

Amanda K Petford-Long

List of Publications by Year in descending order

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119
papers

3,753
citations

218381

26
h-index

133063

59
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119
all docs

119
docs citations

119
times ranked

5193
citing authors

#	ARTICLE	IF	CITATIONS
1	Interface-induced phenomena in magnetism. <i>Reviews of Modern Physics</i> , 2017, 89, .	16.4	672
2	Atomic scale structure of sputtered metal multilayers. <i>Acta Materialia</i> , 2001, 49, 4005-4015.	3.8	664
3	Preparation of transmission electron microscopy cross-section specimens using focused ion beam milling. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001, 19, 2186-2193.	0.9	223
4	Determination of the isothermal nucleation and growth parameters for the crystallization of thin Ge ₂ Sb ₂ Te ₅ films. <i>Journal of Applied Physics</i> , 2002, 92, 3116-3123.	1.1	165
5	Towards data-driven next-generation transmission electron microscopy. <i>Nature Materials</i> , 2021, 20, 274-279.	13.3	130
6	Comparing the Johnsonâ€™Mehlâ€™Avramiâ€™Kolmogorov equations for isothermal and linear heating conditions. <i>Thermochimica Acta</i> , 2001, 378, 97-105.	1.2	126
7	Three-Dimensional Study of the Vector Potential of Magnetic Structures. <i>Physical Review Letters</i> , 2010, 104, 253901.	2.9	84
8	Atomic-resolution study of structural rearrangements in small platinum crystals. <i>Ultramicroscopy</i> , 1986, 20, 71-75.	0.8	82
9	Nanoscale Skyrmions in a Nonchiral Metallic Multiferroic: Ni ₂ MnGa. <i>Nano Letters</i> , 2016, 16, 4141-4148.	4.5	79
10	Visualization of the Magnetic Structure of Sculpted Three-Dimensional Cobalt Nanospirals. <i>Nano Letters</i> , 2014, 14, 759-764.	4.5	73
11	Structural studies of Ag nanocrystals embedded in amorphous Al ₂ O ₃ grown by pulsed laser deposition. <i>Nanotechnology</i> , 2002, 13, 465-470.	1.3	63
12	Catalyst Incorporation at Defects during Nanowire Growth. <i>Nano Letters</i> , 2012, 12, 167-171.	4.5	58
13	Three-dimensional ferroelectric domain imaging of epitaxial BiFeO ₃ thin films using angle-resolved piezoresponse force microscopy. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	54
14	Effect of Ga implantation on the magnetic properties of permalloy thin films. <i>Journal of Applied Physics</i> , 2002, 91, 9937.	1.1	51
15	Thickness and grain-size dependence of the coercivity in permalloy thin films. <i>Journal of Applied Physics</i> , 1997, 81, 4122-4124.	1.1	50
16	Optical and magneto-optical properties of Fe nanoparticles. <i>Physical Review B</i> , 2002, 65, .	1.1	48
17	Magnetic behavior of Fe:Al ₂ O ₃ nanocomposite films produced by pulsed laser deposition. <i>Journal of Applied Physics</i> , 2001, 90, 6268-6274.	1.1	46
18	Real-Time Atomic-Resolution Imaging of Polymorphic Changes in Ruthenium Clusters. <i>Angewandte Chemie International Edition in English</i> , 1988, 27, 555-558.	4.4	40

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19	Broad ion beam milling of focused ion beam prepared transmission electron microscopy cross sections for high resolution electron microscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 982-985.	0.9	38
20	Nanoscale piezoresponse studies of ferroelectric domains in epitaxial BiFeO ₃ nanostructures. Journal of Applied Physics, 2009, 105, 061619.	1.1	37
21	Preparation of site specific transmission electron microscopy plan-view specimens using a focused ion beam system. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 755.	1.6	33
22	Enhanced spin signals due to native oxide formation in Ni ₈₀ Fe ₂₀ /Ag lateral spin valves. Applied Physics Letters, 2010, 97, .	1.5	31
23	Understanding Complex Magnetic Spin Textures with Simulation-Assisted Lorentz Transmission Electron Microscopy. Physical Review Applied, 2021, 15, .	1.5	31
24	Ferroelectric Domain Wall Motion in Freestanding Single-Crystal Complex Oxide Thin Film. Advanced Materials, 2020, 32, e1907036.	11.1	30
25	Transmission Electron Microscopy of Multilayer Thin Films. Annual Review of Materials Research, 2008, 38, 559-584.	4.3	28
26	Magnetization reversal of the ferromagnetic layer in IrMn/CoFe bilayers. Journal of Applied Physics, 2002, 92, 6699-6707.	1.1	27
27	Focused ion beam micromachining of three-dimensional structures and three-dimensional reconstruction to assess their shape. Journal of Micromechanics and Microengineering, 2002, 12, 111-114.	1.5	27
28	Atom probe analysis of roughness and chemical intermixing in CoFe/Cu films (invited). Journal of Applied Physics, 2001, 89, 7517-7521.	1.1	26
29	Applications of nanocomposites. Scripta Materialia, 2001, 44, 2055-2059.	2.6	24
30	Application of a focused ion beam system to micro and nanoengineering. Materials Science and Technology, 2002, 18, 743-748.	0.8	24
31	Magnetization reversal processes in exchange-biased spin-valve structures. IEEE Transactions on Magnetics, 2001, 37, 565-570.	1.2	23
32	<i>In situ</i> oxidation processes for In III-V compound semiconductors studied by high-resolution electron microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1986, 54, 837-850.	0.8	22
33	Electric and Magnetic Phenomena Studied by <i>In Situ</i> Transmission Electron Microscopy. MRS Bulletin, 2008, 33, 101-106.	1.7	21
34	Less is More: Improved Thermal Stability and Plasmonic Response in Au Films via the Use of SubNanometer Ti Adhesion Layers. ACS Applied Materials & Interfaces, 2019, 11, 7607-7614.	4.0	21
35	Quantifying chiral exchange interaction for Néel-type skyrmions via Lorentz transmission electron microscopy. Physical Review B, 2019, 99, .	1.1	21
36	On the growth of small crystals of Cd, Zn, Pt and Rh during electron microscope observations. Journal of Crystal Growth, 1987, 80, 218-224.	0.7	20

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37	Atom probe analysis and modelling of interfaces in magnetic multilayers. Ultramicroscopy, 1992, 47, 367-374.	0.8	20
38	Bipolar resistance switching in Pt/CuOx/Pt via local electrochemical reduction. Applied Physics Letters, 2014, 104, .	1.5	19
39	The effects of annealing on magnetic domain structure and interface profile in sputtered Fe/Cr multilayer films. Journal of Magnetism and Magnetic Materials, 1993, 126, 117-120.	1.0	18
40	Transmission Electron Microscopy Study of the Fe(001) MgO (001) Interface for Magnetic Tunnel Junctions. IEEE Transactions on Magnetics, 2007, 43, 2779-2781.	1.2	18
41	Visualization of magnetic domain structure changes induced by interfacial strain in $\text{CoFe}_2\text{O}_4/\text{BaTiO}_3$ heterostructures. Journal Physics D: Applied Physics, 2013, 46, 055001.	1.3	18
42	Freestanding Ferroelectric Bubble Domains. Advanced Materials, 2021, 33, e2105432.	11.1	18
43	Effect of Ti seed layer on the magnetization reversal process of Co/NiFe/Al-oxide/NiFe junction films. Journal of Applied Physics, 2002, 91, 5234-5239.	1.1	17
44	Optical spectroscopy and energy-filtered transmission electron microscopy of surface plasmons in core-shell nanoparticles. Journal of Applied Physics, 2007, 101, 024307.	1.1	17
45	In situ TEM observation of magnetic materials. Microscopy Research and Technique, 2009, 72, 187-196.	1.2	17
46	Structural studies of pulsed-laser deposited nanocomposite metal-oxide films. Journal of Microscopy, 2001, 201, 250-255.	0.8	16
47	Effect of annealing and applied bias on barrier shape in CoFe/MgO/CoFe tunnel junctions. Physical Review B, 2011, 83, .	1.1	16
48	The structural and magnetic characterization of molecular-beam-epitaxy-grown FeMn-NiFe exchange-biased bilayers. IEEE Transactions on Magnetics, 2002, 38, 2758-2760.	1.2	15
49	Magnetic properties of patterned tunnel junctions. Journal of Applied Physics, 2003, 93, 7287-7289.	1.1	15
50	Nonuniform magnetic structure in Nd ₂ Fe ₁₄ B/Fe ₃ B nanocomposite materials. Journal of Applied Physics, 2003, 93, 8119-8121.	1.1	15
51	Effects of elemental distributions on the behavior of MgO-based magnetic tunnel junctions. Journal of Applied Physics, 2011, 109, 103909.	1.1	15
52	Curved Three-Dimensional Cobalt Nanohelices for Use in Domain Wall Device Applications. ACS Applied Nano Materials, 2020, 3, 6009-6016.	2.4	14
53	Atomic Structural Analysis of Nanowire Defects and Polytypes Enabled Through Cross-sectional Lattice Imaging. Small, 2012, 8, 1717-1724.	5.2	13
54	Nanocrystallization in Fluorochlorozirconate Glass-ceramics. Journal of the American Ceramic Society, 2013, 96, 3617-3621.	1.9	13

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55	The real-time growth of atom planes on Ru, Rh and Sn microcrystals observed at atomic resolution. <i>Journal of Crystal Growth</i> , 1988, 89, 165-170.	0.7	12
56	Structure-property relationships in self-assembled metalorganic chemical vapor deposition-grown CoFe ₂ O ₄ /PbTiO ₃ multiferroic nanocomposites using three-dimensional characterization. <i>Journal of Applied Physics</i> , 2011, 110, 034103.	1.1	12
57	Evaluation of a Fluorochlorozirconate Glass-Ceramic Storage Phosphor Plate for Gamma-Ray Computed Radiography. <i>Journal of the American Ceramic Society</i> , 2015, 98, 2541-2547.	1.9	11
58	High-resolution electron microscopy study of tunnelling junctions with AlN and AlON barriers. <i>Journal of Applied Physics</i> , 2001, 89, 6874-6876.	1.1	10
59	Structure and thermal stability of Fe : Al ₂ O ₃ nanocomposite films. <i>Journal Physics D: Applied Physics</i> , 2002, 35, 916-922.	1.3	10
60	Magnetisation reversal of the ferromagnetic layer in IrMn/CoFe bilayer films. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 242-245, 1073-1076.	1.0	10
61	A Method for Directly Correlating Site-Specific Cross-Sectional and Plan-View Transmission Electron Microscopy of Individual Nanostructures. <i>Microscopy and Microanalysis</i> , 2012, 18, 1410-1418.	0.2	10
62	<i>In situ</i> TEM study of reversible and irreversible electroforming in Pt/Ti:NiO/Pt heterostructures. <i>Physica Status Solidi - Rapid Research Letters</i> , 2015, 9, 301-306.	1.2	10
63	Atomar aufgelöste Echtzeit-Abbildung polymorpher Änderungen bei Ruthenium-Clustern. <i>Angewandte Chemie</i> , 1988, 100, 580-583.	1.6	9
64	In Situ Transmission Electron Microscopy Studies of the Magnetization Reversal Mechanism in Information Storage Materials. <i>Microscopy and Microanalysis</i> , 1998, 4, 325-333.	0.2	9
65	Patterning magnetic antidot-type arrays by Ga ⁺ implantation. <i>IEEE Transactions on Magnetics</i> , 2002, 38, 2553-2555.	1.2	9
66	Structural and Kinetic Analysis of BaCl ₂ Nanocrystals in Fluorochlorozirconate Glass-Ceramics. <i>Journal of the American Ceramic Society</i> , 2015, 98, 1099-1104.	1.9	9
67	Ferroelectric Domain Studies of Patterned (001) BiFeO ₃ by Angle-Resolved Piezoresponse Force Microscopy. <i>Scientific Reports</i> , 2018, 8, 203.	1.6	9
68	Active analog tuning of the phase of light in the visible regime by bismuth-based metamaterials. <i>Nanophotonics</i> , 2020, 9, 885-896.	2.9	9
69	The use of high resolution electron microscopy and image simulation to determine the sharpness of InP/GaInAs interfaces in multiple quantum-well structures. <i>Ultramicroscopy</i> , 1989, 31, 385-397.	0.8	8
70	Combined study of multiple-quantum-well structures using high resolution electron microscopy imaging and analysis in conjunction with the position-sensitive atom probe. <i>Materials Characterization</i> , 1990, 25, 157-176.	1.9	8
71	Lorentz microscopy study of magnetization reversal mechanism in magnetic tunnel junction elements. <i>Journal of Applied Physics</i> , 2001, 89, 7368-7370.	1.1	7
72	Direct Observation of Domain Structure and Magnetization Reversal of Magnetic Thin Films Using Lorentz Transmission Electron Microscopy. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 4891-4896.	0.8	6

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73	Structure and chemistry of manganite based tunnel junctions. Journal of Applied Physics, 2001, 89, 6757-6759.	1.1	6
74	Kinetics of grain-boundary reactions at semimetal-semiconductor interfaces observed during <i>in-situ</i> transmission electron microscope annealing. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 74, 907-918.	0.8	5
75	Reactive sputtering of high moment Fe-N soft magnetic films with <i>in-situ</i> plasma diagnosis and control. IEEE Transactions on Magnetics, 2001, 37, 2284-2287.	1.2	5
76	Lorentz transmission electron microscopy and magnetic force microscopy characterization of NiFe/Al-oxide/Co films. Journal of Applied Physics, 2002, 91, 780-784.	1.1	5
77	Crystalline structure and magnetic and magneto-optical properties of MnSbBi thin films. Thin Solid Films, 2002, 410, 28-37.	0.8	5
78	The structural characterisation of molecular beam epitaxy-grown exchange-biased bilayers. Thin Solid Films, 2002, 413, 41-45.	0.8	5
79	The influence of laser annealing on the crystallization processes in amorphous Co-rich alloys. Journal of Materials Science, 2002, 37, 2773-2780.	1.7	5
80	Analysis of computational EELS modelling results for MgO-based systems. Ultramicroscopy, 2010, 110, 1059-1069.	0.8	5
81	Magneto-optical response of isolated and embedded Fe nanoparticles. IEEE Transactions on Magnetics, 2001, 37, 1416-1418.	1.2	4
82	Magnetization reversal in the pinned layer of PtMnCr/NiFe exchange biased bilayers. Journal of Applied Physics, 2001, 89, 6591-6593.	1.1	4
83	Epitaxial PtMn ²⁺ /NiFe exchange-biased bilayers containing directly deposited ordered PtMn. Journal of Applied Physics, 2005, 97, 10C512.	1.1	4
84	Field-Dependent Magnetic Domain Behavior in van der Waals Fe ₃ GeTe ₂ . Jom, 2022, 74, 2310-2318.	0.9	4
85	Atom-Probe Microanalysis of Metallic Nanostructured Materials. Materials Research Society Symposia Proceedings, 1992, 286, 167.	0.1	3
86	Determination of hydrogen ordering within the \hat{I}^2 -RH ₂ +xphase (R= Ho, Y) using electron diffraction techniques. Journal of Applied Crystallography, 2000, 33, 1246-1252.	1.9	3
87	Microstructural studies of top and bottom magnetic tunnel junctions. Applied Physics Letters, 2001, 79, 57-59.	1.5	3
88	Effects of two in-plane fields on the magnetization reversal mechanism in magnetic tunnel junction elements. Journal of Applied Physics, 2002, 91, 7703.	1.1	3
89	Effect of oxidation and annealing on tunnel barrier structure and composition in IrMn/CoFe/TiOx/CoFe magnetic tunnel junctions. Journal of Applied Physics, 2009, 106, .	1.1	3
90	The magnetic domain structure of Gd/W multilayer films observed at low temperatures by Lorentz microscopy. Journal of Magnetism and Magnetic Materials, 1993, 126, 41-44.	1.0	2

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91	Structural characterisation of multilayer films. <i>Thin Solid Films</i> , 1996, 275, 35-39.	0.8	2
92	Thermally activated reversal in exchange-coupled structures. <i>IEEE Transactions on Magnetics</i> , 2002, 38, 2773-2775.	1.2	2
93	Control of ferromagnetic coupling by in situ interface modification. <i>Journal of Applied Physics</i> , 2003, 94, 7687.	1.1	2
94	Direct Evidence of Topological Defects in Electron Waves through Nanoscale Localized Magnetic Charge. <i>Nano Letters</i> , 2018, 18, 6989-6994.	4.5	2
95	The effect of annealing on optical transmittance and structure of ZLANI fluorozirconate glass thin films. <i>Micron</i> , 2021, 140, 102977.	1.1	2
96	Large spin-to-charge conversion in ultrathin gold-silicon multilayers. <i>Physical Review Materials</i> , 2021, 5, .	0.9	2
97	A High Resolution TEM Study of In-Situ Surface Oxidation of Indium IIIâ€V Semiconductors. <i>Materials Research Society Symposia Proceedings</i> , 1986, 75, 725.	0.1	1
98	Atom Probe Studies of Interfaces in Metallic Multilayers. <i>Materials Research Society Symposia Proceedings</i> , 1991, 230, 79.	0.1	1
99	The correlation between microstructure, chemical profile and reflectivity changes in laser-irradiated Sb/Ge multilayer films. <i>Journal of Magnetism and Magnetic Materials</i> , 1993, 126, 599-601.	1.0	1
100	Lorentz Microscopy Observation of Magnetic Domain Structure Variation in NiFe/Au Multilayer Films Caused by Au Layer Thickness. <i>Materials Transactions, JIM</i> , 1999, 40, 883-886.	0.9	1
101	High Resolution Electron Microscopy Observation of Different Al-oxide Layers in Magnetic Tunnel Junctions. <i>Japanese Journal of Applied Physics</i> , 2001, 40, 5058-5064.	0.8	1
102	High resolution structural and magnetic imaging. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 242-245, 53-58.	1.0	1
103	The role of interfaces in the behavior of magnetic tunnel junction structures. <i>International Journal of Materials Research</i> , 2010, 101, 16-20.	0.1	1
104	Visualization of Magnetization in CoFe Nanofibers by Lorentz TEM and Electron Holography. <i>Microscopy and Microanalysis</i> , 2016, 22, 1692-1693.	0.2	1
105	Topological Defects and Interaction of Electron Waves and Localized Magnetic Charge. <i>Microscopy and Microanalysis</i> , 2018, 24, 940-941.	0.2	1
106	Correlative Magnetic Imaging of Heat-Assisted Magnetic Recording Media in Cross Section Using Lorentz TEM and MFM. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-5.	1.2	1
107	The Correlation of Optical Transmittance with Structural Evolution in Fluorozirconate Glass (ZLANI) Thin Films as a Function of Thermal Annealing. <i>Microscopy and Microanalysis</i> , 2019, 25, 2070-2071.	0.2	1
108	Mesoscale Confinement Effects and Emergent Quantum Interference in Titania Antidot Thin Films. <i>ACS Nano</i> , 2021, 15, 12935-12944.	7.3	1

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109	Geometric control of emergent antiferromagnetic order in coupled artificial spin ices. Cell Reports Physical Science, 2022, 3, 100846.	2.8	1
110	Thermally activated reversal in exchange-coupled structures. , 0, , .		0
111	Correlation of magnetoresistance with deposition parameters and annealing in CoFe/Cu multilayers. , 0, , .		0
112	The structural and magnetic characterisation of MBE-grown FeMn/NiFe exchange-biased bilayers. , 0, , .		0
113	Patterning magnetic antidot-type arrays by Ga/sup +/ implantation. , 0, , .		0
114	The development of information storage materials â€” How microscopy can help?. Pramana - Journal of Physics, 2002, 58, 1125-1129.	0.9	0
115	Growth and properties of epitaxial PtMn/NiFe bilayers on Si (001) substrate containing directly deposited ordered PtMn. Thin Solid Films, 2005, 489, 186-191.	0.8	0
116	Three-dimensional characterization of near-field transducers by electron tomography. Materials Characterization, 2012, 72, 104-110.	1.9	0
117	Three dimensional magnetic field reconstruction of artificial Skyrmion heterostructures. Microscopy and Microanalysis, 2015, 21, 1959-1960.	0.2	0
118	Europiumâ€doped barium chloride storage phosphor plate synthesized by pulsed laser deposition. Journal of the American Ceramic Society, 2021, 104, 4568-4576.	1.9	0
119	Structural characterisation of multilayer films. , 1996, , 35-39.		0