

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	Cellulose Surface Degradation by a Lytic Polysaccharide Monooxygenase and Its Effect on Cellulase Hydrolytic Efficiency. <i>Journal of Biological Chemistry</i> , 2014, 289, 35929-35938.	3.4	234
2	Enhanced Performance of Germanium Halide Perovskite Solar Cells through Compositional Engineering. <i>ACS Applied Energy Materials</i> , 2018, 1, 343-347.	5.1	200
3	Simulation-Guided 3D Nanomanufacturing via Focused Electron Beam Induced Deposition. <i>ACS Nano</i> , 2016, 10, 6163-6172.	14.6	130
4	Direct-Write 3D Nanoprinting of Plasmonic Structures. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8233-8240.	8.0	125
5	Rapid and Highly Compact Purification for Focused Electron Beam Induced Deposits: A Low Temperature Approach Using Electron Stimulated H ₂ O Reactions. <i>Journal of Physical Chemistry C</i> , 2014, 118, 14009-14016.	3.1	90
6	3D nanoprinting via focused electron beams. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	90
7	Direct-write of free-form building blocks for artificial magnetic 3D lattices. <i>Scientific Reports</i> , 2018, 8, 6160.	3.3	87
8	Single-molecule study of oxidative enzymatic deconstruction of cellulose. <i>Nature Communications</i> , 2017, 8, 894.	12.8	86
9	Electron-Beam-Assisted Oxygen Purification at Low Temperatures for Electron-Beam-Induced Pt Deposits: Towards Pure and High-Fidelity Nanostructures. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 1018-1024.	8.0	73
10	Focused Electron Beam-Based 3D Nanoprinting for Scanning Probe Microscopy: A Review. <i>Micromachines</i> , 2020, 11, 48.	2.9	68
11	Direct writing of CoFe alloy nanostructures by focused electron beam induced deposition from a heteronuclear precursor. <i>Nanotechnology</i> , 2015, 26, 475701.	2.6	63
12	Dissecting and Reconstructing Synergism. <i>Journal of Biological Chemistry</i> , 2012, 287, 43215-43222.	3.4	61
13	Optimization of postgrowth electron-beam curing for focused electron-beam-induced Pt deposits. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011, 29, .	1.2	54
14	High-Fidelity 3D-Nanoprinting via Focused Electron Beams: Growth Fundamentals. <i>ACS Applied Nano Materials</i> , 2018, 1, 1014-1027.	5.0	54
15	High-Fidelity 3D-Nanoprinting via Focused Electron Beams: Computer-Aided Design (3BID). <i>ACS Applied Nano Materials</i> , 2018, 1, 1028-1041.	5.0	54
16	Cellulases Dig Deep. <i>Journal of Biological Chemistry</i> , 2012, 287, 2759-2765.	3.4	52
17	Fundamental Proximity Effects in Focused Electron Beam Induced Deposition. <i>ACS Nano</i> , 2012, 6, 286-294.	14.6	51
18	Functional characterization of the native swollenin from <i>Trichoderma reesei</i> : study of its possible role as C1 factor of enzymatic lignocellulose conversion. <i>Biotechnology for Biofuels</i> , 2016, 9, 178.	6.2	51

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19	The influence of beam defocus on volume growth rates for electron beam induced platinum deposition. <i>Nanotechnology</i> , 2008, 19, 485302.	2.6	50
20	Variable tunneling barriers in FEBID based PtC metal-matrix nanocomposites as a transducing element for humidity sensing. <i>Nanotechnology</i> , 2013, 24, 305501.	2.6	50
21	Visualizing cellulase activity. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1529-1549.	3.3	50
22	The Nanoscale Implications of a Molecular Gas Beam during Electron Beam Induced Deposition. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 2987-2995.	8.0	47
23	Purification of Nanoscale Electron-Beam-Induced Platinum Deposits via a Pulsed Laser-Induced Oxidation Reaction. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 21256-21263.	8.0	45
24	Post-growth purification of Co nanostructures prepared by focused electron beam induced deposition. <i>Nanotechnology</i> , 2015, 26, 075301.	2.6	41
25	Tunable 3D Nanoresonators for Gas Sensing Applications. <i>Advanced Functional Materials</i> , 2018, 28, 1707387.	14.9	40
26	Magnetic Characterization of Direct-Write Free-Form Building Blocks for Artificial Magnetic 3D Lattices. <i>Materials</i> , 2018, 11, 289.	2.9	40
27	Mechanical Properties of 3D Nanostructures Obtained by Focused Electron/Ion Beam-Induced Deposition: A Review. <i>Micromachines</i> , 2020, 11, 397.	2.9	39
28	Impact of Electron-Beam Heating during 3D Nanoprinting. <i>ACS Nano</i> , 2019, 13, 5198-5213.	14.6	38
29	Nanoscale electron beam-induced deposition and purification of ruthenium for extreme ultraviolet lithography mask repair. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 1705-1713.	2.3	34
30	Surface structural dynamics of enzymatic cellulose degradation, revealed by combined kinetic and atomic force microscopy studies. <i>FEBS Journal</i> , 2014, 281, 275-290.	4.7	33
31	Fundamental Resolution Limits during Electron-Induced Direct-Write Synthesis. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 7380-7387.	8.0	32
32	Toward Ultraflat Surface Morphologies During Focused Electron Beam Induced Nanosynthesis: Disruption Origins and Compensation. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 3289-3297.	8.0	30
33	Electron-stimulated purification of platinum nanostructures grown via focused electron beam induced deposition. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 907-918.	2.8	26
34	Three-Dimensional Nanothermistors for Thermal Probing. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 22655-22667.	8.0	26
35	Long-Chain Li and Na Alkyl Carbonates as Solid Electrolyte Interphase Components: Structure, Ion Transport, and Mechanical Properties. <i>Chemistry of Materials</i> , 2018, 30, 3338-3345.	6.7	25
36	Biobased Cellulosic CuInS ₂ Nanocomposites for Optoelectronic Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 3115-3122.	6.7	24

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37	3D Nanoprinting via laser-assisted electron beam induced deposition: growth kinetics, enhanced purity, and electrical resistivity. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 801-812.	2.8	24
38	A Biological Nanomachine at Work: Watching the Cellulosome Degrade Crystalline Cellulose. <i>ACS Central Science</i> , 2020, 6, 739-746.	11.3	24
39	Chemical tuning of PtC nanostructures fabricated via focused electron beam induced deposition. <i>Nanotechnology</i> , 2013, 24, 175305.	2.6	23
40	Dielectric sensing by charging energy modulation in a nano-granular metal. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 1689-1696.	2.3	23
41	Focused electron beam induced deposition as a tool to create electron vortices. <i>Micron</i> , 2016, 80, 34-38.	2.2	23
42	Probing the Morphology and Evolving Dynamics of 3D Printed Nanostructures Using High-Speed Atomic Force Microscopy. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24456-24461.	8.0	23
43	An investigation on focused electron/ion beam induced degradation mechanisms of conjugated polymers. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 20235.	2.8	21
44	Spatial chemistry evolution during focused electron beam-induced deposition: origins and workarounds. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 1675-1688.	2.3	21
45	Fundamental edge broadening effects during focused electron beam induced nanosynthesis. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 462-471.	2.8	21
46	Enzymes as Biodevelopers for Nano- And Micropatterned Bicomponent Biopolymer Thin Films. <i>Biomacromolecules</i> , 2016, 17, 3743-3749.	5.4	21
47	High-Fidelity 3D Nanoprinting of Plasmonic Gold Nanoantennas. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 1178-1191.	8.0	21
48	Cellular automata modeling depicts degradation of cellulosic material by a cellulase system with single-molecule resolution. <i>Biotechnology for Biofuels</i> , 2016, 9, 56.	6.2	20
49	Electron nanoprobe induced oxidation: a simulation of direct-write purification. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 18294-18304.	2.8	19
50	How Bound and Free Fatty Acids in Cellulose Films Impact Nonspecific Protein Adsorption. <i>Biomacromolecules</i> , 2017, 18, 4224-4231.	5.4	18
51	Comparing postdeposition reactions of electrons and radicals with Pt nanostructures created by focused electron beam induced deposition. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 2410-2424.	2.8	17
52	In situ real-time annealing of ultrathin vertical Fe nanowires grown by focused electron beam induced deposition. <i>Acta Materialia</i> , 2019, 174, 379-386.	7.9	17
53	Tunable Semicrystalline Thin Film Cellulose Substrate for High-Resolution, <i>In-Situ</i> AFM Characterization of Enzymatic Cellulose Degradation. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 27900-27909.	8.0	16
54	New possibilities for soft matter applications: eliminating technically induced thermal stress during FIB processing. <i>RSC Advances</i> , 2012, 2, 6932.	3.6	15

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55	Focused Electron Beam Induced Deposition Synthesis of 3D Photonic and Magnetic Nanoresonators. ACS Applied Nano Materials, 2019, 2, 8075-8082.	5.0	14
56	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
57	Simulation Informed CAD for 3D Nanoprinting. Micromachines, 2020, 11, 8.	2.9	13
58	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
59	Multi-layered nanoscale cellulose/CuInS ₂ sandwich type thin films. Carbohydrate Polymers, 2019, 203, 219-227.	10.2	12
60	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
61	Expanding FEBID-Based 3D-Nanoprinting toward Closed High-Fidelity Nanoarchitectures. ACS Applied Electronic Materials, 2022, 4, 744-754.	4.3	10
62	Analyzing the Nanogranularity of Focused-Electron-Beam-Induced-Deposited Materials by Electron Tomography. ACS Applied Nano Materials, 2019, 2, 5356-5359.	5.0	9
63	Humidity Response of Cellulose Thin Films. Biomacromolecules, 2022, 23, 1148-1157.	5.4	9
64	FEBID 3D-Nanoprinting at Low Substrate Temperatures: Pushing the Speed While Keeping the Quality. Nanomaterials, 2021, 11, 1527.	4.1	8
65	Tunable mixed amorphous/crystalline cellulose substrates (MACS) for dynamic degradation studies by atomic force microscopy in liquid environments. Cellulose, 2014, 21, 3927-3939.	4.9	7
66	Lectins at Interfaces: An Atomic Force Microscopy and Multi-Parameter-Surface Plasmon Resonance Study. Materials, 2018, 11, 2348.	2.9	7
67	Deposition of Cellulose-Based Thin Films on Flexible Substrates. Materials, 2018, 11, 2433.	2.9	7
68	Expanding 3D Nanoprinting Performance by Blurring the Electron Beam. Micromachines, 2021, 12, 115.	2.9	7
69	Shape evolution and growth mechanisms of 3D-printed nanowires. Additive Manufacturing, 2021, 46, 102076.	3.0	5
70	A study on the correlation between micro and magnetic domain structure of Cu ₅₂ Ni ₃₄ Fe ₁₄ spinodal alloys. Journal of Alloys and Compounds, 2022, 922, 166214.	5.5	3
71	3D Nanoprinting via Focused Electron Beams. Microscopy and Microanalysis, 2018, 24, 346-347.	0.4	2
72	Accurate Near-Field Simulations of the Real Substrate Geometry: A Powerful Tool for Understanding Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 6826-6834.	3.1	1

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73	3D Nano-Probes for Thermal Microscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 1872-1873.	0.4	0
74	Vanadium and Manganese Carbonyls as Precursors in Electron-Induced and Thermal Deposition Processes. <i>Nanomaterials</i> , 2022, 12, 1110.	4.1	0