

# Axel Lubk

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8473252/publications.pdf>

Version: 2024-02-01

99  
papers

2,614  
citations

249298

26  
h-index

214428

50  
g-index

99  
all docs

99  
docs citations

99  
times ranked

4036  
citing authors

#	ARTICLE	IF	CITATIONS
1	Unveiling the three-dimensional magnetic texture of skyrmion tubes. <i>Nature Nanotechnology</i> , 2022, 17, 250-255.	15.6	45
2	Observation of fractional spin textures in a Heusler material. <i>Nature Communications</i> , 2022, 13, 2348.	5.8	9
3	Tailoring electron beams with high-frequency self-assembled magnetic charged particle micro optics. <i>Nature Communications</i> , 2022, 13, .	5.8	6
4	Exploiting Combinatorics to Investigate Plasmonic Properties in Heterogeneous Ag <sub>10</sub> Au Nanosphere Chain Assemblies. <i>Advanced Optical Materials</i> , 2021, 9, 2001983.	3.6	14
5	Vacuum processed large area doped thin-film crystals: A new approach for high-performance organic electronics. <i>Materials Today Physics</i> , 2021, 17, 100352.	2.9	15
6	Extraction of physically meaningful endmembers from STEM spectrum-images combining geometrical and statistical approaches. <i>Micron</i> , 2021, 145, 103068.	1.1	4
7	Hard x-ray photoemission spectroscopy of LaVO <sub>3</sub> /SrTiO <sub>3</sub> : Band alignment and electronic reconstruction. <i>Physical Review B</i> , 2021, 103, .	1.1	4
8	Magnetism and phonons in transmission electron microscopy. <i>Microscopy and Microanalysis</i> , 2021, 27, 114-116.	0.2	0
9	Correcting STEM distortions in atomically resolved elemental maps. <i>Microscopy and Microanalysis</i> , 2021, 27, 596-598.	0.2	0
10	Correction for linear and non-linear distortions of STEM images. <i>Microscopy and Microanalysis</i> , 2021, 27, 2320-2322.	0.2	0
11	Layered van der Waals Topological Metals of TaTMTe <sub>4</sub> (TM = Ir, Rh, Ru) Family. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 6730-6735.	2.1	8
12	Off-axis Electron Holography on 2D Materials with Small Coherent and Incoherent Aberrations. <i>Microscopy and Microanalysis</i> , 2021, 27, 128-129.	0.2	0
13	Nanoparticle Chains for Plasmonic Band Engineering. <i>Microscopy and Microanalysis</i> , 2021, 27, 880-882.	0.2	0
14	A Hamiltonian mechanics framework for charge particle optics in straight and curved systems. <i>Optik</i> , 2021, 242, 167242.	1.4	1
15	Axion Mie theory of electron energy loss spectroscopy in topological insulators. <i>SciPost Physics Core</i> , 2021, 4, .	0.9	3
16	Tailoring Plasmonics of Au@Ag Nanoparticles by Silica Encapsulation. <i>Advanced Optical Materials</i> , 2021, 9, 2101221.	3.6	5
17	Exploring the 3D structure and defects of a self-assembled gold mesocrystal by coherent X-ray diffraction imaging. <i>Nanoscale</i> , 2021, 13, 10425-10435.	2.8	8
18	Morphogenesis of Magnetite Mesocrystals: Interplay between Nanoparticle Morphology and Solvation Shell. <i>Chemistry of Materials</i> , 2021, 33, 9119-9130.	3.2	11

#	ARTICLE	IF	CITATIONS
19	2D and 3D Electron Holography Revealing Complex Magnetic Configurations in CoNi Nanowires. <i>Microscopy and Microanalysis</i> , 2020, 26, 1544-1545.	0.2	1
20	Electronic structure of epitaxial perovskite films in the two-dimensional limit: Role of the surface termination. <i>Applied Physics Letters</i> , 2020, 116, 201601.	1.5	2
21	Additive-controlled synthesis of monodisperse single crystalline gold nanoparticles: interplay of shape and surface plasmon resonance. <i>Journal of Materials Chemistry C</i> , 2020, 8, 10844-10851.	2.7	21
22	Autocorrected off-axis holography of two-dimensional materials. <i>Physical Review Research</i> , 2020, 2, .	1.3	5
23	Inelastic Momentum Transfer Measurements on Plasmonic Structures in the (S)TEM. <i>Microscopy and Microanalysis</i> , 2019, 25, 632-633.	0.2	1
24	Holographic vector field electron tomography of three-dimensional nanomagnets. <i>Communications Physics</i> , 2019, 2, .	2.0	45
25	Optimal principal component analysis of STEM XEDS spectrum images. <i>Advanced Structural and Chemical Imaging</i> , 2019, 5, 4.	4.0	26
26	Magnetic Nanoparticle Chains in Gelatin Ferrogels: Bioinspiration from Magnetotactic Bacteria. <i>Advanced Functional Materials</i> , 2019, 29, 1905996.	7.8	23
27	Chromium Trihalides Cr <sub>3</sub> (X = Cl, Br, I): Direct Deposition of Micro- and Nanosheets on Substrates by Chemical Vapor Transport. <i>Advanced Materials Interfaces</i> , 2019, 6, 1901410.	1.9	37
28	Direct Observation of Plasmon Band Formation and Delocalization in Quasi-Infinite Nanoparticle Chains. <i>Nano Letters</i> , 2019, 19, 3854-3862.	4.5	32
29	Three-Dimensional Imaging of Beam-Induced Biasing of InP/GaInP Tunnel Diodes. <i>Nano Letters</i> , 2019, 19, 3490-3497.	4.5	4
30	Chemical Aspects of the Candidate Antiferromagnetic Topological Insulator MnBi <sub>2</sub> Te <sub>4</sub> . <i>Chemistry of Materials</i> , 2019, 31, 2795-2806.	3.2	203
31	The Dresden in-situ (S)TEM special with a continuous-flow liquid-helium cryostat. <i>Ultramicroscopy</i> , 2019, 203, 12-20.	0.8	1
32	Domain matching epitaxy of BaBiO <sub>3</sub> on SrTiO <sub>3</sub> with structurally modified interface. <i>Applied Physics Letters</i> , 2018, 112, 141601.	1.5	17
33	Nanomorphology Effects in Semiconductors with Native Ferromagnetism: Hierarchical Europium (II) Oxide Tubes Prepared via a Topotactic Nanostructure Transition. <i>Advanced Materials</i> , 2018, 30, 1703612.	11.1	9
34	Magnetic Configurations in Three-Dimensional Nanomagnets Explored by Electron Holographic Tomography. <i>Microscopy and Microanalysis</i> , 2018, 24, 914-915.	0.2	1
35	Cryogenic TEM Studies of Bloch and Neel Skyrmion Textures in Lacunar Spinel and Cubic Helimagnets. <i>Microscopy and Microanalysis</i> , 2018, 24, 946-947.	0.2	1
36	Spectral field mapping in plasmonic nanostructures with nanometer resolution. <i>Nature Communications</i> , 2018, 9, 4207.	5.8	21

#	ARTICLE	IF	CITATIONS
37	Chemical vapor growth and delamination of $\text{RuCl}_3$ nanosheets down to the monolayer limit. <i>Nanoscale</i> , 2018, 10, 19014-19022.	2.8	36
38	Induction Mapping of the 3D-Modulated Spin Texture of Skyrmions in Thin Helimagnets. <i>Physical Review Letters</i> , 2018, 120, 217201.	2.9	26
39	$\text{Fe}_{1-x}\text{Ni}_x$ Alloy Nanoparticles Encapsulated Inside Carbon Nanotubes: Controlled Synthesis, Structure and Magnetic Properties. <i>Nanomaterials</i> , 2018, 8, 576.	1.9	6
40	Three-Dimensional Composition and Electric Potential Mapping of $\text{MgO}/\text{Co}/\text{MgO}$ Core-Shell Nanowires by Correlative STEM and Holographic Tomography. <i>Nano Letters</i> , 2018, 18, 4777-4784.	4.5	27
41	A Novel Method for Automatic Determination of the Number of Meaningful Components in the PCA Analysis of Spectrum-Images. <i>Microscopy and Microanalysis</i> , 2018, 24, 572-573.	0.2	1
42	Surface Plasmon Modes in Long Chains of Au Nanoparticles. <i>Microscopy and Microanalysis</i> , 2018, 24, 1748-1749.	0.2	0
43	Towards Induction Mapping of the 3D Spin Texture of Skyrmions. <i>Microscopy and Microanalysis</i> , 2018, 24, 930-931.	0.2	1
44	Holography and Tomography with Electrons. <i>Advances in Imaging and Electron Physics</i> , 2018, 206, 1-14.	0.1	8
45	Electron Optics in Phase Space. <i>Advances in Imaging and Electron Physics</i> , 2018, 206, 105-140.	0.1	1
46	Electron Holographic Tomography. <i>Advances in Imaging and Electron Physics</i> , 2018, 206, 231-299.	0.1	1
47	Paraxial Quantum Mechanics. <i>Advances in Imaging and Electron Physics</i> , 2018, 206, 15-58.	0.1	5
48	Tomography. <i>Advances in Imaging and Electron Physics</i> , 2018, 206, 59-104.	0.1	0
49	Three-dimensional Induction Mapping of Magnetic Nanoscale Materials by Electron Holographic Tomography. <i>Microscopy and Microanalysis</i> , 2016, 22, 1690-1691.	0.2	1
50	Quantitative determination of elastic and inelastic attenuation coefficients by off-axis electron holography. <i>Ultramicroscopy</i> , 2016, 171, 26-33.	0.8	9
51	Fundamentals of Focal Series Inline Electron Holography. <i>Advances in Imaging and Electron Physics</i> , 2016, 197, 105-147.	0.1	3
52	3D mapping of nanoscale electric potentials in semiconductor structures using electron-holographic tomography. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 364004.	1.3	8
53	Spiral phase plate contrast in optical and electron microscopy. <i>Physical Review A</i> , 2016, 94, .	1.0	13
54	Elastic Scattering of Electron Vortex Beams in Magnetic Matter. <i>Physical Review Letters</i> , 2016, 116, 127203.	2.9	44

#	ARTICLE	IF	CITATIONS
55	Synthesis and Three-Dimensional Magnetic Field Mapping of Co <sub>2</sub> FeGa Heusler Nanowires at 5 nm Resolution. Nano Letters, 2016, 16, 114-120.	4.5	39
56	Phase-space foundations of electron holography. Physical Review A, 2015, 92, .	1.0	17
57	Electron Microscopy of Probability Currents at Atomic Resolution. Physical Review Letters, 2015, 115, 176101.	2.9	17
58	A Phase Space Perspective on Electron Holography - Building Bridges Between Inline-, Off-axis Holography, Differential Phase Contrast and Diffractive Imaging. Microscopy and Microanalysis, 2015, 21, 2307-2308.	0.2	1
59	Spin-Multislice Applied to the Electron Spin Interaction with Materials. Microscopy and Microanalysis, 2015, 21, 1961-1962.	0.2	0
60	A proposal for the holographic correction of incoherent aberrations by tilted reference waves. Ultramicroscopy, 2015, 152, 63-74.	0.8	6
61	Differential phase contrast: An integral perspective. Physical Review A, 2015, 91, .	1.0	67
62	Semiclassical TEM image formation in phase space. Ultramicroscopy, 2015, 151, 136-149.	0.8	8
63	3D Magnetic Induction Maps of Nanoscale Materials Revealed by Electron Holographic Tomography. Chemistry of Materials, 2015, 27, 6771-6778.	3.2	64
64	Prospects of linear reconstruction in atomic resolution electron holographic tomography. Ultramicroscopy, 2015, 150, 65-70.	0.8	4
65	Transfer and reconstruction of the density matrix in off-axis electron holography. Ultramicroscopy, 2014, 146, 103-116.	0.8	21
66	Nanoscale three-dimensional reconstruction of elastic and inelastic mean free path lengths by electron holographic tomography. Applied Physics Letters, 2014, 105, .	1.5	13
67	Nanometer-scale tomographic reconstruction of three-dimensional electrostatic potentials in GaAs/AlGaAs core-shell nanowires. Physical Review B, 2014, 90, .	1.1	28
68	Nanoscale three-dimensional reconstruction of electric and magnetic stray fields around nanowires. Applied Physics Letters, 2014, 105, .	1.5	20
69	Weighted simultaneous iterative reconstruction technique for single-axis tomography. Ultramicroscopy, 2014, 136, 15-25.	0.8	61
70	Dynamic scattering theory for dark-field electron holography of 3D strain fields. Ultramicroscopy, 2014, 136, 42-49.	0.8	31
71	Dynamical effects in strain measurements by dark-field electron holography. Ultramicroscopy, 2014, 147, 70-85.	0.8	19
72	Noise estimation for off-axis electron holography. Ultramicroscopy, 2014, 144, 32-42.	0.8	31

#	ARTICLE	IF	CITATIONS
73	Electron Holographic Tomography of Mean Free Path Lengths at the nm-scale. <i>Microscopy and Microanalysis</i> , 2014, 20, 270-271.	0.2	1
74	Local Strain Measurements at Dislocations, Disclinations and Domain Boundaries. <i>Microscopy and Microanalysis</i> , 2014, 20, 1044-1045.	0.2	0
75	Electron holography: state and prospects. <i>Microscopy and Microanalysis</i> , 2014, 20, 244-245.	0.2	1
76	Transport of Intensity Phase Retrieval of Arbitrary Wave Fields Including Vortices. <i>Physical Review Letters</i> , 2013, 111, 173902.	2.9	44
77	Electron holography for fields in solids: Problems and progress. <i>Ultramicroscopy</i> , 2013, 134, 126-134.	0.8	36
78	Electron holographic tomography. <i>Current Opinion in Solid State and Materials Science</i> , 2013, 17, 126-134.	5.6	50
79	Topological analysis of paraxially scattered electron vortex beams. <i>Physical Review A</i> , 2013, 87, .	1.0	33
80	Electromechanical Coupling among Edge Dislocations, Domain Walls, and Nanodomains in $\text{BiFeO}_3$ Revealed by Unit-Cell-Wise Strain and Polarization Maps. <i>Nano Letters</i> , 2013, 13, 1410-1415.	4.5	76
81	Tomographic investigation of fermi level pinning at focused ion beam milled semiconductor surfaces. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	23
82	Retro-fitting an older (S)TEM with two $\text{Cs}$ aberration correctors for 80 kV and 60 kV operation. <i>Journal of Microscopy</i> , 2013, 249, 87-92.	0.8	18
83	Progress in electrons vortex creation and application in a transmission electron microscope. <i>Microscopy and Microanalysis</i> , 2013, 19, 1164-1165.	0.2	1
84	Transport of Intensity Phase Reconstruction Revisited. <i>Microscopy and Microanalysis</i> , 2013, 19, 1378-1379.	0.2	1
85	Dynamic scattering theory for dark-field electron holography of 3D strain fields. <i>Microscopy and Microanalysis</i> , 2013, 19, 1392-1393.	0.2	2
86	Electron Holography at Low Voltages Exemplified by Graphene. <i>Microscopy and Microanalysis</i> , 2013, 19, 1384-1385.	0.2	0
87	Ferroelectric effects in individual $\text{BaTiO}_3$ nanocrystals investigated by electron holography. <i>Physical Review B</i> , 2012, 85, .	1.1	18
88	A new linear transfer theory and characterization method for image detectors. Part II: Experiment. <i>Ultramicroscopy</i> , 2012, 115, 78-87.	0.8	22
89	A new linear transfer theory and characterization method for image detectors. Part I: Theory. <i>Ultramicroscopy</i> , 2012, 115, 68-77.	0.8	19
90	Flexoelectric rotation of polarization in ferroelectric thin films. <i>Nature Materials</i> , 2011, 10, 963-967.	13.3	503

#	ARTICLE	IF	CITATIONS
91	Atomic Resolution Analysis of Silver Ion-Exchanged Zeolite...A. Angewandte Chemie - International Edition, 2011, 50, 11230-11233.	7.2	83
92	Mapping Intrinsic Electric Fields Through Off-Axis Electron Holography: Prospects and Problems. Microscopy and Microanalysis, 2010, 16, 582-583.	0.2	0
93	Off-axis and inline electron holography: Experimental comparison. Ultramicroscopy, 2010, 110, 472-482.	0.8	59
94	Coherent and incoherent effects on the imaging and scattering process in transmission electron microscopy and off-axis electron holography. Ultramicroscopy, 2010, 110, 1397-1403.	0.8	4
95	The effect of dynamical scattering in off-axis holographic mean inner potential and inelastic mean free path measurements. Ultramicroscopy, 2010, 110, 438-446.	0.8	38
96	Long-range correlations in $\ln \langle O_2 \rangle$ in $ZnO$ $T_j$ ETQq0 0 0 rgBT /Overlock 10 Tf 50 522 T	0.8	6
97	Towards automated electron holographic tomography for 3D mapping of electrostatic potentials. Ultramicroscopy, 2010, 110, 390-399.	0.8	57
98	Off-axis and inline electron holography: A quantitative comparison. Ultramicroscopy, 2010, 110, 460-471.	0.8	63
99	First-principles study of ferroelectric domain walls in multiferroic bismuth ferrite. Physical Review B, 2009, 80, .	1.1	236