopy and Microanalysis</i> , 2016, 22, 520-521.	0.4	0
40	Composition analysis of coaxially grown InGaN multi quantum wells using scanning transmission electron microscopy. <i>Journal of Applied Physics</i> , 2016, 119, 175701.	2.5	0
41	Direct Measurement of Polarization-Induced Fields in GaN/AlN by Nano-Beam Electron Diffraction. <i>Scientific Reports</i> , 2016, 6, 28459.	3.3	25
42	Nanosopic Insights into InGaN/GaN Core-Shell Nanorods: Structure, Composition, and Luminescence. <i>Nano Letters</i> , 2016, 16, 5340-5346.	9.1	43
43	Quantitative measurements of internal electric fields with differential phase contrast microscopy on InGaN/GaN quantum well structures. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 140-144.	1.5	31
44	Ultrasoother Ru(0001) Films as Templates for Ceria Nanoarchitectures. <i>Crystal Growth and Design</i> , 2016, 16, 4216-4224.	3.0	15
45	Materials characterisation by angle-resolved scanning transmission electron microscopy. <i>Scientific Reports</i> , 2016, 6, 37146.	3.3	33
46	A pnCCD-based, fast direct single electron imaging camera for TEM and STEM. <i>Journal of Instrumentation</i> , 2016, 11, P04006-P04006.	1.2	97
47	Sample tilt effects on atom column position determination in ABF-STEM imaging. <i>Ultramicroscopy</i> , 2016, 160, 110-117.	1.9	47
48	Effects of instrument imperfections on quantitative scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2016, 161, 146-160.	1.9	55
49	Messung atomarer elektrischer Felder. <i>Physik in Unserer Zeit</i> , 2015, 46, 110-111.	0.0	0
50	Homogeneity and composition of AlInGaN: A multiprobe nanostructure study. <i>Ultramicroscopy</i> , 2015, 156, 29-36.	1.9	14
51	Two-dimensional strain mapping in semiconductors by nano-beam electron diffraction employing a delay-line detector. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	38
52	Theoretical study of precision and accuracy of strain analysis by nano-beam electron diffraction. <i>Ultramicroscopy</i> , 2015, 158, 38-48.	1.9	43
53	Near-surface depletion of antimony during the growth of GaAsSb and GaAs/GaAsSb nanowires. <i>Journal of Applied Physics</i> , 2014, 116, 144303.	2.5	18
54	Structural and emission properties of InGaAs/GaAs quantum dots emitting at 1.3 μ m. <i>Applied Physics Letters</i> , 2014, 105, 152102.	3.3	19

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55	A study of the initial stages of the growth of Au-assisted epitaxial Ge nanowires on a clean Ge(100) surface. CrystEngComm, 2014, 16, 2486.	2.6	7
56	Wrinkling of Atomic Planes in Ultrathin Au Nanowires. Nano Letters, 2014, 14, 4859-4866.	9.1	35
57	A nanocrystalline Hilbert phase-plate for phase-contrast transmission electron microscopy. Ultramicroscopy, 2014, 139, 29-37.	1.9	7
58	Simultaneous Quantification of Indium and Nitrogen Concentration in InGaNs Using HAADF-STEM. Microscopy and Microanalysis, 2014, 20, 1740-1752.	0.4	20
59	Influence of Static Atomic Displacements on Composition Quantification of AlGaIn/GaN Heterostructures from HAADF-STEM Images. Microscopy and Microanalysis, 2014, 20, 1463-1470.	0.4	11
60	Measurement of indium concentration profiles and segregation efficiencies from high-angle annular dark field-scanning transmission electron microscopy images. Ultramicroscopy, 2013, 131, 1-9.	1.9	18
61	Synthesis Route for the Self-Assembly of Submicrometer-Sized Colloidosomes with Tailorable Nanopores. Chemistry of Materials, 2013, 25, 3464-3471.	6.7	47
62	Comparison of intensity and absolute contrast of simulated and experimental high-resolution transmission electron microscopy images for different multislice simulation methods. Ultramicroscopy, 2013, 134, 94-101.	1.9	25
63	Quantitative chemical evaluation of dilute GaNs using ADF STEM: Avoiding surface strain induced artifacts. Ultramicroscopy, 2013, 129, 1-9.	1.9	29
64	Nano scale phase separation in Au-Ge system on ultra clean Si(100) surfaces. Journal of Applied Physics, 2012, 111, 104319.	2.5	6
65	Scanning transmission electron microscopy strain measurement from millisecond frames of a direct electron charge coupled device. Applied Physics Letters, 2012, 101, 212110.	3.3	63
66	Strain Measurement in Semiconductor Heterostructures by Scanning Transmission Electron Microscopy. Microscopy and Microanalysis, 2012, 18, 995-1009.	0.4	62
67	Bulk and Surface Excitons in Alloyed and Phase-Separated ZnO/MgO Particulate Systems. ACS Applied Materials & Interfaces, 2012, 4, 2490-2497.	8.0	10
68	Determination of the chemical composition of GaNs using STEM HAADF imaging and STEM strain state analysis. Ultramicroscopy, 2012, 117, 15-23.	1.9	79
69	Toward Simultaneous Assessment of In and N in InGaAsN Alloys by Quantitative STEM-ADF Imaging. Microscopy and Microanalysis, 2011, 17, 1862-1863.	0.4	3
70	Composition mapping in InGaIn by scanning transmission electron microscopy. Ultramicroscopy, 2011, 111, 1316-1327.	1.9	156
71	Microstructural and compositional analyses of GaN-based nanostructures. Physica Status Solidi (B): Basic Research, 2011, 248, 1822-1836.	1.5	4
72	DC heating induced shape transformation of Ge structures on ultraclean Si(5 5 12) surfaces. Journal of Physics Condensed Matter, 2011, 23, 135002.	1.8	4

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73	Nanostructured Praseodymium Oxide: Correlation Between Phase Transitions and Catalytic Activity. ChemCatChem, 2010, 2, 694-704.	3.7	33
74	Refinement of the 200 structure factor for GaAs using parallel and convergent beam electron nanodiffraction data. Ultramicroscopy, 2009, 109, 802-814.	1.9	11
75	Measurement of specimen thickness and composition in $\text{Al}_x\text{Ga}_{1-x}\text{N}$ using high-angle annular dark field image. Ultramicroscopy, 2009, 109, 1171-1182.	1.6	6
76	Visibility and Apparent Size of Néel-Type Magnetic Skyrmions in Fresnel Defocus Images of Multilayer Films. Microscopy and Microanalysis, 0, , 1-10.	0.4	2