Stefan Baunack

List of Publications by Year
in descending order

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95	2,866	172207	174990
papers	citations	29	52
		h-index	g-index

99	99	99	4104
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Wearable Magnetic Field Sensors for Flexible Electronics. Advanced Materials, 2015, 27, 1274-1280.	11.1	201
2	Naturally Rolledâ€Up C/Si/C Trilayer Nanomembranes as Stable Anodes for Lithiumâ€Ion Batteries with Remarkable Cycling Performance. Angewandte Chemie - International Edition, 2013, 52, 2326-2330.	7.2	181
3	Stretchable Magnetoelectronics. Nano Letters, 2011, 11, 2522-2526.	4.5	150
4	Hierarchically Designed SiOx/SiOy Bilayer Nanomembranes as Stable Anodes for Lithium Ion Batteries. Advanced Materials, 2014, 26, 4527-4532.	11.1	141
5	Nanomembrane Quantumâ€Lightâ€Emitting Diodes Integrated onto Piezoelectric Actuators. Advanced Materials, 2012, 24, 2668-2672.	11.1	111
6	Pitting corrosion of bulk glass-forming zirconium-based alloys. Journal of Alloys and Compounds, 2004, 377, 290-297.	2.8	104
7	Sandwich-Stacked SnO₂/Cu Hybrid Nanosheets as Multichannel Anodes for Lithium Ion Batteries. ACS Nano, 2013, 7, 6948-6954.	7.3	99
8	Selfâ€Assembled Onâ€Chipâ€Integrated Giant Magnetoâ€Impedance Sensorics. Advanced Materials, 2015, 27, 6582-6589.	11.1	99
9	Highâ€Performance Magnetic Sensorics for Printable and Flexible Electronics. Advanced Materials, 2015, 27, 880-885.	11.1	87
10	Biomimetic Microelectronics for Regenerative Neuronal Cuff Implants. Advanced Materials, 2015, 27, 6797-6805.	11.1	86
11	Incorporation of sulfur, chlorine, and carbon into electroplated Cu thin films. Microelectronic Engineering, 2007, 84, 54-59.	1.1	84
12	Free-standing Fe2O3 nanomembranes enabling ultra-long cycling life and high rate capability for Li-ion batteries. Scientific Reports, 2014, 4, 7452.	1.6	83
13	Comparing properties of substrate-constrained and freestanding epitaxial Niâ€“Mnâ€“Ga films. Acta Materialia, 2010, 58, 3415-3421.	3.8	73
14	Direct Transfer of Magnetic Sensor Devices to Elastomeric Supports for Stretchable Electronics. Advanced Materials, 2015, 27, 1333-1338.	11.1	69
15	Corrosion behaviour of the amorphous Mg65Y10Cu15Ag10 alloy. Corrosion Science, 2003, 45, 817-832.	3.0	64
16	Self-Assembly of Integrated Tubular Microsupercapacitors with Improved Electrochemical Performance and Self-Protective Function. ACS Nano, 2019, 13, 8067-8075.	7.3	57
17	Highâ€Performance Liâ€O₂ Batteries with Trilayered Pd/MnO_x/Pd Nanomembranes. Advanced Science, 2015, 2, 1500113.	5.6	55
18	Comparison of depth profiling techniques using ion sputtering from the practical point of view. Thin Solid Films, 2003, 425, 9-19.	0.8	46

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19	Dimensional behaviour of aluminium sintered in different atmospheres. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 478, 251-256.	2.6	45
20	Pitting corrosion of zirconium-based bulk glass-matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 415, 242-249.	2.6	44
21	Dynamic Molecular Processes Detected by Microtubular Optoâ€chemical Sensors Selfâ€Assembled from Prestrained Nanomembranes. Advanced Materials, 2013, 25, 2357-2361.	11.1	44
22	Ultra-thin all-solid-state micro-supercapacitors with exceptional performance and device flexibility. Nano Energy, 2017, 33, 387-392.	8.2	42
23	Electrocrystallisation of CoFe alloys under the influence of external homogeneous magnetic fieldsâ€”Properties of deposited thin films. Electrochimica Acta, 2010, 55, 819-831.	2.6	39
24	Selfâ€Assembled Flexible and Integratable 3D Microtubular Asymmetric Supercapacitors. Advanced Science, 2019, 6, 1901051.	5.6	39
25	Electron Transfer Kinetics at Oxide Films on Metallic Biomaterials. Journal of the Electrochemical Society, 2007, 154, C508.	1.3	37
26	Depth profile and interface analysis in the nm-range. Applied Surface Science, 2005, 252, 3-10.	3.1	35
27	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
28	Characterization of oxide layers on amorphous Zr-based alloys by Auger electron spectroscopy with sputter depth profiling. Applied Surface Science, 2005, 252, 162-166.	3.1	30
29	Microwave Radiation Detection with an Ultrathin Free-Standing Superconducting Niobium Nanohelix. ACS Nano, 2019, 13, 2948-2955.	7.3	28
30	A study of UV/Ozone cleaning procedure for silicon surfaces. Physica Status Solidi A, 1989, 115, 223-227.	1.7	27
31	Corrosion behaviour of the Mg65Y10Cu15Ag10 bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 280-284.	2.6	27
32	Oxidation behaviour of Cu-Ni(Mn) (constantan) films. Thin Solid Films, 1995, 258, 252-259.	0.8	26
33	Adjustment of temperature coefficient of resistance in NiCr/CuNi(Mn)/NiCr films. Journal of Applied Physics, 1996, 79, 8516-8520.	1.1	23
34	Influence of oxygen and copper in electrodeposited FePt films. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1270-1273.	1.0	23
35	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
36	Thermal transport through short-period SiGe nanodot superlattices. Journal of Applied Physics, 2014, 115, 044312.	1.1	22

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37	Quantitative depth profiling of thin layers. Fresenius' Journal of Analytical Chemistry, 1997, 358, 25-31.	1.5	21
38	Interdiffusion in NiFe/Cu/NiFe trilayers: Possible failure mechanism for magnetoelectronic devices. Applied Physics Letters, 2000, 77, 358-360.	1.5	20
39	Resistance behaviour and interdiffusion of layered CuNi-NiCr films. Thin Solid Films, 1995, 258, 236-246.	0.8	19
40	Electrochemical response of Fe65.5Cr4Mo4Ga4P12 C5B5.5 bulk amorphous alloy in different aqueous media. Materials and Corrosion - Werkstoffe Und Korrosion, 2004, 55, 36-42.	0.8	19
41	Highly photocatalytic TiO2interconnected porous powder fabricated by sponge-templated atomic layer deposition. Nanotechnology, 2015, 26, 364001.	1.3	19
42	Digital Electrochemistry for Onâ€Chip Heterogeneous Material Integration. Advanced Materials, 2021, 33, e2101272.	11.1	19
43	In-Plane Thermal Conductivity of Radial and Planar Si/SiO_x Hybrid Nanomembrane Superlattices. ACS Nano, 2017, 11, 8215-8222.	7.3	18
44	Influence of incorporated non-metallic impurities on electromigration in copper damascene interconnect lines. Thin Solid Films, 2009, 517, 2687-2690.	0.8	17
45	Rolled-up tubes and cantilevers by releasing SrRuO3-Pr0.7Ca0.3MnO3 nanomembranes. Nanoscale Research Letters, 2011, 6, 621.	3.1	16
46	Stability of the Mg₆₅Y₁₀Cu₁₅Ag₁₀metallic glass in neutral and weakly acidic media. Journal of Materials Research, 2003, 18, 97-105.	1.2	14
47	Electron-beam-induced decomposition and oxidation of thin CaF2-layers on Si(111) Studied by auger electron spectroscopy. Surface Science, 1990, 225, 292-300.	0.8	13
48	Fabrication and optical properties of C/Î²-SiC/Si hybrid rolled-up microtubes. Journal of Applied Physics, 2009, 105, 016103.	1.1	13
49	Corrosion and pitting behaviour of ultrafine eutectic Tiâ€“Feâ€“Sn alloys. Journal of Alloys and Compounds, 2010, 503, 19-24.	2.8	12
50	Surface characterisation of laser irradiated SiC ceramics by AES and XPS. Fresenius' Journal of Analytical Chemistry, 1999, 365, 173-177.	1.5	11
51	Effect of sulphur on cube texture formation in microalloyed nickel substrate tapes. Physica C: Superconductivity and Its Applications, 2005, 418, 9-15.	0.6	11
52	Results on low pressure oxygen adsorption on a Pt60Re40 alloy sample: A SIMS and XPS study. Surface Science, 1988, 203, L682-L688.	0.8	10
53	Interdiffusion, stress, and microstructure evolution during annealing in Co/Cu/Co trilayers. Journal of Applied Physics, 2002, 91, 9696.	1.1	10
54	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

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55	Quantitative nitrogen analysis by Auger electron spectrometry and glow discharge optical emission spectrometry. Mikrochimica Acta, 2006, 156, 69-72.	2.5	10
56	Mechanical Stress, Grain-boundary Relaxation, and Oxidation of Sputtered CuNi(Mn) Films. Journal of Materials Research, 1999, 14, 1286-1294.	1.2	9
57	Corrosion behavior of the bulk glassy (Fe_{44.3}Cr₅Co₅Mo_{12.8}Mn_{11.2}C_{15.8}B_{5.9}) alloy. Journal of Materials Research, 2009, 24, 1471-1479.	1.3	9
58	Electrical resistance and mechanical stress in NiCr/Cu/NiCr thin films. Journal of Applied Physics, 1999, 85, 935-940.	1.1	8
59	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
60	Low pressure oxygen adsorption induced Re segregation on an annealed Ptâ^'Re alloy: A sims and aes study. Surface Science, 1987, 184, L361-L369.	0.8	7
61	Factor analysis and XPS-data preprocessing for non-conducting samples. Fresenius' Journal of Analytical Chemistry, 1999, 365, 59-62.	1.5	7
62	Oxidation, Diffusion and Segregation in CuNi(Mn) Films Studied by AES. Mikrochimica Acta, 2000, 133, 17-22.	2.5	7
63	XPS and AES investigations of hard magnetic Ndâ€“Feâ€“B films. Applied Surface Science, 2005, 252, 218-222.	3.1	7
64	Exchange bias related coercivity enhancement as a characterization tool. Journal of Applied Physics, 2012, 112, 123917.	1.1	7
65	TEM study of the fibre cross-section attack in ?-Al2O3/Mg8Li metal matrix composites. Mikrochimica Acta, 1997, 127, 243-252.	2.5	6
66	Auger spectroscopy study of MgLi melt affected carbon/pyrocarbon fibres. Applied Surface Science, 2001, 179, 129-132.	3.1	6
67	AES depth profiling multilayers of 3d transition metals. Applied Surface Science, 2001, 179, 25-29.	3.1	6
68	The ion exchange promoted interfacial strength in magnesium based composites. Journal of Alloys and Compounds, 2004, 378, 127-131.	2.8	6
69	Tailoring electron beams with high-frequency self-assembled magnetic charged particle micro optics. Nature Communications, 2022, 13, .	5.8	6
70	XPS and SIMS Examination of Alumina Fibres Affected with Mg and MgLi Melt. Mikrochimica Acta, 2000, 133, 29-34.	2.5	5
71	Investigation of a Taâ€“Siâ€“O/Taâ€“Siâ€“N bilayer system for embedded SAW finger structures. Microelectronic Engineering, 2005, 82, 301-306.	1.1	5
72	Data Preprocessing in Peak Shape Analysis of Auger Electron Spectra. Mikrochimica Acta, 2000, 133, 307-312.	2.5	3

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73	Abnormal grain growth of sputtered CuNi(Mn) thin films. Journal of Materials Research, 2000, 15, 1062-1068.	1.2	3
74	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
75	Transformation of epitaxial NiMnGa/InGaAs nanomembranes grown on GaAs substrates into freestanding microtubes. RSC Advances, 2016, 6, 72568-72574.	1.7	3
76	Silicon Nanomembranes with Hybrid Crystal Orientations and Strain States. ACS Applied Materials & Interfaces, 2017, 9, 42372-42382.	4.0	3
77	The effect of magnetic fields on the electrodeposition of CoFe alloys. Magnetohydrodynamics, 2009, 45, 259-266.	0.5	3
78	Electron beam-induced decomposition of MBE grown CaF2 films: an AES study. Vacuum, 1990, 41, 1003-1005.	1.6	2
79	In-situ fracture investigations of MgLi-carbon fibre composite materials by AES and data analysis by means of factor and cluster analysis. Fresenius' Journal of Analytical Chemistry, 1997, 357, 886-893.	1.5	2
80	Hillock Growth Phenomena during Post-Indentation Annealing of Quasicrystalline AlPdMn. Physica Status Solidi A, 1999, 172, 317-327.	1.7	2
81	Oxidation Behaviour of PACVD-(Ti,Al)N Wear Resistance Layers. Mikrochimica Acta, 2000, 133, 215-221.	2.5	2
82	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
83	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
84	Application of factor analysis in electron spectrometry (AES, XPS) for materials science. International Journal of Materials Research, 2005, 96, 972-982.	0.8	2
85	In-situ characterization of MgLi composite materials by means of AES and factor analysis. Mikrochimica Acta, 1997, 125, 245-249.	2.5	1
86	AES investigations of the iron surface composition after laser irradiation under atmospheric conditions. Mikrochimica Acta, 1998, 130, 89-95.	2.5	1
87	AES analysis of failures in Cu based electromigration test samples. Applied Surface Science, 2001, 179, 245-250.	3.1	1
88	Analysis of Mgâ€“B compounds by means of Auger electron microprobe. Applied Surface Science, 2005, 252, 167-171.	3.1	1
89	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
90	Flexible Electronics: Highâ€Performance Magnetic Sensorics for Printable and Flexible Electronics (Adv. Mater. 5/2015). Advanced Materials, 2015, 27, 955-955.	11.1	1

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91	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
92	Description of sputter removal during auger depth profiling of rough oxide layers. Fresenius' Journal of Analytical Chemistry, 1994, 349, 214-215.	1.5	0
93	<title>Laser modification of iron under atmospheric conditions: a study on target surface composition and laser-induced plasma</title>. , 1998, 3343, 939.		0
94	Digital Electrochemistry: Digital Electrochemistry for Onâ€Chip Heterogeneous Material Integration (Adv. Mater. 26/2021). Advanced Materials, 2021, 33, 2170204.	11.1	0
95	Application of factor analysis in electron spectrometry (AES, XPS) for materials science. International Journal of Materials Research, 2022, 96, 972-982.	0.1	0