Harald Plank

List of Publications by Year
in descending order

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74 papers	2,814 citations	159585 30 h-index	182427 51 g-index
75 all docs	75 docs citations	75 times ranked	2539 citing authors

#	Article	IF	Citations
1	Expanding FEBID-Based 3D-Nanoprinting toward Closed High-Fidelity Nanoarchitectures. ACS Applied Electronic Materials, 2022, 4, 744-754.	4.3	10
2	Humidity Response of Cellulose Thin Films. Biomacromolecules, 2022, 23, 1148-1157.	5.4	9
3	Vanadium and Manganese Carbonyls as Precursors in Electron-Induced and Thermal Deposition Processes. Nanomaterials, 2022, 12, 1110.	4.1	0
4	A study on the correlation between micro and magnetic domain structure of Cu52Ni34Fe14 spinodal alloys. Journal of Alloys and Compounds, 2022, 922, 166214.	5.5	3
5	Expanding 3D Nanoprinting Performance by Blurring the Electron Beam. Micromachines, 2021, 12, 115.	2.9	7
6	Incorporation of an Allogenic Cortical Bone Graft Following Arthrodesis of the First Metatarsophalangeal Joint in a Patient with Hallux Rigidus. Life, 2021, 11, 473.	2.4	10
7	FEBID 3D-Nanoprinting at Low Substrate Temperatures: Pushing the Speed While Keeping the Quality. Nanomaterials, 2021, 11, 1527.	4.1	8
8	Shape evolution and growth mechanisms of 3D-printed nanowires. Additive Manufacturing, 2021, 46, 102076.	3.0	5
9	High-Fidelity 3D Nanoprinting of Plasmonic Gold Nanoantennas. ACS Applied Materials & Interfaces, 2021, 13, 1178-1191.	8.0	21
10	Simulation Informed CAD for 3D Nanoprinting. Micromachines, 2020, 11, 8.	2.9	13
11	Water-Assisted Process for Purification of Ruthenium Nanomaterial Fabricated by Electron Beam Induced Deposition. ACS Applied Nano Materials, 2020, 3, 8352-8364.	5.0	14
12	A Biological Nanomachine at Work: Watching the Cellulosome Degrade Crystalline Cellulose. ACS Central Science, 2020, 6, 739-746.	11.3	24
13	Focused Electron Beam-Based 3D Nanoprinting for Scanning Probe Microscopy: A Review. Micromachines, 2020, 11, 48.	2.9	68
14	Mechanical Properties of 3D Nanostructures Obtained by Focused Electron/Ion Beam-Induced Deposition: A Review. Micromachines, 2020, 11, 397.	2.9	39
15	Focused Electron Beam Induced Deposition Synthesis of 3D Photonic and Magnetic Nanoresonators. ACS Applied Nano Materials, 2019, 2, 8075-8082.	5.0	14
16	Analyzing the Nanogranularity of Focused-Electron-Beam-Induced-Deposited Materials by Electron Tomography. ACS Applied Nano Materials, 2019, 2, 5356-5359.	5.0	9
17	In situ real-time annealing of ultrathin vertical Fe nanowires grown by focused electron beam induced deposition. Acta Materialia, 2019, 174, 379-386.	7.9	17
18	Three-Dimensional Nanothermistors for Thermal Probing. ACS Applied Materials & Interfaces, 2019, 11, 22655-22667.	8.0	26

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19	3D nanoprinting via focused electron beams. Journal of Applied Physics, 2019, 125, .	2.5	90
20	Impact of Electron-Beam Heating during 3D Nanoprinting. ACS Nano, 2019, 13, 5198-5213.	14.6	38
21	Multi-layered nanoscale cellulose/CuInS2 sandwich type thin films. Carbohydrate Polymers, 2019, 203, 219-227.	10.2	12
22	Accurate Near-Field Simulations of the Real Substrate Geometryâ€"A Powerful Tool for Understanding Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 6826-6834.	3.1	1
23	High-Fidelity 3D-Nanoprinting via Focused Electron Beams: Growth Fundamentals. ACS Applied Nano Materials, 2018, 1, 1014-1027.	5.0	54
24	High-Fidelity 3D-Nanoprinting via Focused Electron Beams: Computer-Aided Design (3BID). ACS Applied Nano Materials, 2018, 1, 1028-1041.	5.0	54
25	Enhanced Performance of Germanium Halide Perovskite Solar Cells through Compositional Engineering. ACS Applied Energy Materials, 2018, 1, 343-347.	5.1	200
26	Long-Chain Li and Na Alkyl Carbonates as Solid Electrolyte Interphase Components: Structure, Ion Transport, and Mechanical Properties. Chemistry of Materials, 2018, 30, 3338-3345.	6.7	25
27	Tunable 3D Nanoresonators for Gasâ€Sensing Applications. Advanced Functional Materials, 2018, 28, 1707387.	14.9	40
28	3D Nano-Probes for Thermal Microscopy. Microscopy and Microanalysis, 2018, 24, 1872-1873.	0.4	0
29	Lectins at Interfacesâ€"An Atomic Force Microscopy and Multi-Parameter-Surface Plasmon Resonance Study. Materials, 2018, 11, 2348.	2.9	7
30	Deposition of Cellulose-Based Thin Films on Flexible Substrates. Materials, 2018, 11, 2433.	2.9	7
31	Magnetic Characterization of Direct-Write Free-Form Building Blocks for Artificial Magnetic 3D Lattices. Materials, 2018, 11, 289.	2.9	40
32	Direct-write of free-form building blocks for artificial magnetic 3D lattices. Scientific Reports, 2018, 8, 6160.	3.3	87
33	3D Nanoprinting via Focused Electron Beams. Microscopy and Microanalysis, 2018, 24, 346-347.	0.4	2
34	Biobased Cellulosicâ€"CuInS₂ Nanocomposites for Optoelectronic Applications. ACS Sustainable Chemistry and Engineering, 2017, 5, 3115-3122.	6.7	24
35	Direct-Write 3D Nanoprinting of Plasmonic Structures. ACS Applied Materials & Interfaces, 2017, 9, 8233-8240.	8.0	125
36	How Bound and Free Fatty Acids in Cellulose Films Impact Nonspecific Protein Adsorption. Biomacromolecules, 2017, 18, 4224-4231.	5.4	18

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37	Single-molecule study of oxidative enzymatic deconstruction of cellulose. Nature Communications, 2017, 8, 894.	12.8	86
38	Probing the Morphology and Evolving Dynamics of 3D Printed Nanostructures Using High-Speed Atomic Force Microscopy. ACS Applied Materials & Interfaces, 2017, 9, 24456-24461.	8.0	23
39	Comparing postdeposition reactions of electrons and radicals with Pt nanostructures created by focused electron beam induced deposition. Beilstein Journal of Nanotechnology, 2017, 8, 2410-2424.	2.8	17
40	3D Nanoprinting via laser-assisted electron beam induced deposition: growth kinetics, enhanced purity, and electrical resistivity. Beilstein Journal of Nanotechnology, 2017, 8, 801-812.	2.8	24
41	Functional characterization of the native swollenin from Trichoderma reesei: study of its possible role as C1 factor of enzymatic lignocellulose conversion. Biotechnology for Biofuels, 2016, 9, 178.	6.2	51
42	Enzymes as Biodevelopers for Nano- And Micropatterned Bicomponent Biopolymer Thin Films. Biomacromolecules, 2016, 17, 3743-3749.	5.4	21
43	Cellular automata modeling depicts degradation of cellulosic material by a cellulase system with single-molecule resolution. Biotechnology for Biofuels, 2016, 9, 56.	6.2	20
44	Simulation-Guided 3D Nanomanufacturing <i>via</i> Focused Electron Beam Induced Deposition. ACS Nano, 2016, 10, 6163-6172.	14.6	130
45	Focused electron beam induced deposition as a tool to create electron vortices. Micron, 2016, 80, 34-38.	2.2	23
46	Electron-stimulated purification of platinum nanostructures grown via focused electron beam induced deposition. Beilstein Journal of Nanotechnology, 2015, 6, 907-918.	2.8	26
47	Fundamental edge broadening effects during focused electron beam induced nanosynthesis. Beilstein Journal of Nanotechnology, 2015, 6, 462-471.	2.8	21
48	Direct writing of CoFe alloy nanostructures by focused electron beam induced deposition from a heteronuclear precursor. Nanotechnology, 2015, 26, 475701.	2.6	63
49	Tunable Semicrystalline Thin Film Cellulose Substrate for High-Resolution, <i>In-Situ</i> AFM Characterization of Enzymatic Cellulose Degradation. ACS Applied Materials & Interfaces, 2015, 7, 27900-27909.	8.0	16
50	Toward Ultraflat Surface Morphologies During Focused Electron Beam Induced Nanosynthesis: Disruption Origins and Compensation. ACS Applied Materials & Interfaces, 2015, 7, 3289-3297.	8.0	30
51	Post-growth purification of Co nanostructures prepared by focused electron beam induced deposition. Nanotechnology, 2015, 26, 075301.	2.6	41
52	Electron nanoprobe induced oxidation: a simulation of direct-write purification. Physical Chemistry Chemical Physics, 2015, 17, 18294-18304.	2.8	19
53	Nanoscale electron beam-induced deposition and purification of ruthenium for extreme ultraviolet lithography mask repair. Applied Physics A: Materials Science and Processing, 2014, 117, 1705-1713.	2.3	34
54	Dielectric sensing by charging energy modulation in a nano-granular metal. Applied Physics A: Materials Science and Processing, 2014, 117, 1689-1696.	2.3	23

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55	Surface structural dynamics of enzymatic cellulose degradation, revealed by combined kinetic and atomic force microscopy studies. FEBS Journal, 2014, 281, 275-290.	4.7	33
56	Cellulose Surface Degradation by a Lytic Polysaccharide Monooxygenase and Its Effect on Cellulase Hydrolytic Efficiency. Journal of Biological Chemistry, 2014, 289, 35929-35938.	3.4	234
57	Purification of Nanoscale Electron-Beam-Induced Platinum Deposits via a Pulsed Laser-Induced Oxidation Reaction. ACS Applied Materials & Interfaces, 2014, 6, 21256-21263.	8.0	45
58	Tunable mixed amorphousâ€“crystalline cellulose substrates (MACS) for dynamic degradation studies by atomic force microscopy in liquid environments. Cellulose, 2014, 21, 3927-3939.	4.9	7
59	The Nanoscale Implications of a Molecular Gas Beam during Electron Beam Induced Deposition. ACS Applied Materials & Interfaces, 2014, 6, 2987-2995.	8.0	47
60	Electron-Beam-Assisted Oxygen Purification at Low Temperatures for Electron-Beam-Induced Pt Deposits: Towards Pure and High-Fidelity Nanostructures. ACS Applied Materials & Interfaces, 2014, 6, 1018-1024.	8.0	73
61	Fundamental Resolution Limits during Electron-Induced Direct-Write Synthesis. ACS Applied Materials & Interfaces, 2014, 6, 7380-7387.	8.0	32
62	Rapid and Highly Compact Purification for Focused Electron Beam Induced Deposits: A Low Temperature Approach Using Electron Stimulated H₂O Reactions. Journal of Physical Chemistry C, 2014, 118, 14009-14016.	3.1	90
63	Spatial chemistry evolution during focused electron beam-induced deposition: origins and workarounds. Applied Physics A: Materials Science and Processing, 2014, 117, 1675-1688.	2.3	21
64	Variable tunneling barriers in FEBID based PtC metal-matrix nanocomposites as a transducing element for humidity sensing. Nanotechnology, 2013, 24, 305501.	2.6	50
65	Visualizing cellulase activity. Biotechnology and Bioengineering, 2013, 110, 1529-1549.	3.3	50
66	Chemical tuning of PtC nanostructures fabricated via focused electron beam induced deposition. Nanotechnology, 2013, 24, 175305.	2.6	23
67	Dissecting and Reconstructing Synergism. Journal of Biological Chemistry, 2012, 287, 43215-43222.	3.4	61
68	New possibilities for soft matter applications: eliminating technically induced thermal stress during FIB processing. RSC Advances, 2012, 2, 6932.	3.6	15
69	Fundamental Proximity Effects in Focused Electron Beam Induced Deposition. ACS Nano, 2012, 6, 286-294.	14.6	51
70	Cellulases Dig Deep. Journal of Biological Chemistry, 2012, 287, 2759-2765.	3.4	52
71	An investigation on focused electron/ion beam induced degradation mechanisms of conjugated polymers. Physical Chemistry Chemical Physics, 2011, 13, 20235.	2.8	21
72	Optimization of postgrowth electron-beam curing for focused electron-beam-induced Pt deposits. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	1.2	54

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73	Ion beam degradation analysis of poly(3-hexylthiophene) (P3HT): can cryo-FIB minimize irradiation damage?. Physical Chemistry Chemical Physics, 2009, 11, 5130.	2.8	12
74	The influence of beam defocus on volume growth rates for electron beam induced platinum deposition. Nanotechnology, 2008, 19, 485302.	2.6	50