

Stefan Baunack

List of Publications by Year in descending order

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95
papers

2,866
citations

172207

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99
all docs

99
docs citations

99
times ranked

4104
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of factor analysis in electron spectrometry (AES, XPS) for materials science. International Journal of Materials Research, 2022, 96, 972-982.	0.1	0
2	Tailoring electron beams with high-frequency self-assembled magnetic charged particle micro optics. Nature Communications, 2022, 13, .	5.8	6
3	Digital Electrochemistry for On-Chip Heterogeneous Material Integration. Advanced Materials, 2021, 33, e2101272.	11.1	19
4	Digital Electrochemistry: Digital Electrochemistry for On-Chip Heterogeneous Material Integration (Adv. Mater. 26/2021). Advanced Materials, 2021, 33, 2170204.	11.1	0
5	Self-Assembly of Integrated Tubular Microsupercapacitors with Improved Electrochemical Performance and Self-Protective Function. ACS Nano, 2019, 13, 8067-8075.	7.3	57
6	Self-Assembled Flexible and Integratable 3D Microtubular Asymmetric Supercapacitors. Advanced Science, 2019, 6, 1901051.	5.6	39
7	Microwave Radiation Detection with an Ultrathin Free-Standing Superconducting Niobium Nanohelix. ACS Nano, 2019, 13, 2948-2955.	7.3	28
8	Nanoporous Copper Pattern Fabricated by Electron Beam Irradiation on Cu ₃ N Film for SERS Application. Physica Status Solidi (B): Basic Research, 2019, 256, 1800378.	0.7	8
9	Ultra-thin all-solid-state micro-supercapacitors with exceptional performance and device flexibility. Nano Energy, 2017, 33, 387-392.	8.2	42
10	Evidence for self-organized formation of logarithmic spirals during explosive crystallization of amorphous Ge:Mn layers. Journal of Applied Physics, 2017, 121, 184901.	1.1	1
11	In-Plane Thermal Conductivity of Radial and Planar Si/SiO ₂ Hybrid Nanomembrane Superlattices. ACS Nano, 2017, 11, 8215-8222.	7.3	18
12	Silicon Nanomembranes with Hybrid Crystal Orientations and Strain States. ACS Applied Materials & Interfaces, 2017, 9, 42372-42382.	4.0	3
13	Transformation of epitaxial NiMnGa/InGaAs nanomembranes grown on GaAs substrates into freestanding microtubes. RSC Advances, 2016, 6, 72568-72574.	1.7	3
14	Stretchable Electronics: Direct Transfer of Magnetic Sensor Devices to Elastomeric Supports for Stretchable Electronics (Adv. Mater. 8/2015). Advanced Materials, 2015, 27, 1306-1306.	11.1	1
15	Biomimetic Microelectronics for Regenerative Neuronal Cuff Implants. Advanced Materials, 2015, 27, 6797-6805.	11.1	86
16	Flexible Electronics: High-Performance Magnetic Sensorics for Printable and Flexible Electronics (Adv. Mater. 5/2015). Advanced Materials, 2015, 27, 955-955.	11.1	1
17	Direct Transfer of Magnetic Sensor Devices to Elastomeric Supports for Stretchable Electronics. Advanced Materials, 2015, 27, 1333-1338.	11.1	69
18	High-Performance Li ₂ O Batteries with Trilayered Pd/MnO ₂ /Pd Nanomembranes. Advanced Science, 2015, 2, 1500113.	5.6	55

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19	Self-Assembled On-Chip Integrated Giant Magneto-Impedance Sensorics. <i>Advanced Materials</i> , 2015, 27, 6582-6589.	11.1	99
20	Highly photocatalytic TiO ₂ interconnected porous powder fabricated by sponge-templated atomic layer deposition. <i>Nanotechnology</i> , 2015, 26, 364001.	1.3	19
21	Wearable Magnetic Field Sensors for Flexible Electronics. <i>Advanced Materials</i> , 2015, 27, 1274-1280.	11.1	201
22	High-Performance Magnetic Sensorics for Printable and Flexible Electronics. <i>Advanced Materials</i> , 2015, 27, 880-885.	11.1	87
23	Thermal transport through short-period SiGe nanodot superlattices. <i>Journal of Applied Physics</i> , 2014, 115, 044312.	1.1	22
24	Hierarchically Designed SiO _x /SiO _y Bilayer Nanomembranes as Stable Anodes for Lithium Ion Batteries. <i>Advanced Materials</i> , 2014, 26, 4527-4532.	11.1	141
25	Free-standing Fe ₂ O ₃ nanomembranes enabling ultra-long cycling life and high rate capability for Li-ion batteries. <i>Scientific Reports</i> , 2014, 4, 7452.	1.6	83
26	Sandwich-Stacked SnO ₂ /Cu Hybrid Nanosheets as Multichannel Anodes for Lithium Ion Batteries. <i>ACS Nano</i> , 2013, 7, 6948-6954.	7.3	99
27	Naturally Rolled-Up C/Si/C Trilayer Nanomembranes as Stable Anodes for Lithium-Ion Batteries with Remarkable Cycling Performance. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 2326-2330.	7.2	181
28	Dynamic Molecular Processes Detected by Microtubular Optochemical Sensors Self-Assembled from Prestrained Nanomembranes. <i>Advanced Materials</i> , 2013, 25, 2357-2361.	11.1	44
29	Exchange bias related coercivity enhancement as a characterization tool. <i>Journal of Applied Physics</i> , 2012, 112, 123917.	1.1	7
30	Nanomembrane Quantum-Light-Emitting Diodes Integrated onto Piezoelectric Actuators. <i>Advanced Materials</i> , 2012, 24, 2668-2672.	11.1	111
31	Stretchable Magnetoelectronics. <i>Nano Letters</i> , 2011, 11, 2522-2526.	4.5	150
32	Rolled-up tubes and cantilevers by releasing SrRuO ₃ -Pr _{0.7} Ca _{0.3} MnO ₃ nanomembranes. <i>Nanoscale Research Letters</i> , 2011, 6, 621.	3.1	16
33	Electrocrystallisation of CoFe alloys under the influence of external homogeneous magnetic fields—Properties of deposited thin films. <i>Electrochimica Acta</i> , 2010, 55, 819-831.	2.6	39
34	Comparing properties of substrate-constrained and freestanding epitaxial Ni-Mn-Ga films. <i>Acta Materialia</i> , 2010, 58, 3415-3421.	3.8	73
35	Corrosion and pitting behaviour of ultrafine eutectic Ti-Fe-Sn alloys. <i>Journal of Alloys and Compounds</i> , 2010, 503, 19-24.	2.8	12
36	Corrosion behavior of the bulk glassy (Fe _{44.3} Cr ₅ Co ₅ Mo _{12.8} Mn _{11.2} C _{15.8}) ₁₀₀ alloy. <i>Journal of Materials Research</i> , 2009, 24, 1471-1479.	1.8	59

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37	Influence of incorporated non-metallic impurities on electromigration in copper damascene interconnect lines. <i>Thin Solid Films</i> , 2009, 517, 2687-2690.	0.8	17
38	Fabrication and optical properties of C ₆₀ -SiC/Si hybrid rolled-up microtubes. <i>Journal of Applied Physics</i> , 2009, 105, 016103.	1.1	13
39	The effect of magnetic fields on the electrodeposition of CoFe alloys. <i>Magnetohydrodynamics</i> , 2009, 45, 259-266.	0.5	3
40	Dimensional behaviour of aluminium sintered in different atmospheres. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 478, 251-256.	2.6	45
41	Electron Transfer Kinetics at Oxide Films on Metallic Biomaterials. <i>Journal of the Electrochemical Society</i> , 2007, 154, C508.	1.3	37
42	Incorporation of sulfur, chlorine, and carbon into electroplated Cu thin films. <i>Microelectronic Engineering</i> , 2007, 84, 54-59.	1.1	84
43	Pitting corrosion of zirconium-based bulk glass-matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 415, 242-249.	2.6	44
44	Quantitative nitrogen analysis by Auger electron spectrometry and glow discharge optical emission spectrometry. <i>Mikrochimica Acta</i> , 2006, 156, 69-72.	2.5	10
45	XPS and AES investigations of hard magnetic Nd-Fe-B films. <i>Applied Surface Science</i> , 2005, 252, 218-222.	3.1	7
46	Effect of sulphur on cube texture formation in microalloyed nickel substrate tapes. <i>Physica C: Superconductivity and Its Applications</i> , 2005, 418, 9-15.	0.6	11
47	Depth profile and interface analysis in the nm-range. <i>Applied Surface Science</i> , 2005, 252, 3-10.	3.1	35
48	Characterization of oxide layers on amorphous Zr-based alloys by Auger electron spectroscopy with sputter depth profiling. <i>Applied Surface Science</i> , 2005, 252, 162-166.	3.1	30
49	Analysis of Mg-B compounds by means of Auger electron microprobe. <i>Applied Surface Science</i> , 2005, 252, 167-171.	3.1	1
50	Influence of oxygen and copper in electrodeposited FePt films. <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 290-291, 1270-1273.	1.0	23
51	Investigation of a Ta-SiO ₂ /Ta-Si ₃ N ₄ bilayer system for embedded SAW finger structures. <i>Microelectronic Engineering</i> , 2005, 82, 301-306.	1.1	5
52	Application of factor analysis in electron spectrometry (AES, XPS) for materials science. <i>International Journal of Materials Research</i> , 2005, 96, 972-982.	0.8	2
53	Electrochemical response of Fe _{65.5} Cr ₄ Mo ₄ Ga ₄ P ₁₂ C ₅ B _{5.5} bulk amorphous alloy in different aqueous media. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2004, 55, 36-42.	0.8	19
54	Corrosion behaviour of the Mg ₆₅ Y ₁₀ Cu ₁₅ Ag ₁₀ bulk metallic glass. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 375-377, 280-284.	2.6	27

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55	The ion exchange promoted interfacial strength in magnesium based composites. Journal of Alloys and Compounds, 2004, 378, 127-131.	2.8	6
56	Pitting corrosion of bulk glass-forming zirconium-based alloys. Journal of Alloys and Compounds, 2004, 377, 290-297.	2.8	104
57	AES and SIMS investigation of diffusion barriers for copper metallization in power-SAW devices. Analytical and Bioanalytical Chemistry, 2003, 375, 891-895.	1.9	10
58	Characterization of oxide layers on amorphous Mg-based alloys by Auger electron spectroscopy with sputter depth profiling. Analytical and Bioanalytical Chemistry, 2003, 375, 896-901.	1.9	3
59	Comparison of depth profiling techniques using ion sputtering from the practical point of view. Thin Solid Films, 2003, 425, 9-19.	0.8	46
60	Corrosion behaviour of the amorphous Mg ₆₅ Y ₁₀ Cu ₁₅ Ag ₁₀ alloy. Corrosion Science, 2003, 45, 817-832.	3.0	64
61	Stability of the Mg ₆₅ Y ₁₀ Cu ₁₅ Ag ₁₀ metallic glass in neutral and weakly acidic media. Journal of Materials Research, 2003, 18, 97-105.	1.2	14
62	Thermally induced modification of GMR in Co/Cu multilayers: correlation among structural, transport, and magnetic properties. Journal Physics D: Applied Physics, 2003, 36, 564-572.	1.3	33
63	Characterization of laser-irradiated YNi ₂ B ₂ C surfaces by Auger electron spectroscopy. Analytical and Bioanalytical Chemistry, 2002, 374, 681-684.	1.9	2
64	Model investigations on the effect of Si transport on the nanocrystallization of amorphous FeSiB-(Cu,Nb). Analytical and Bioanalytical Chemistry, 2002, 374, 736-741.	1.9	2
65	Interdiffusion, stress, and microstructure evolution during annealing in Co/Cu/Co trilayers. Journal of Applied Physics, 2002, 91, 9696.	1.1	10
66	Auger spectroscopy study of MgLi melt affected carbon/pyrocarbon fibres. Applied Surface Science, 2001, 179, 129-132.	3.1	6
67	Oxidation of NiFe(20 wt.%) thin films. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2001, 86, 272-275.	1.7	22
68	AES depth profiling multilayers of 3d transition metals. Applied Surface Science, 2001, 179, 25-29.	3.1	6
69	AES analysis of failures in Cu based electromigration test samples. Applied Surface Science, 2001, 179, 245-250.	3.1	1
70	Interdiffusion in NiFe/Cu/NiFe trilayers: Possible failure mechanism for magnetoelectronic devices. Applied Physics Letters, 2000, 77, 358-360.	1.5	20
71	Oxidation, Diffusion and Segregation in CuNi(Mn) Films Studied by AES. Mikrochimica Acta, 2000, 133, 17-22.	2.5	7
72	XPS and SIMS Examination of Alumina Fibres Affected with Mg and MgLi Melt. Mikrochimica Acta, 2000, 133, 29-34.	2.5	5

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73	Oxidation Behaviour of PACVD-(Ti,Al)N Wear Resistance Layers. <i>Mikrochimica Acta</i> , 2000, 133, 215-221.	2.5	2
74	Data Preprocessing in Peak Shape Analysis of Auger Electron Spectra. <i>Mikrochimica Acta</i> , 2000, 133, 307-312.	2.5	3
75	Abnormal grain growth of sputtered CuNi(Mn) thin films. <i>Journal of Materials Research</i> , 2000, 15, 1062-1068.	1.2	3
76	Mechanical Stress, Grain-boundary Relaxation, and Oxidation of Sputtered CuNi(Mn) Films. <i>Journal of Materials Research</i> , 1999, 14, 1286-1294.	1.2	9
77	Factor analysis and XPS-data preprocessing for non-conducting samples. <i>Fresenius' Journal of Analytical Chemistry</i> , 1999, 365, 59-62.	1.5	7
78	Surface characterisation of laser irradiated SiC ceramics by AES and XPS. <i>Fresenius' Journal of Analytical Chemistry</i> , 1999, 365, 173-177.	1.5	11
79	Hillock Growth Phenomena during Post-Indentation Annealing of Quasicrystalline AlPdMn. <i>Physica Status Solidi A</i> , 1999, 172, 317-327.	1.7	2
80	Electrical resistance and mechanical stress in NiCr/Cu/NiCr thin films. <i>Journal of Applied Physics</i> , 1999, 85, 935-940.	1.1	8
81	AES investigations of the iron surface composition after laser irradiation under atmospheric conditions. <i>Mikrochimica Acta</i> , 1998, 130, 89-95.	2.5	1
82	<title>Laser modification of iron under atmospheric conditions: a study on target surface composition and laser-induced plasma</title>. , 1998, 3343, 939.		0
83	In-situ fracture investigations of MgLi-carbon fibre composite materials by AES and data analysis by means of factor and cluster analysis. <i>Fresenius' Journal of Analytical Chemistry</i> , 1997, 357, 886-893.	1.5	2
84	Quantitative depth profiling of thin layers. <i>Fresenius' Journal of Analytical Chemistry</i> , 1997, 358, 25-31.	1.5	21
85	TEM study of the fibre cross-section attack in γ -Al ₂ O ₃ /Mg ₈ Li metal matrix composites. <i>Mikrochimica Acta</i> , 1997, 127, 243-252.	2.5	6
86	In-situ characterization of MgLi composite materials by means of AES and factor analysis. <i>Mikrochimica Acta</i> , 1997, 125, 245-249.	2.5	1
87	Adjustment of temperature coefficient of resistance in NiCr/CuNi(Mn)/NiCr films. <i>Journal of Applied Physics</i> , 1996, 79, 8516-8520.	1.1	23
88	Resistance behaviour and interdiffusion of layered CuNi-NiCr films. <i>Thin Solid Films</i> , 1995, 258, 236-246.	0.8	19
89	Oxidation behaviour of Cu-Ni(Mn) (constantan) films. <i>Thin Solid Films</i> , 1995, 258, 252-259.	0.8	26
90	Description of sputter removal during auger depth profiling of rough oxide layers. <i>Fresenius' Journal of Analytical Chemistry</i> , 1994, 349, 214-215.	1.5	0

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91	Electron beam-induced decomposition of MBE grown CaF ₂ films: an AES study. <i>Vacuum</i> , 1990, 41, 1003-1005.	1.6	2
92	Electron-beam-induced decomposition and oxidation of thin CaF ₂ -layers on Si(111) Studied by auger electron spectroscopy. <i>Surface Science</i> , 1990, 225, 292-300.	0.8	13
93	A study of UV/Ozone cleaning procedure for silicon surfaces. <i>Physica Status Solidi A</i> , 1989, 115, 223-227.	1.7	27
94	Results on low pressure oxygen adsorption on a Pt60Re40 alloy sample: A SIMS and XPS study. <i>Surface Science</i> , 1988, 203, L682-L688.	0.8	10
95	Low pressure oxygen adsorption induced Re segregation on an annealed Pt~Re alloy: A sims and aes study. <i>Surface Science</i> , 1987, 184, L361-L369.	0.8	7