

# Christophe Gatel

## List of Publications by Year in descending order

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121  
papers

2,887  
citations

159585

30  
h-index

197818

49  
g-index

128  
all docs

128  
docs citations

128  
times ranked

3874  
citing authors

#	ARTICLE	IF	CITATIONS
1	Room temperature spin filtering in epitaxial cobalt-ferrite tunnel barriers. Applied Physics Letters, 2007, 91, .	3.3	184
2	Thickness dependence of anomalous magnetic behavior in epitaxial Fe <sub>3</sub> O <sub>4</sub> (111) thin films: Effect of density of antiphase boundaries. Physical Review B, 2004, 70, .	3.2	123
3	Magnetic Configurations of 30 nm Iron Nanocubes Studied by Electron Holography. Nano Letters, 2008, 8, 4293-4298.	9.1	121
4	Ultrasmall Functional Ferromagnetic Nanostructures Grown by Focused Electron-Beam-Induced Deposition. ACS Nano, 2011, 5, 7781-7787.	14.6	105
5	Imaging the Fine Structure of a Magnetic Domain Wall in a Ni Nanocylinder. Nano Letters, 2013, 13, 2053-2057.	9.1	101
6	Magnetotransport properties of Fe <sub>3</sub> O <sub>4</sub> epitaxial thin films: Thickness effects driven by antiphase boundaries. Journal of Applied Physics, 2006, 100, 103902.	2.5	82
7	Experimental application of sum rules for electron energy loss magnetic chiral dichroism. Physical Review B, 2007, 76, .	3.2	81
8	Tuning Complex Shapes in Platinum Nanoparticles: From Cubic Dendrites to Fivefold Stars. Angewandte Chemie - International Edition, 2012, 51, 4690-4694.	13.8	78
9	Use of long chain amine as a reducing agent for the synthesis of high quality monodisperse iron(0) nanoparticles. Journal of Materials Chemistry, 2011, 21, 13464.	6.7	71
10	Magnetic Configurations in Co/Cu Multilayered Nanowires: Evidence of Structural and Magnetic Interplay. Nano Letters, 2016, 16, 1230-1236.	9.1	68
11	3D Magnetic Induction Maps of Nanoscale Materials Revealed by Electron Holographic Tomography. Chemistry of Materials, 2015, 27, 6771-6778.	6.7	64
12	Size-Specific Spin Configurations in Single Iron Nanomagnet: From Flower to Exotic Vortices. Nano Letters, 2015, 15, 6952-6957.	9.1	63
13	Exchange bias in Co/CoO core-shell nanowires: Role of antiferromagnetic superparamagnetic fluctuations. Physical Review B, 2009, 80, .	3.2	55
14	Quantitative Nanoscale Magnetic Study of Isolated Diameter-Modulated FeCoCu Nanowires. ACS Nano, 2016, 10, 9669-9678.	14.6	54
15	Influence of a metallic or oxide top layer in epitaxial magnetic bilayers containing CoFe <sub>2</sub> O <sub>4</sub> (111) tunnel barriers. Physical Review B, 2007, 75, .	3.2	52
16	Magnetism of CoFe <sub>2</sub> O <sub>4</sub> ultrathin films on MgAl <sub>2</sub> O <sub>4</sub> driven by epitaxial strain. Applied Physics Letters, 2013, 103, .	3.3	50
17	Magnetic behavior and role of the antiphase boundaries in Fe <sub>3</sub> O <sub>4</sub> epitaxial films sputtered on MgO (001). European Physical Journal B, 2001, 24, 43-49.	1.5	49
18	Counting Elementary Charges on Nanoparticles by Electron Holography. Physical Review Letters, 2013, 111, 025501.	7.8	49

#	ARTICLE	IF	CITATIONS
19	Crystal growth of bullet-shaped magnetite in magnetotactic bacteria of the <i>Nitrospirae</i> phylum. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20141288.	3.4	48
20	Development of TEM and SEM high brightness electron guns using cold-field emission from a carbon nanotip. <i>Ultramicroscopy</i> , 2015, 151, 107-115.	1.9	48
21	Holographic vector field electron tomography of three-dimensional nanomagnets. <i>Communications Physics</i> , 2019, 2, 020101.	5.3	45
22	Epitaxial growth and ferrimagnetic behavior of MnFe <sub>2</sub> O <sub>4</sub> . <i>Physical Review B</i> , 2006, 74, 044411.	3.2	44
23	Structure, magnetic ordering, and spin filtering efficiency of NiFe <sub>2</sub> O <sub>4</sub> (111) ultrathin films. <i>Applied Physics Letters</i> , 2014, 104, 123101.	3.3	37
24	Inhomogeneous spatial distribution of the magnetic transition in an iron-rhodium thin film. <i>Nature Communications</i> , 2017, 8, 15703.	12.8	37
25	Restoration of bulk magnetic properties by strain engineering in epitaxial CoFe <sub>2</sub> O <sub>4</sub> (001) ultrathin films. <i>Applied Physics Letters</i> , 2011, 99, 122401.	3.3	35
26	Comparative study of Pt, Au and Ag growth on Fe <sub>3</sub> O <sub>4</sub> (001) surface. <i>Surface Science</i> , 2006, 600, 2650-2662.	1.9	34
27	Characterization of antiphase boundary network in Fe <sub>3</sub> O <sub>4</sub> (111) epitaxial thin films: Effect on anomalous magnetic behavior. <i>Physical Review B</i> , 2006, 74, 044411.	3.2	32
28	Optimal aperture sizes and positions for EMCD experiments. <i>Ultramicroscopy</i> , 2008, 108, 865-872.	1.9	31
29	Dynamic scattering theory for dark-field electron holography of 3D strain fields. <i>Ultramicroscopy</i> , 2014, 136, 42-49.	1.9	31
30	Morphology of Pt islands grown on MgO(001). <i>Journal of Crystal Growth</i> , 2003, 252, 424-432.	1.5	30
31	Stabilizing Vortices in Interacting Nano-Objects: A Chemical Approach. <i>Nano Letters</i> , 2012, 12, 3245-3250.	9.1	30
32	Experimental investigation of the vibrational density of states and electronic excitations in metallic nanocrystals. <i>Physical Review B</i> , 2014, 89, 041407.	3.2	30
33	Epitaxial growth and magnetic exchange anisotropy in Fe <sub>3</sub> O <sub>4</sub> /NiO bilayers grown on MgO(001) and Al <sub>2</sub> O <sub>3</sub> (0001). <i>European Physical Journal B</i> , 2005, 45, 157-168.	1.5	29
34	CoFe Nanodumbbells: Synthesis, Structure, and Magnetic Properties. <i>Nano Letters</i> , 2014, 14, 2747-2754.	9.1	29
35	Epitaxial growth of Au and Pt on Fe <sub>3</sub> O <sub>4</sub> (111) surface. <i>Surface Science</i> , 2007, 601, 1031-1039.	1.9	27
36	Off-Axial Aberration Correction using a B-COR for Lorentz and HREM Modes. <i>Microscopy and Microanalysis</i> , 2014, 20, 932-933.	0.4	27

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37	Air- and Water-Resistant Noble Metal Coated Ferromagnetic Cobalt Nanorods. ACS Nano, 2015, 9, 2792-2804.	14.6	27
38	Quantitative Observation of Magnetic Flux Distribution in New Magnetic Films for Future High Density Recording Media. Nano Letters, 2009, 9, 2803-2806.	9.1	26
39	Investigation of high quality magnetite thin films grown on SrTiO <sub>3</sub> (001) substrates by pulsed laser deposition. Thin Solid Films, 2012, 525, 115-120.	1.8	26
40	Quantitative in situ magnetization reversal studies in Lorentz microscopy and electron holography. Ultramicroscopy, 2013, 134, 144-154.	1.9	25
41	Determining the work function of a carbon-cone cold-field emitter by in situ electron holography. Micron, 2014, 63, 2-8.	2.2	25
42	One-Pot Seed-Mediated Growth of Co Nanoparticles by the Polyol Process: Unraveling the Heterogeneous Nucleation. Nano Letters, 2019, 19, 9160-9169.	9.1	25
43	Customized MFM probes based on magnetic nanorods. Nanoscale, 2020, 12, 10090-10097.	5.6	25
44	Optimized cobalt nanowires for domain wall manipulation imaged by <i>in situ</i> Lorentz microscopy. Applied Physics Letters, 2013, 102, .	3.3	23
45	Air-Stable Anisotropic Monocrystalline Nickel Nanowires Characterized Using Electron Holography. Nano Letters, 2018, 18, 1733-1738.	9.1	23
46	A new linear transfer theory and characterization method for image detectors. Part II: Experiment. Ultramicroscopy, 2012, 115, 78-87.	1.9	22
47	Molecular beam epitaxy and properties of GaAsBi/GaAs quantum wells grown by molecular beam epitaxy: effect of thermal annealing. Nanoscale Research Letters, 2014, 9, 123.	5.7	22
48	Unlimited acquisition time in electron holography by automated feedback control of transmission electron microscope. Applied Physics Letters, 2018, 113, .	3.3	22
49	Key Signatures of Magnetofossils Elucidated by Mutant Magnetotactic Bacteria and Micromagnetic Calculations. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	22
50	Experimental evidence of the spin dependence of electron reflections in magnetic CoFe <sub>2</sub> O <sub>4</sub> /Au/Fe <sub>3</sub> O <sub>4</sub> trilayers. Physical Review B, 2006, 73, . <a href="#">Microstructure and interface studies of mml:math</a>	3.2	21
51	$\text{LaVO}_3$ $\text{SrVO}_3$ Physical Review B, 2011, 83, .	3.2	21
52	Formation of strained interfaces in AlSb/InAs multilayers grown by molecular beam epitaxy for quantum cascade lasers. Journal of Applied Physics, 2015, 118, .	2.5	21
53	Role of internal demagnetizing field for the dynamics of a surface-modulated magnonic crystal. Physical Review B, 2017, 95, .	3.2	20
54	Dynamical effects in strain measurements by dark-field electron holography. Ultramicroscopy, 2014, 147, 70-85.	1.9	19

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55	Highly strained AlAs-type interfaces in InAs/AlSb heterostructures. Applied Physics Letters, 2016, 108, .	3.3	19
56	Magnetic-field induced rotation of magnetosome chains in silicified magnetotactic bacteria. Scientific Reports, 2018, 8, 7699.	3.3	19
57	Microstructure and mechanical properties of ultrafine-grained fcc/hcp cobalt processed by a bottom-up approach. Journal of Alloys and Compounds, 2010, 489, 424-428.	5.5	18
58	The use of Lorentz microscopy for the determination of magnetic reversal mechanism of exchange-biased Co <sub>30</sub> Fe <sub>70</sub> /NiMn bilayer. Journal of Magnetism and Magnetic Materials, 2009, 321, 3080-3083.	2.3	15
59	Effect of spatial and energy distortions on energy-loss magnetic chiral dichroism measurements: Application to an iron thin film. Ultramicroscopy, 2010, 110, 1033-1037.	1.9	15
60	Elastic strains at interfaces in InAs/AlSb multilayer structures for quantum cascade lasers. Applied Physics Letters, 2014, 104, 031907.	3.3	15
61	Exotic Transverse-Vortex Magnetic Configurations in CoNi Nanowires. ACS Nano, 2020, 14, 1399-1405.	14.6	15
62	c-axis inclined AlN film growth in planar system for shear wave devices. Diamond and Related Materials, 2008, 17, 1770-1774.	3.9	14
63	In situ electron holography of the dynamic magnetic field emanating from a hard-disk drive writer. Nano Research, 2015, 8, 1241-1249.	10.4	14
64	Magnetic imaging using geometrically constrained nano-domain walls. Nanoscale, 2019, 11, 4478-4488.	5.6	14
65	Mechanisms of epitaxy and defects at the interface in ultrathin YSZ films on Si(001). CrystEngComm, 2012, 14, 7851.	2.6	13
66	Optimization of off-axis electron holography performed with femtosecond electron pulses. Ultramicroscopy, 2019, 202, 26-32.	1.9	13
67	Magnetic properties of FeCo alloys measured by energy-loss magnetic chiral dichroism. Journal of Applied Physics, 2010, 107, .	2.5	11
68	Structure and chemical order in FeRh nanolayers epitaxially grown on MgO(001). Journal of Crystal Growth, 2011, 314, 336-340.	1.5	11
69	High-resolution imaging of remanent state and magnetization reversal of superdomain structures in high-density cobalt antidot arrays. Nanotechnology, 2014, 25, 385703.	2.6	10
70	Optimising electron microscopy experiment through electron optics simulation. Ultramicroscopy, 2017, 175, 67-80.	1.9	10
71	Distortion corrections of ESI data cubes for magnetic studies. Ultramicroscopy, 2009, 109, 1465-1471.	1.9	8
72	Analysis by high-resolution electron microscopy of elastic strain in thick InAs layers embedded in Ga <sub>0.47</sub> In <sub>0.53</sub> As buffers on InP(0 0 1) substrate. Acta Materialia, 2010, 58, 3238-3246.	7.9	8

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73	Electron holography study of the local magnetic switching process in magnetic tunnel junctions. Journal of Applied Physics, 2010, 107, 09D310.	2.5	8
74	Low-noise cold-field emission current obtained between two opposed carbon cone nanotips during <i>in situ</i> transmission electron microscope biasing. Applied Physics Letters, 2015, 106, .	3.3	8
75	Magnetism and morphology in faceted B2-ordered FeRh nanoparticles. Europhysics Letters, 2016, 116, 27006.	2.0	8
76	Dynamical holographic Moiré's in a TEM. Journal Physics D: Applied Physics, 2016, 49, 324001.	2.8	8
77	Lorentz microscopy mapping for domain wall structure study in $L_{10}$ FePd thin films. Ultramicroscopy, 2009, 110, 20-25.	1.9	7
78	Magnetic field strength and orientation effects on Co-Fe discontinuous multilayers close to percolation. Physical Review B, 2010, 82, .	3.2	7
79	Tunnel-mediated coupling between antiferromagnetic thin films. Physical Review B, 2014, 90, .	3.2	7
80	Structural investigation of magnetic FeRh epitaxial films. Materials Research Express, 2015, 2, 086401.	1.6	7
81	Quantitative 3D electromagnetic field determination of 1D nanostructures from single projection. Ultramicroscopy, 2016, 164, 24-30.	1.9	7
82	TEM study of structural hardening in a new martensitic steel for aeronautic application. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 576, 290-297.	5.6	6
83	Assessment of off-axis and in-line electron holography for measurement of potential variations in Cu(In,Ga)Se <sub>2</sub> thin-film solar cells. Advanced Structural and Chemical Imaging, 2016, 2, .	4.0	6
84	Probing domain walls in cylindrical magnetic nanowires with electron holography. Journal of Physics: Conference Series, 2017, 903, 012055.	0.4	6
85	Single-Crystalline Body Centered FeCo Nano-Octopods: From One-Pot Chemical Growth to a Complex 3D Magnetic Configuration. Nano Letters, 2021, 21, 3664-3670.	9.1	6
86	Field tunable three-dimensional magnetic nanotextures in cobalt-nickel nanowires. Physical Review Research, 2021, 3, .	3.6	6
87	Synthesis of magnetic Fe and Co nano-whiskers and platelets via physical vapor deposition. Materials and Design, 2021, 208, 109914.	7.0	6
88	Synthesis of carbon coated $\beta$ -SiC nanofibers by microwave plasma assisted chemical vapour deposition in CH <sub>4</sub> /H <sub>2</sub> gas mixture. Diamond and Related Materials, 2008, 17, 1660-1665.	3.9	5
89	In Depth Spatially Inhomogeneous Phase Transition in Epitaxial MnAs Film on GaAs(001). Nano Letters, 2017, 17, 2460-2466.	9.1	5
90	Epitaxial growth and exchange coupling in NiO/Fe <sub>3</sub> O <sub>4</sub> bilayers deposited on MgO(001) and Al <sub>2</sub> O <sub>3</sub> (001). Journal of Applied Physics, 2017, 121, 084301.	2.3	4

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91	Crystalline structure of oxide-based epitaxial tunnel junctions. <i>European Physical Journal: Special Topics</i> , 2009, 167, 53-58.	2.6	4
92	Platinum tripods as nanometric frequency multiplexing devices. <i>Nanoscale</i> , 2017, 9, 14635-14640.	5.6	4
93	Phase detection limits in off-axis electron holography from pixelated detectors: gain variations, geometric distortion and failure of reference-hologram correction. <i>Microscopy (Oxford, England)</i> , 2021, 70, 47-58.	1.5	3
94	Epitaxial growth micro-structure and magnetic studies of FePt nanoparticles/ $\frac{1}{4}$ MgO multi-layer composite thin films. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2014, 63, 166801.	0.5	3
95	Experimental evidence of the spin-dependence of electrons reflections in magnetic multilayers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2006, 126, 120-125.	3.5	2
96	Lorentz microscopy mapping during magnetization process of L1 <sub>0</sub> FePd thin films. <i>Journal of Physics: Conference Series</i> , 2008, 126, 012055.	0.4	2
97	Contrast enhancement of data measured with area detectors: a way to generalize the use of neutron diffraction for thin-film studies. <i>Journal of Applied Crystallography</i> , 2013, 46, 726-735.	4.5	2
98	Enhanced magnetization at the Cr/MgO(001) interface. <i>Applied Physics Letters</i> , 2015, 107, 251602.	3.3	2
99	Sb surfactant mediated growth of InAs/AlAs <sub>0.56</sub> Sb <sub>0.44</sub> strained quantum well for intersubband absorption at 1.55 $\mu$ m. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	2
100	Achievement of InSb Quantum Dots on InP(100) Substrates. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 060210.	1.5	1
101	Magnetic Configurations in Three-Dimensional Nanomagnets Explored by Electron Holographic Tomography. <i>Microscopy and Microanalysis</i> , 2018, 24, 914-915.	0.4	1
102	Multi magnetic states in Co/Cu multilayered cylindrical nanowires studied by combination of off-axis electron holography imaging and micromagnetic simulations. <i>Journal of Applied Physics</i> , 2019, 126, 163906.	2.5	1
103	Nanoparticle Ripening : A Versatile Approach for the Size and Shape Control of Metallic Iron Nanoparticles. <i>ChemPlusChem</i> , 2019, 84, 302-306.	2.8	1
104	2D and 3D Electron Holography Revealing Complex Magnetic Configurations in CoNi Nanowires. <i>Microscopy and Microanalysis</i> , 2020, 26, 1544-1545.	0.4	1
105	Mapping electric fields in real nanodevices by <i>operando</i> electron holography. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	1
106	Études par diffraction haute résolution et réflectivité de films minces épitaxiaux. <i>European Physical Journal Special Topics</i> , 2002, 12, 247-254.	0.2	0
107	Electron Microscopy Investigation of Magnetization Process in Thin Foils and Nanostructures. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1026, 1.	0.1	0
108	Magnetic Chiral Dichroism Studies using Energy Filtered Images. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1026, 1.	0.1	0

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109	Towards a Room Temperature Organic Spin Valve: Structural, Magnetic and Transport Properties of Fe <sub>3</sub> O <sub>4</sub> /PTCTE/Co Devices. Materials Research Society Symposia Proceedings, 2011, 1359, 193.	0.1	0
110	Mesures et modélisations des déformations élastiques autour de nanoparticules. Revue De Metallurgie, 2012, 109, 409-414.	0.3	0
111	Local Strain Measurements at Dislocations, Disclinations and Domain Boundaries. Microscopy and Microanalysis, 2014, 20, 1044-1045.	0.4	0
112	Local Chemical and Deformation Profiles in InAs/AlSb Multilayer Structures for Quantum Cascade Lasers. Microscopy and Microanalysis, 2015, 21, 1925-1926.	0.4	0
113	Off-Axis Electron Holography for the Quantitative Study of Magnetic Properties of Nanostructures: From the Single Nanomagnet to the Complex Device. Microscopy and Microanalysis, 2015, 21, 2147-2148.	0.4	0
114	Three Dimensional Visualization of Electromagnetic Fields from One Dimensional Nanostructures. Microscopy and Microanalysis, 2015, 21, 1977-1978.	0.4	0
115	Off-axis electron holography for the quantitative study of magnetic properties of nanostructures: from the single nanomagnet to the complex device.. , 2018, , .		0
116	Dynamic automation in transmission electron microscopy: application to electron holography. Microscopy and Microanalysis, 2021, 27, 248-250.	0.4	0
117	TEM Analysis Of Advanced Devices For Electronics Or Spintronics: From Structure To Properties. NATO Science for Peace and Security Series B: Physics and Biophysics, 2008, , 249-262.	0.3	0
118	Measuring lattice distortions from HR(S)TEM images. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C106-C106.	0.3	0
119	In Situ Lorentz Microscopy and Electron Holography Magnetization Studies of Ferromagnetic Focused Electron Beam Induced Nanodeposits. , 2017, , 305-338.		0
120	Orbital and spin sum rules for electron energy loss magnetic chiral dichroism: Application to metals and oxides. , 2008, , 359-360.		0
121	Defect-induced monopole injection and manipulation in artificial spin ice. Nature Communications, 2022, 13, .	12.8	0