GÃ¼nter MÃ¶bus

List of Publications by Year
in descending order

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97	2,452	159358	205818
papers	citations	30 h-index	48 g-index

98	98	98	2623
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Analysis of mismatched heterointerfaces by combined HREM image processing and modelling. International Journal of Materials Research, 2022, 94, 358-367.	0.1	0
2	Tomographic Study of Mesopore Formation in Ceria Nanorods. Journal of Physical Chemistry C, 2021, 125, 10077-10089.	1.5	7
3	In situ formation of 1D nanostructures from ceria nanoparticle dispersions by liquid cell TEM irradiation. Journal of Materials Science, 2020, 55, 2815-2825.	1.7	5
4	In-situ observation of radiation physics and chemistry of nanostructured cerium oxide in water. Materials Research Express, 2019, 6, 015032.	0.8	6
5	Giant Radiolytic Dissolution Rates of Aqueous Ceria Observed in Situ by Liquidâ€Cell TEM. ChemPhysChem, 2017, 18, 1247-1251.	1.0	16
6	Comparison of nanoparticular hydroxyapatite pastes of different particle content and size in a novel scapula defect model. Scientific Reports, 2017, 7, 43425.	1.6	19
7	The relationship between particle morphology and rheological properties in injectable nano-hydroxyapatite bone graft substitutes. Materials Science and Engineering C, 2017, 75, 1083-1090.	3.8	27
8	New insight into nanoparticle precipitation by electron beams in borosilicate glasses. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	4
9	Preparation and Antibacterial Properties of Silver-Doped Nanoscale Hydroxyapatite Pastes for Bone Repair and Augmentation. Journal of Biomedical Nanotechnology, 2017, 13, 1168-1176.	0.5	23
10	Electron Beam Transformation of Glass Nanoparticles. Journal of Physics: Conference Series, 2017, 902, 012009.	0.3	0
11	In-situ irradiation of cerium precursors in TEM to study nanocrystal formation. Journal of Physics: Conference Series, 2017, 902, 012003.	0.3	1
12	Ceria-Water-Reactions Studied by Liquid Cell TEM. Journal of Physics: Conference Series, 2017, 902, 012004.	0.3	0
13	Electron irradiation induced nanocrystal formation in Cu-borosilicate glass. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	3
14	Zn nanodot patterning in borosilicate glasses by electron irradiation. Journal of Materials Research, 2015, 30, 1914-1924.	1.2	7
15	Engineering of nanoscale defect patterns in CeO₂ nanorods via ex situ and in situ annealing. Nanoscale, 2015, 7, 5169-5177.	2.8	51
16	Mechanical properties of mesoporous ceria nanoarchitectures. Physical Chemistry Chemical Physics, 2014, 16, 24899-24912.	1.3	3
17	Environment-mediated structure, surface redox activity and reactivity of ceria nanoparticles. Nanoscale, 2013, 5, 6063.	2.8	71
18	Morphology and Surface Analysis of Pure and Doped Cuboidal Ceria Nanoparticles. Journal of Physical Chemistry C, 2013, 117, 24561-24569.	1.5	31

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19	Perforation and Carbon Ablation Experiments on Nano-Ceria by Electron Irradiation. Materials Research Society Symposia Proceedings, 2013, 1552, 125-130.	0.1	2
20	Electron beam synthesis of 3D metal nanostructures from fluoride precursors. Materials Research Society Symposia Proceedings, 2012, 1411, 7.	0.1	0
21	A route for periodic nanodot fabrication in substrates using nanochanel alumina membranes as masks for ion implantation. , 2012, , .		0
22	Electron beam induced surface morphology changes of CeO<inf>2</inf> nanocrystals: An in-situ aberration corrected TEM study. , 2012, , .		1
23	XTEM characterization of modulated ion implantation through self-organized anodic aluminum oxide (AAO) membranes. Materials Research Society Symposia Proceedings, 2012, 1411, 39.	0.1	0
24	Atomic motion on various surfaces of ceria nanoparticles in comparison. Journal of Physics: Conference Series, 2012, 371, 012007.	0.3	4
25	A nanomanipulation system for tomographic examination of nanostructures on demand. Journal of Physics: Conference Series, 2012, 371, 012051.	0.3	1
26	Cationic Surface Reconstructions on Cerium Oxide Nanocrystals: An Aberration-Corrected HRTEM Study. ACS Nano, 2012, 6, 421-430.	7.3	53
27	In situ TEM observation of lithium nanoparticle growth and morphological cycling. Nanoscale, 2012, 4, 1754.	2.8	38
28	Strain and Architecture-Tuned Reactivity in Ceria Nanostructures; Enhanced Catalytic Oxidation of CO to CO₂. Chemistry of Materials, 2012, 24, 1811-1821.	3.2	100
29	In situ synthesis of cobalt nanocrystal hierarchies in a transmission electron microscope. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	6
30	Mechanical properties of ceria nanorods and nanochains; the effect of dislocations, grain-boundaries and oriented attachment. Nanoscale, 2011, 3, 1823.	2.8	42
31	NanoLAB Triboprobe: Characterizing Dynamic Wear, Friction and Fatigue at the Nanoscale. Materials Research Society Symposia Proceedings, 2011, 1297, 65.	0.1	0
32	Molten salt synthesis of silicon carbide nanorods using carbon nanotubes as templates. Journal of Materials Chemistry, 2011, 21, 18325.	6.7	57
33	A Piezoelectric Goniometer Inside a Transmission Electron Microscope Goniometer. Microscopy and Microanalysis, 2011, 17, 827-833.	0.2	4
34	<i>In-Situ</i> Fabrication of Three Dimensional Nickel Nanobeads by Electron Beam Induced Transformation. Journal of Nanoscience and Nanotechnology, 2011, 11, 1019-1024.	0.9	6
35	Electron beam nanofabrication of ferromagnetic nanostructures in TEM. Applied Physics A: Materials Science and Processing, 2011, 102, 205-211.	1.1	6
36	Dynamics of Polar Surfaces on Ceria Nanoparticles Observed In Situ with Singleâ€Atom Resolution. Advanced Functional Materials, 2011, 21, 1971-1976.	7.8	40

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37	SINGLE-ATOM MOVEMENT: Dynamics of Polar Surfaces on Ceria Nanoparticles Observed In Situ with Single-Atom Resolution (Adv. Funct. Mater. 11/2011). Advanced Functional Materials, 2011, 21, 1970-1970.	7.8	1
38	A novel tripod-driven platform for in-situ positioning of samples and electrical probes in a TEM. Journal of Physics: Conference Series, 2010, 241, 012057.	0.3	1
39	Three-dimensional characterization of multiply twinned nanoparticles by high-angle tilt series of lattice images and tomography. Journal of Nanoparticle Research, 2010, 12, 1045-1053.	0.8	3
40	CeO2 nano-precipitation in borosilicate glasses: A redox study using EELS. Journal of the European Ceramic Society, 2010, 30, 831-838.	2.8	8
41	Nano-scale quasi-melting of alkali-borosilicate glasses under electron irradiation. Journal of Nuclear Materials, 2010, 396, 264-271.	1.3	43
42	In situ and ex situ transmission electron microscopy investigation of Cuâ€“Alâ€“Cuâ€“Ti reactive metallic multilayer coatings. Journal of Materials Research, 2010, 25, 1196-1203.	1.2	3
43	Conductive nichrome probe tips: fabrication, characterization and application as nanotools. Nanotechnology, 2009, 20, 395708.	1.3	11
44	Hybrid Tomography of Nanostructures in the Electron Microscope. Materials Research Society Symposia Proceedings, 2009, 1184, 125.	0.1	2
45	On radiation-induced fluidization (quasi-melting) of silicate glasses. Materials Research Society Symposia Proceedings, 2009, 1193, 393.	0.1	6
46	Nanoscale Tribology, Energy Dissipation and Failure Mechanisms of Nano- and Micro-silica Particle-filled Polymer Composites. Tribology Letters, 2009, 34, 11-19.	1.2	29
47	MRT letter: Fullâ€tilt electron tomography with a piezoâ€actuated rotary drive. Microscopy Research and Technique, 2008, 71, 773-777.	1.2	3
48	Plasmon energy chemical phase mapping of reactive multilayers. Physica Status Solidi - Rapid Research Letters, 2008, 2, 7-9.	1.2	3
49	Electron tomography of regularly shaped nanostructures under nonâ€linear image acquisition. Journal of Microscopy, 2008, 232, 186-195.	0.8	25
50	Mapping Nanostructure: A Systematic Enumeration of Nanomaterials by Assembling Nanobuilding Blocks at Crystallographic Positions. ACS Nano, 2008, 2, 1237-1251.	7.3	50
51	Three-Dimensional Structure of CeO₂ Nanodendrites in Glass. Crystal Growth and Design, 2008, 8, 1102-1105.	1.4	10
52	Electron Irradiation and Electron Tomography Studies of Glasses and Glass Nanocomposites. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	7
53	Tomographic nanofabrication of ultrasharp three-dimensional nanostructures. Applied Physics Letters, 2008, 93, 153102.	1.5	11
54	Three-dimensional metrology and fractal analysis of dendritic nanostructures. Physical Review B, 2008, 78, .	1.1	14

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55	Nanobead Formation and Nanopatterning in Glasses. Microscopy and Microanalysis, 2008, 14, 434-435.	0.2	6
56	Transition from quantitative to geometric tomography. Journal of Physics: Conference Series, 2008, 126, 012063.	0.3	1
57	Electron tomography of CeO2nanostructures. Journal of Physics: Conference Series, 2008, 126, 012016.	0.3	1
58	Reconstruction of 3D morphology of polyhedral nanoparticles. Nanotechnology, 2007, 18, 225501.	1.3	57
59	Three-dimensional chemical analysis of tungsten probes by energy dispersive x-ray nanotomography. Applied Physics Letters, 2007, 91, 251906.	1.5	36
60	The information content of lattice resolved high angle tilt series of nanoparticles. Materials Research Society Symposia Proceedings, 2007, 1026, 1.	0.1	0
61	3D Reconstruction of SPM Probes by Electron Tomography. Journal of Physics: Conference Series, 2007, 61, 810-814.	0.3	9
62	Nanoscale characterization of CoPt/Pt multilayer nanowires. Nanotechnology, 2007, 18, 485704.	1.3	45
63	Nanoscale tomography in materials science. Materials Today, 2007, 10, 18-25.	8.3	222
64	Fine structure EELS analysis of glasses and glass composites. Journal of Physics: Conference Series, 2006, 26, 73-76.	0.3	8
65	Spontaneous formation of the B2 phase from a decagonal quasicrystal under reduced constraint. Journal of Materials Science, 2006, 41, 6081-6086.	1.7	3
66	Cerium and boron chemistry in doped borosilicate glasses examined by EELS. Micron, 2006, 37, 433-441.	1.1	37
67	EELS Spectrum Imaging and Tomography Studies of Simulated Nuclear Waste Glasses. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	1
68	Electron Tomography of SPM Probes, Nanoparticles and Precipitates. Materials Research Society Symposia Proceedings, 2006, 982, 1.	0.1	0
69	Environment and oxidation state of molybdenum in simulated high level nuclear waste glass compositions. Journal of Nuclear Materials, 2005, 340, 179-186.	1.3	72
70	IMAGE-WARP: A real-space restoration method for high-resolution STEM images using quantitative HRTEM analysis. Ultramicroscopy, 2005, 103, 285-301.	0.8	32
71	Analytical STEM of Borosilicate Glasses Containing Molybdates.. Materials Research Society Symposia Proceedings, 2004, 824, 372.	0.1	2
72	Nanobeam propagation and imaging in a FEGTEM/STEM. Ultramicroscopy, 2003, 96, 285-298.	0.8	35

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73	Spectroscopic electron tomography. Ultramicroscopy, 2003, 96, 433-451.	0.8	165
74	Subsurface damage analysis by TEM and 3D FIB crack mapping in alumina and alumina/5vol.%SiC nanocomposites. Acta Materialia, 2003, 51, 149-163.	3.8	75
75	Secondary Phases on the Surface of Real Vitrified Radioactive Waste Disposed in a Loamy Soil. Materials Research Society Symposia Proceedings, 2003, 807, 712.	0.1	6
76	Novel Nanoscale Tomography Modes in Materials Science. Microscopy and Microanalysis, 2003, 9, 176-177.	0.2	7
77	3D Display and Analysis of Strain Fields at Heterointerfaces. Microscopy and Microanalysis, 2003, 9, 746-747.	0.2	1
78	Quantitative HAADF-STEM image analysis using IMAGE-WARP processing. Microscopy and Microanalysis, 2003, 9, 52-53.	0.2	0
79	Nanoscale 3D Chemical Mapping by Spectroscopic Electron Tomography. Materials Research Society Symposia Proceedings, 2002, 738, 121.	0.1	1
80	Applications of a Cs Corrected HRTEM in Materials Science. Microscopy and Microanalysis, 2002, 8, 10-11.	0.2	10
81	3-D focused ion beam mapping of nanoindentation zones in a Cuâ€“Ti multilayered coating. Thin Solid Films, 2002, 413, 147-154.	0.8	31
82	Three-dimensional reconstruction of buried nanoparticles by element-sensitive tomography based on inelastically scattered electrons. Applied Physics Letters, 2001, 79, 1369-1371.	1.5	99
83	Electron Spectroscopic Tomography for Materials Science. Microscopy and Microanalysis, 2001, 7, 84-85.	0.2	4
84	Interpretation of Atomic Resolution Eels Signals at Interfaces. Microscopy and Microanalysis, 2001, 7, 1180-1181.	0.2	1
85	Subsurface nanoindentation deformation of Cu-Al multilayers mapped in 3D by focused ion beam microscopy. Journal of Microscopy, 2001, 201, 256-269.	0.8	78
86	3d Reconstruction of Sub-Nm Beam Profiles in STEM. Microscopy and Microanalysis, 2001, 7, 344-345.	0.2	2
87	Probability calculus for quantitative HREM. Part I: Monte-Carlo and point cloud techniques. Ultramicroscopy, 2000, 85, 183-198.	0.8	6
88	Probability calculus for quantitative HREM.Part II: Entropy and likelihood concepts. Ultramicroscopy, 2000, 85, 199-213.	0.8	5
89	Structure of misfit dislocations in niobiumâ€“sapphire interfaces and strength of interfacial bonding: an atomistic study. Acta Materialia, 1999, 47, 4143-4152.	3.8	23
90	The Influence of Phonon Scattering on HREM Images. Acta Crystallographica Section A: Foundations and Advances, 1998, 54, 83-90.	0.3	18

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91	Synthesis of analytical and high-resolution transmission electron microscopy to determine the interface structure of Cu/Al2O3. Ultramicroscopy, 1997, 67, 207-217.	0.8	49
92	Retrieval of crystal defect structures from HREM images by simulated evolution I. Basic technique. Ultramicroscopy, 1996, 65, 205-216.	0.8	60
93	Retrieval of crystal defect structures from HREM images by simulated evolution II. Experimental image evaluation. Ultramicroscopy, 1996, 65, 217-228.	0.8	43
94	Measurement of coherency states of metalâ€"ceramic interfaces by HREM image processing. Physica Status Solidi A, 1995, 150, 77-87.	1.7	26
95	New high-voltage atomic resolution microscope approaching 1 Ã... point resolution installed in Stuttgart. Ultramicroscopy, 1994, 56, 1-10.	0.8	159
96	Structure determination of metal-ceramic interfaces by numerical contrast evaluation of HRTEM micrographs. Ultramicroscopy, 1994, 56, 54-70.	0.8	99
97	Adaptive fourier-filtering technique for quantitative evaluation of high-resolution electron micrographs of interfaces. Ultramicroscopy, 1993, 49, 46-65.	0.8	53