Maciej O Liedke

List of Publications by Year
in descending order

117 papers	2,091 citations	257101 24 h-index	276539 41 g-index
121 all docs	121 docs citations	121 times ranked	2515 citing authors

#	Article	IF	Citations
1	Purely antiferromagnetic magnetoelectric random access memory. Nature Communications, 2017, 8, 13985.	5.8	217
2	Introducing artificial length scales to tailor magnetic properties. New Journal of Physics, 2009, 11, 125002.	1.2	80
3	Nitrogen interstitial diffusion induced decomposition in AISI 304L austenitic stainless steel. Acta Materialia, 2012, 60, 4065-4076.	3.8	76
4	Direct Magnetic Patterning due to the Generation of Ferromagnetism by Selective Ion Irradiation of Paramagnetic FeAl Alloys. Small, 2009, 5, 229-234.	5.2	71
5	Induced anisotropies in exchange-coupled systems on rippled substrates. Physical Review B, 2007, 75, .	1.1	66
6	Chemical manipulation of hydrogen induced high p-type and n-type conductivity in Ga2O3. Scientific Reports, 2020, 10, 6134.	1.6	65
7	Tailoring of magnetism in Pt/Co/Pt ultrathin films by ion irradiation. Physical Review B, 2012, 85, .	1.1	64
8	Crossover in the surface anisotropy contributions of ferromagnetic films on rippled Si surfaces. Physical Review B, 2013, 87, .	1.1	61
9	Open volume defects and magnetic phase transition in Fe60Al40 transition metal aluminide. Journal of Applied Physics, 2015, 117, .	1.1	61
10	Positron annihilation lifetime and Doppler broadening spectroscopy at the ELBE facility. AIP Conference Proceedings, 2018, , .	0.3	60
11	Control of Interlayer Exchange Coupling inFe/Cr/FeTrilayers by Ion Beam Irradiation. Physical Review Letters, 2003, 90, 097201.	2.9	58
12	Voltage-Controlled ONâ€“OFF Ferromagnetism at Room Temperature in a Single Metal Oxide Film. ACS Nano, 2018, 12, 10291-10300.	7.3	57
13	Magnetic anisotropy and domain patterning of amorphous films by He-ion irradiation. Applied Physics Letters, 2005, 86, 162502.	1.5	53
14	ZnO Luminescence and scintillation studied via photoexcitation, X-ray excitation and gamma-induced positron spectroscopy. Scientific Reports, 2016, 6, 31238.	1.6	45
15	Magnetic anisotropy engineering: Single-crystalline Fe films on ion eroded ripple surfaces. Applied Physics Letters, 2012, 100, .	1.5	43
16	Voltage-driven motion of nitrogen ions: a new paradigm for magneto-ionics. Nature Communications, 2020, 11, 5871.	5.8	42
17	Perpendicular magnetic anisotropy in a Pt/Co/Pt ultrathin film arising from a lattice distortion induced by ion irradiation. Physical Review B, 2012, 86, .	1.1	41
18	Ion mass dependence of irradiation-induced local creation of ferromagnetism in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Fe</mml:mtext></mml:mrow><mml:mrow><mml:mn>60</mml:m Physical Review B, 2008, 77, .	1.1	40

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19	Tailored fabrication of iridium nanoparticle-sensitized titanium oxynitride nanotubes for solar-driven water splitting: experimental insights on the photocatalyticâ€“activityâ€“defects relationship. Catalysis Science and Technology, 2020, 10, 801-809.	2.1	33
20	A new mechanism for void-cascade interaction from nondestructive depth-resolved atomic-scale measurements of ion irradiationâ€“induced defects in Fe. Science Advances, 2020, 6, eaba8437.	4.7	32
21	Vacancy complexes in nonequilibrium germanium-tin semiconductors. Applied Physics Letters, 2019, 114, .	1.5	30
22	Ion beam induced destabilization of icosahedral structures in gas phase prepared FePt nanoparticles. Journal of Applied Physics, 2005, 97, 10N112.	1.1	29
23	Interlayer exchange coupling of Fe/Cr/Fe thin films on rippled substrates. Physical Review B, 2009, 80, .	1.1	28
24	Two-fold origin of the deformation-induced ferromagnetism in bulk Fe₆₀Al₄₀(at.%) alloys. New Journal of Physics, 2008, 10, 103030.	1.2	25
25	A new system for real-time data acquisition and pulse parameterization for digital positron annihilation lifetime spectrometers with high repetition rates. Journal of Instrumentation, 2021, 16, P08001.	0.5	25
26	Enhanced flux pinning isotropy by tuned nanosized defect network in superconducting YBa2Cu3O6+x films. Scientific Reports, 2019, 9, 15425.	1.6	24
27	Oxidation of amorphous HfNbTaTiZr high entropy alloy thin films prepared by DC magnetron sputtering. Journal of Alloys and Compounds, 2021, 869, 157978.	2.8	24
28	n-InAs Nanopyramids Fully Integrated into Silicon. Nano Letters, 2011, 11, 2814-2818.	4.5	23
29	Magnetic response of FeRh to static and dynamic disorder. RSC Advances, 2020, 10, 14386-14395.	1.7	21
30	Positron annihilation lifetime spectroscopy at a superconducting electron accelerator. Journal of Physics: Conference Series, 2017, 791, 012004.	0.3	20
31	InP nanocrystals on silicon for optoelectronic applications. Nanotechnology, 2012, 23, 485204.	1.3	19
32	Probing the Impact of the Initiator Layer on Grafted-from Polymer Brushes: A Positron Annihilation Spectroscopy Study. Macromolecules, 2017, 50, 5574-5581.	2.2	18
33	Boosting Roomâ€Temperature Magnetoâ€Ionics in a Nonâ€Magnetic Oxide Semiconductor. Advanced Functional Materials, 2020, 30, 2003704.	7.8	18
34	Patterning of magnetic structures on austenitic stainless steel by local ion beam nitriding. Acta Materialia, 2008, 56, 4570-4576.	3.8	17
35	Engineering of optical and electrical properties of ZnO by non-equilibrium thermal processing: The role of zinc interstitials and zinc vacancies. Journal of Applied Physics, 2017, 122, 035303.	1.1	17
36	Microstructure, defect structure and hydrogen trapping in zirconium alloy Zr-1Nb treated by plasma immersion Ti ion implantation and deposition. Journal of Alloys and Compounds, 2018, 732, 80-87.	2.8	17

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37	Vacancy-Hydrogen Interaction in Niobium during Low-Temperature Baking. Scientific Reports, 2020, 10, 8300.	1.6	17
38	Controlled generation of ferromagnetic martensite from paramagnetic austenite in AISI 316L austenitic stainless steel. Journal of Materials Research, 2009, 24, 565-573.	1.2	16
39	Ion irradiation induced enhancement of out-of-plane magnetic anisotropy in ultrathin Co films. Journal of Applied Physics, 2013, 113, 17C109.	1.1	16
40	Depth selective magnetic phase coexistence in FeRh thin films. APL Materials, 2020, 8, .	2.2	15
41	Flexible IGZO TFTs and Their Suitability for Space Applications. IEEE Journal of the Electron Devices Society, 2019, 7, 1182-1190.	1.2	14
42	The role of open-volume defects in the annihilation of antisites in a B2-ordered alloy. Acta Materialia, 2019, 176, 167-176.	3.8	14
43	Exploring point defects and trap states in undoped SrTiO3 single crystals. Journal of the European Ceramic Society, 2022, 42, 1510-1521.	2.8	14
44	Ion beam synthesis of Fe nanoparticles in MgO and yttria-stabilized zirconia. Journal of Applied Physics, 2006, 99, 08N701.	1.1	13
45	Magneto-Ionics in Single-Layer Transition Metal Nitrides. ACS Applied Materials & Interfaces, 2021, 13, 30826-30834.	4.0	13
46	Formation and time dynamics of hydrogen-induced vacancies in nickel. Acta Materialia, 2021, 219, 117264.	3.8	13
47	Defect Nanostructure and its Impact on Magnetism of Î±â€Cr₂O₃ Thin Films. Small, 2022, 18, e2201228.	5.2	13
48	III-V/Si on silicon-on-insulator platform for hybrid nanoelectronics. Journal of Applied Physics, 2014, 115, .	1.1	12
49	Point and extended defects in heteroepitaxial Î²â''Ga2O3 films. Physical Review Materials, 2020, 4, .	0.9	12
50	Nonmagnetic to magnetic nanostructures via ion irradiation. Microelectronic Engineering, 2006, 83, 1721-1725.	1.1	11
51	Magnetic layer formation on plasma nitrided CoCrMo alloy. Surface and Coatings Technology, 2011, 205, S280-S285.	2.2	11
52	Formation of Co nanodisc with enhanced perpendicular magnetic anisotropy driven by <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mi mathvariant="normal">Ga</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math> ion irradiation on Pt/Co/Pt films. Physical Review B, 2016, 94, .	1.1	11
53	A detailed ellipsometric porosimetry and positron annihilation spectroscopy study of porous organosilicate-glass films with various ratios of methyl terminal and ethylene bridging groups. Microporous and Mesoporous Materials, 2020, 306, 110434.	2.2	11
54	Effect of roughness and nanoporosity on optical properties of black and reflective Al films prepared by magnetron sputtering. Journal of Alloys and Compounds, 2021, 872, 159744.	2.8	11

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55	Domain structure of magnetically micro-patterned PtMn/NiFe exchange bias bilayers. IEEE Transactions on Magnetics, 2005, 41, 3610-3612.	1.2	10
56	Domain structure during magnetization reversal of PtMnâˆ•CoFe exchange bias micropatterned lines. Journal of Applied Physics, 2006, 100, 043918.	1.1	10
57	Magnetization dynamics of buckling domain structures in patterned thin films. Physical Review B, 2012, 86, .	1.1	9
58	Synthesis and characterization of MnAs and MnP nanoclusters embedded in IIIâ€“V semiconductors. Materials Research Express, 2014, 1, 026105.	0.8	9
59	Exploring the antisite disorder and oxygen vacancies in Sr<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e281" altimg="si7.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>FeMoO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e289" altimg="si8.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>6</mml:mn></mml:mrow></mml:msub>	1.0	9
60	Positron annihilation analysis of nanopores and growth mechanism of oblique angle evaporated TiO2 and SiO2 thin films and multilayers. Microporous and Mesoporous Materials, 2020, 295, 109968.	2.2	8
61	Zinc Oxide Defect Microstructure and Surface Chemistry Derived from Oxidation of Metallic Zinc: Thinâ€Film Transistor and Sensor Behavior of ZnO Films and Rods. Chemistry - A European Journal, 2021, 27, 5422-5431.	1.7	8
62	Effect of Ga+ irradiation on the magneto-optic spectra of Pt/Co/Pt sandwiches. Thin Solid Films, 2012, 520, 7169-7172.	0.8	7
63	Effect of Ga+ irradiation in molecular-beam epitaxy grown Pt/Co/Pt thin films studied by magneto-optic spectroscopy. Journal of Applied Physics, 2014, 115, 17C106.	1.1	7
64	On defectsâ€™ role in enhanced perpendicular magnetic anisotropy in Pt/Co/Pt, induced by ion irradiation. Journal of Physics Condensed Matter, 2019, 31, 185801.	0.7	7
65	Characterisation of micropores in plasma deposited SiO _x films by means of positron annihilation lifetime spectroscopy. Journal Physics D: Applied Physics, 2020, 53, 475205.	1.3	7
66	Environment Controlled Dewetting of Rhâ€“Pd Bilayers: A Route for Coreâ€“Shell Nanostructure Synthesis. Journal of Physical Chemistry C, 2012, 116, 14401-14407.	1.5	6
67	Improvement of luminescence properties of n-GaN using TEGa precursor. Journal of Crystal Growth, 2020, 531, 125383.	0.7	6
68	Critical Role of Electrical Resistivity in Magnetoionics. Physical Review Applied, 2021, 16, .	1.5	6
69	Phase evolution of Te-hyperdoped Si upon furnace annealing. Applied Surface Science, 2021, 567, 150755.	3.1	6
70	Light-driven permanent transition from insulator to conductor. Physical Review B, 2021, 104, .	1.1	6
71	Nanoscaled LiMn₂O₄ for Extended Cycling Stability in the 3 V Plateau. ACS Applied Materials & Interfaces, 2022, 14, 33438-33446.	4.0	6
72	Ultrathin Co films with Pt and Au coversâ€”magnetic and structural properties driven by Ga⁺ ion irradiation. New Journal of Physics, 2021, 23, 023015.	1.2	5

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73	Microstructure and Nanoscopic Porosity in Black Pd Films. Acta Physica Polonica A, 2020, 137, 222-226.	0.2	5
74	Study of Nanoscopic Porosity in Black Metals by Positron Annihilation Spectroscopy. Acta Physica Polonica B, 2020, 51, 383.	0.3	5
75	Influence of surface activation on the microporosity of PEâ€CVD and PEâ€ALD SiO_x thin films on PDMS. Plasma Processes and Polymers, 2022, 19, .	1.6	5
76	Magnetism and Magnetoelectricity of Textured Polycrystalline Bulk Cr₂O₃ Sintered in Conditions Far out of Equilibrium. ACS Applied Electronic Materials, 2022, 4, 2943-2952.	2.0	5
77	Unravelling the Origin of Ultraâ€Low Conductivity in SrTiO₃ Thin Films: Sr Vacancies and Ti on Aâ€Sites Cause Fermi Level Pinning. Advanced Functional Materials, 2022, 32, .	7.8	5
78	Formation of heavy clusters in ion-irradiated compounds. Vacuum, 2019, 164, 149-152.	1.6	4
79	Thermal kinetics of free volume in porous spin-on dielectrics: Exploring the network- and pore-properties. Microporous and Mesoporous Materials, 2020, 308, 110457.	2.2	4
80	Cation non-stoichiometry in Fe:SrTiO₃ thin films and its effect on the electrical conductivity. Nanoscale Advances, 2021, 3, 6114-6127.	2.2	4
81	Tuned AFMâ€“FM coupling by the formation of vacancy complex in Gd_{0.6}Ca_{0.4}MnO₃ thin film lattice. Journal of Physics Condensed Matter, 2021, 33, 255803.	0.7	4
82	Dissolution of donor-vacancy clusters in heavily doped n-type germanium. New Journal of Physics, 2020, 22, 123036.	1.2	4
83	The mechanism behind the high radiation tolerance of Feâ€“Cr alloys. Journal of Applied Physics, 2022, 131, .	1.1	4
84	Ion Intercalation in Lanthanum Strontium Ferrite for Aqueous Electrochemical Energy Storage Devices. ACS Applied Materials & Interfaces, 2022, 14, 18486-18497.	4.0	4
85	FMR study of ultrathin Co magnetic films on vicinal Si(1 1 1) substrates. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E911-E912.	1.0	3
86	Reflectivity characterisation of ion irradiated exchange bias FeMnâ€“FeNi films. Journal of Magnetism and Magnetic Materials, 2005, 286, 225-228.	1.0	3
87	Magnetic Measurements as a Sensitive Tool for Studying Dehydrogenation Processes in Hydrogen Storage Materials. Journal of Physical Chemistry C, 2010, 114, 16818-16822.	1.5	3
88	Mapping the Structure of Oxygen-Doped Wurtzite Aluminum Nitride Coatings from Ab Initio Random Structure Search and Experiments. ACS Applied Materials & Interfaces, 2021, 13, 5762-5771.	4.0	3
89	Positron Structural Analysis of ScN Films Deposited on MgO Substrate. Acta Physica Polonica A, 2020, 137, 209-214.	0.2	3
90	Defects in Thin Layers of High Entropy Alloy HfNbTaTiZr. Acta Physica Polonica A, 2020, 137, 219-221.	0.2	3

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91	Radiation damage evolution in pure W and W-Cr-Hf alloy caused by 5ÂMeV Au ions in a broad range of dpa. Nuclear Materials and Energy, 2021, 29, 101085.	0.6	3
92	Modification of Porous Ultralow-k Film by Vacuum Ultraviolet Emission. ACS Applied Electronic Materials, 2022, 4, 2760-2776.	2.0	3
93	Effects of thermal annealing on structural and magnetic properties of thin Pt/Cr/Co multilayers. Journal of Magnetism and Magnetic Materials, 2010, 322, 3464-3469.	1.0	2
94	Conductivity type and crystal orientation of GaAs nanocrystals fabricated in silicon by ion implantation and flash lamp annealing. Nuclear Instruments & Methods in Physics Research B, 2013, 312, 104-109.	0.6	2
95	Metal oxide double layer capacitors by electrophoretic deposition of metal oxides. Fabrication, electrical characterization and defect analysis using positron annihilation spectroscopy. Journal of Materials Chemistry C, 2018, 6, 9501-9509.	2.7	2
96	An experimental investigation of light emission produced in the process of positronium formation in matter. Physical Chemistry Chemical Physics, 2021, 23, 11264-11271.	1.3	2
97	Investigation of Optical Properties and Defects Structure of Rare Earth (Sm, Gd, Ho) Doped Zinc Oxide Thin Films Prepared by Pulsed Laser Deposition. Acta Physica Polonica A, 2020, 137, 215-218.	0.2	2
98	Strongly Enhanced Growth of High-Temperature Superconducting Films on an Advanced Metallic Template. Crystal Growth and Design, 2022, 22, 2097-2104.	1.4	2
99	The impact of high hydrostatic pressure maintenance after high-pressure torsion on phenomena during high hydrostatic pressure annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142874.	2.6	2
100	Ga+ion irradiation-induced changes in magnetic anisotropy of a Pt/Co/Pt thin film studied by X-ray magnetic circular dichroism. EPJ Web of Conferences, 2013, 40, 08002.	0.1	1
101	Low Temperature and Radiation Stability of Flexible IGZO TFTs and their Suitability for Space Applications. , 2018, , .		1
102	Depth Resolved Measurements of Atomic Scale Defects in Ion Irradiated Fe Alloys. Microscopy and Microanalysis, 2019, 25, 1546-1547.	0.2	1
103	Ion-induced processes in polymer composite materials: Positron annihilation spectroscopy in combination with UV-Vis absorption and Raman spectroscopy. AIP Conference Proceedings, 2019, , .	0.3	1
104	Measurement and Simulation of Vacancy Formation in 2-MeV Self-irradiated Pure Fe. Jom, 2020, 72, 2436-2444.	0.9	1
105	A secret luminescence killer in deepest QWs of InGaN/GaN multiple quantum well structures. Journal of Crystal Growth, 2020, 536, 125579.	0.7	1
106	Positronium Probing of Pores in Zirconia Nanopowders. Acta Physica Polonica A, 2017, 132, 1564-1568.	0.2	1
107	Positronium Formation in Nanostructured Metals. Acta Physica Polonica A, 2017, 132, 1579-1584.	0.2	1
108	Analysis of the Ni<mml:math altimg="si35.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	1.0	0

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109	Effect of low energy He+-ion irradiation on structural and magnetic properties of thin Pt/Cr/Co multilayers. Nuclear Instruments & Methods in Physics Research B, 2011, 272, 96-96.	0.6	0
110	Application of Positron Beams to the Investigation of Memristive Materials and Diluted Magnetic Semiconductors. Defect and Diffusion Forum, 0, 331, 235-251.	0.4	0
111	Porosity in Ce4+ and Mg2+ doped zirconia nanomaterials. AIP Conference Proceedings, 2019, , .	0.3	0
112	Solution synthesis and dielectric properties of alumina thin films: understanding the role of the organic additive in film formation. Dalton Transactions, 2021, 50, 8811-8819.	1.6	0
113	Zinc Oxide Defect Microstructure and Surface Chemistry Derived from Oxidation of Metallic Zinc. Thin Film Transistor and Sensoric Behaviour of ZnO Films and Rods. Chemistry - A European Journal, 2021, 27, 5312-5312.	1.7	0
114	Defect Characterization Using Positron Annihilation Spectroscopy on Laser-Ablated Surfaces. Jom, 2021, 73, 4221.	0.9	0
115	Quenched-in Vacancies and Hardening of Fe-Al Intermetallics. Acta Physica Polonica A, 2020, 137, 255-259.	0.2	0
116	Fundamental studies on the curing behavoir of porous CVD and spin-on dielectrics. , 2020, , .		0
117	Manipulating magnetic and magnetoresistive properties by oxygen vacancy complexes in GCMO thin films. Journal of Physics Condensed Matter, 2022, 34, 155804.	0.7	0