

Daniel Spemann

List of Publications by Year in descending order

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85
papers

5,881
citations

136740

32
h-index

71532

76
g-index

86
all docs

86
docs citations

86
times ranked

6830
citing authors

#	ARTICLE	IF	CITATIONS
1	Induced Magnetic Ordering by Proton Irradiation in Graphite. <i>Physical Review Letters</i> , 2003, 91, 227201.	2.9	759
2	Raman scattering in ZnO thin films doped with Fe, Sb, Al, Ga, and Li. <i>Applied Physics Letters</i> , 2003, 83, 1974-1976.	1.5	595
3	Infrared dielectric functions and phonon modes of high-quality ZnO films. <i>Journal of Applied Physics</i> , 2003, 93, 126-133.	1.1	590
4	Myelin and iron concentration in the human brain: A quantitative study of MRI contrast. <i>NeuroImage</i> , 2014, 93, 95-106.	2.1	528
5	Ferromagnetism in oriented graphite samples. <i>Physical Review B</i> , 2002, 66, .	1.1	352
6	Defect-induced magnetic order in pure ZnO films. <i>Physical Review B</i> , 2009, 80, .	1.1	274
7	Ï-Electron Ferromagnetism in Metal-Free Carbon Probed by Soft X-Ray Dichroism. <i>Physical Review Letters</i> , 2007, 98, 187204.	2.9	258
8	Mg _x Zn _{1-x} O (0 ≤ x < 0.2) nanowire arrays on sapphire grown by high-pressure pulsed-laser deposition. <i>Applied Physics Letters</i> , 2005, 86, 143113.	1.5	188
9	Dielectric functions (1 to 5 eV) of wurtzite Mg _x Zn _{1-x} O (x = 0.29) thin films. <i>Applied Physics Letters</i> , 2003, 82, 2260-2262.	1.5	165
10	Ferromagnetic Spots in Graphite Produced by Proton Irradiation. <i>Advanced Materials</i> , 2003, 15, 1719-1722.	11.1	140
11	Optical and electrical properties of epitaxial (Mg,Cd) _x Zn _{1-x} O, ZnO, and ZnO:(Ga,Al) thin films on c-plane sapphire grown by pulsed laser deposition. <i>Solid-State Electronics</i> , 2003, 47, 2205-2209.	0.8	140
12	Experimental evidence for two-dimensional magnetic order in proton bombarded graphite. <i>Physical Review B</i> , 2007, 76, .	1.1	112
13	The role of hydrogen in room-temperature ferromagnetism at graphite surfaces. <i>New Journal of Physics</i> , 2010, 12, 123012.	1.2	101
14	Defect-Induced Magnetism in Solids. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 4668-4674.	1.2	87
15	Electrical and magnetic properties of RE-doped ZnO thin films (RE = Gd, Nd). <i>Superlattices and Microstructures</i> , 2007, 42, 231-235.	1.4	71
16	Observation of intrinsic magnetic domains in C60 polymer. <i>Carbon</i> , 2003, 41, 785-795.	5.4	69
17	UV optical properties of ferromagnetic Mn-doped ZnO thin films grown by PLD. <i>Thin Solid Films</i> , 2005, 486, 117-121.	0.8	66
18	A quantitative study of the intracellular concentration of graphene/noble metal nanoparticle composites and their cytotoxicity. <i>Nanoscale</i> , 2014, 6, 8535-8542.	2.8	66

#	ARTICLE	IF	CITATIONS
19	Infrared dielectric functions and phonon modes of wurtzite $Mg_xZn_{1-x}O$ ($x \approx 0.2$). Applied Physics Letters, 2002, 81, 2376-2378.	1.5	65
20	Single atom devices by ion implantation. Journal of Physics Condensed Matter, 2015, 27, 154204.	0.7	61
21	Refractive indices and band-gap properties of rocksalt $Mg_xZn_{1-x}O$ ($0.68 \leq x \leq 1$). Journal of Applied Physics, 2006, 99, 123701.	1.1	55
22	The Leipzig high-energy ion nanoprobe: A report on first results. Nuclear Instruments & Methods in Physics Research B, 2000, 161-163, 323-327.	0.6	52
23	Source Identification of Lead Pollution in the Atmosphere of Shanghai City by Analyzing Single Aerosol Particles (SAP). Environmental Science & Technology, 2000, 34, 1900-1905.	4.6	51
24	Identification of a possible superconducting transition above room temperature in natural graphite crystals. New Journal of Physics, 2016, 18, 113041.	1.2	51
25	Magnetic carbon: Explicit evidence of ferromagnetism induced by proton irradiation. Carbon, 2004, 42, 1213-1218.	5.4	49
26	Magnetic order in graphite: Experimental evidence, intrinsic and extrinsic difficulties. Journal of Magnetism and Magnetic Materials, 2010, 322, 1156-1161.	1.0	48
27	Electronic band gap of $Zn_2x(CuIn)_{1-x}X_2$ solid solution series ($X=S, Se, Te$). Journal of Alloys and Compounds, 2006, 414, 26-30.	2.8	42
28	Possible pitfalls in search of magnetic order in thin films deposited on single crystalline sapphire substrates. Journal of Magnetism and Magnetic Materials, 2007, 317, 53-60.	1.0	40
29	Hydrogen-mediated ferromagnetism in ZnO single crystals. New Journal of Physics, 2011, 13, 063017.	1.2	40
30	Silicide induced ion beam patterning of Si(001). Nanotechnology, 2014, 25, 115303.	1.3	40
31	Room-temperature ferromagnetic Mn-alloyed ZnO films obtained by pulsed laser deposition. Journal of Magnetism and Magnetic Materials, 2006, 307, 212-221.	1.0	38
32	Systematic investigation of the properties of TiO ₂ films grown by reactive ion beam sputter deposition. Applied Surface Science, 2017, 421, 331-340.	3.1	37
33	Optical and structural properties of MgZnO/ZnO hetero- and double heterostructures grown by pulsed laser deposition. Applied Physics A: Materials Science and Processing, 2007, 88, 99-104.	1.1	31
34	Local lattice distortions in oxygen deficient Mn-doped ZnO thin films, probed by electron paramagnetic resonance. Journal of Materials Chemistry C, 2014, 2, 4947.	2.7	30
35	Infrared dielectric function and phonon modes of Mg-rich cubic $Mg_xZn_{1-x}O$ ($x \approx 0.67$) thin films on sapphire (0001). Applied Physics Letters, 2004, 85, 905-907.	1.5	29
36	Detection of small bunches of ions using image charges. Scientific Reports, 2018, 8, 9781.	1.6	26

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37	Defect-induced Magnetism in Nonmagnetic Oxides: Basic Principles, Experimental Evidence, and Possible Devices with ZnO and TiO ₂ . Physica Status Solidi (B): Basic Research, 2020, 257, 1900623.	0.7	26
38	Dielectric properties of Fe-doped Ba _x Sr _{1-x} TiO ₃ thin films on polycrystalline substrates at temperatures between -35 and +85 °C. Solid-State Electronics, 2003, 47, 2199-2203.	0.8	24
39	Magnetic order and superconductivity observed in bundles of double-wall carbon nanotubes. Carbon, 2015, 88, 16-25.	5.4	24
40	The influence of iron, fluorine and boron implantation on the magnetic properties of graphite. Journal of Magnetism and Magnetic Materials, 2008, 320, 966-977.	1.0	23
41	Trace element content and magnetic properties of commercial HOPG samples studied by ion beam microscopy and SQUID magnetometry. AIP Advances, 2014, 4, 107142.	0.6	23
42	The two-phase region in 2(ZnSe) _x (CuInSe ₂) _{1-x} alloys and structural relation between the tetragonal and cubic phases. Journal of Solid State Chemistry, 2005, 178, 3631-3638.	1.4	21
43	Magnetoresistance in pulsed laser deposited 3d transition metal doped ZnO films. Thin Solid Films, 2006, 515, 2549-2554.	0.8	20
44	Materials analysis and modification at LIPSION – Present state and future developments. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 2175-2179.	0.6	20
45	Solid State Analysis with the New Leipzig High-Energy Ion Nanoprobe. Mikrochimica Acta, 2000, 133, 105-111.	2.5	18
46	Addendum to “Observation of intrinsic magnetic domains in C60 polymers”. Carbon, 2003, 41, 2425-2426.	5.4	18
47	Growth of highly oriented graphite films at room temperature by pulsed laser deposition using carbon-sulfur targets. Carbon, 2006, 44, 3064-3072.	5.4	17
48	Defect-induced magnetism in homoepitaxial manganese-stabilized zirconia thin films. Journal Physics D: Applied Physics, 2013, 46, 275002.	1.3	17
49	Topological insulator thin films starting from the amorphous phase-Bi ₂ Se ₃ as example. Journal of Applied Physics, 2015, 117, 075301.	1.1	16
50	Strong out-of-plane magnetic anisotropy in ion irradiated anatase TiO ₂ thin films. AIP Advances, 2016, 6, 125009.	0.6	16
51	Deterministic Shallow Dopant Implantation in Silicon with Detection Confidence Upper Bound to 99.85% by Ion-Solid Interactions. Advanced Materials, 2022, 34, e2103235.	11.1	16
52	Lattice parameter and elastic constants of cubic Zn _{1-x} Mn _x Se epilayers grown by molecular-beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 649-652.	0.8	15
53	Deep defects generated in n-conducting ZnO:TM thin films. Solid State Communications, 2006, 137, 417-421.	0.9	14
54	Weak ferromagnetism in textured Zn _{1-x} (TM) _x O thin films. Superlattices and Microstructures, 2006, 39, 334-339.	1.4	14

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55	Comment on "Revealing common artifacts due to ferromagnetic inclusions in highly oriented pyrolytic graphite" by Sepioni M. et al .. Europhysics Letters, 2012, 98, 57006.	0.7	12
56	Low-energy and SQUID evidence of magnetism in highly oriented pyrolytic graphite. Journal of Magnetism and Magnetic Materials, 2010, 322, 1228-1231.	1.0	11
57	Image charge detection statistics relevant for deterministic ion implantation. Journal Physics D: Applied Physics, 2019, 52, 305103.	1.3	11
58	Combination of Micro-PIXE with the Pattern Recognition Technique for the Source Identification of Individual Aerosol Particles. Applied Spectroscopy, 2000, 54, 807-811.	1.2	10
59	Examples of room-temperature magnetic ordering in carbon-based structures. Phase Transitions, 2005, 78, 155-171.	0.6	10
60	Proton irradiation effects and magnetic order in carbon structures. Thin Solid Films, 2006, 505, 85-89.	0.8	10
61	Ion beam sputter deposition of TiO ₂ films using oxygen ions. European Physical Journal B, 2018, 91, 1.	0.6	10
62	Titanium 3d ferromagnetism with perpendicular anisotropy in defective anatase. Physical Review B, 2020, 101, .	1.1	10
63	Nanoscale ion implantation using focussed highly charged ions. New Journal of Physics, 2020, 22, 083028.	1.2	10
64	Magnetic order in proton irradiated graphite: Curie temperatures and magnetoresistance effect. Journal of Nuclear Materials, 2009, 389, 336-340.	1.3	9
65	Vacancy diffusion and nitrogen-vacancy center formation near the diamond surface. Applied Physics Letters, 2021, 118, .	1.5	9
66	Morphological and elemental characterisation with the high-energy ion-nanoprobe LIPSION. Applied Surface Science, 2005, 252, 43-48.	3.1	8
67	Creation of GaAs microstructures using the nuclear nanoprobe LIPSION. Semiconductor Science and Technology, 2008, 23, 125028.	1.0	8
68	Study of the negative magneto-resistance of single proton-implanted lithium-doped ZnO microwires. Journal of Physics Condensed Matter, 2015, 27, 256002.	0.7	8
69	Ion-beam analysis of CuInSe ₂ solar cells deposited on polyimide foil. Analytical and Bioanalytical Chemistry, 2004, 379, 622-7.	1.9	7
70	Modelling of a radio frequency plasma bridge neutralizer (RFPBN). Procedia Engineering, 2017, 185, 9-16.	1.2	6
71	The Role of Nuclear Nanoprobes in Inducing Magnetic Ordering in Graphite. Hyperfine Interactions, 2005, 160, 27-37.	0.2	5
72	Characterization of an RF excited broad beam ion source operating with inert gases. Journal of Applied Physics, 2021, 129, .	1.1	5

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73	Toward a systematic discovery of artificial functional magnetic materials. <i>Physical Review B</i> , 2021, 104, .	1.1	5
74	Electrical transport in strained Mg _x Zn _{1-x} O:P thin films grown by pulsed laser deposition on ZnO(0001). <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 82-90.	0.7	4
75	Evidence for Magnetic Order in Graphite from Magnetization and Transport Measurements. <i>Springer Series in Materials Science</i> , 2016, , 45-76.	0.4	4
76	Graphene on silicon dioxide via carbon ion implantation in copper with PMMA-free transfer. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	4
77	Image charge detection of ion bunches using a segmented, cryogenic detector. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	4
78	Intrinsic carbon doping of (AlGa)As for (InGa)As laser structures (Γ - Γ 1.17 $\frac{1}{4}$ m). <i>Journal of Crystal Growth</i> , 2004, 272, 642-649.	0.7	3
79	Advanced Electric Propulsion Diagnostic Tools at IOM. <i>Procedia Engineering</i> , 2017, 185, 1-8.	1.2	3
80	Local zincblende coordination in heteroepitaxial wurtzite Zn _{1-x} Mg _x O:Mn thin films with 0.01 at% x at% 0.04 identified by electron paramagnetic resonance. <i>Journal of Materials Chemistry C</i> , 2015, 3, 11918-11929.	2.7	2
81	Properties of gallium oxide thin films grown by ion beam sputter deposition at room temperature. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022, 40, .	0.9	2
82	Non-destructive 3D-characterization of Zn _{2-2x} Cu _x In _x S ₂ -thin films with ion beam analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2002, 374, 626-630.	1.9	1
83	Magnetism in Carbon: Writing Magnetic Structures with a Proton Micro-Beam on Graphite Surfaces. <i>Acta Physica Polonica A</i> , 2006, 109, 249-255.	0.2	1
84	Deterministic Shallow Dopant Implantation in Silicon with Detection Confidence Upper Bound to 99.85% by Ion-Solid Interactions (<i>Adv. Mater.</i> 3/2022). <i>Advanced Materials</i> , 2022, 34, .	11.1	1
85	BIOMEDICAL IMAGING WITH THE LEIPZIG HIGH-ENERGY ION-NANOPROBE LIPSION. <i>International Journal of PIXE</i> , 2005, 15, 125-130.	0.4	0