

Matthieu Bugnet

List of Publications by Year in descending order

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78
papers

2,346
citations

218381

26
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214527

47
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87
all docs

87
docs citations

87
times ranked

4293
citing authors

#	ARTICLE	IF	CITATIONS
1	Segregation and clustering of solutes at grain boundaries in Mg-rare earth solid solutions. Acta Materialia, 2014, 79, 66-73.	3.8	185
2	Direct Measurement of Surface Termination Groups and Their Connectivity in the 2D MXene V_2CT_x Using NMR Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 13713-13720.	1.5	169
3	Enhanced and tunable surface plasmons in two-dimensional Ti_3C_2 stacks: Electronic structure versus boundary effects. Physical Review B, 2014, 89, .	1.1	122
4	Elucidating the Nature of the Active Phase in Copper/Ceria Catalysts for CO Oxidation. ACS Catalysis, 2016, 6, 1675-1679.	5.5	122
5	Chemical Structure of Nitrogen-Doped Graphene with Single Platinum Atoms and Atomic Clusters as a Platform for the PEMFC Electrode. Journal of Physical Chemistry C, 2014, 118, 3890-3900.	1.5	121
6	Can magneto-plasmonic nanohybrids efficiently combine photothermia with magnetic hyperthermia?. Nanoscale, 2015, 7, 18872-18877.	2.8	97
7	Strained Lattice with Persistent Atomic Order in Pt_3Fe_2 Intermetallic Core-Shell Nanocatalysts. ACS Nano, 2013, 7, 6103-6110.	7.3	95
8	Intracellular Biodegradation of Ag Nanoparticles, Storage in Ferritin, and Protection by a Au Shell for Enhanced Photothermal Therapy. ACS Nano, 2018, 12, 6523-6535.	7.3	91
9	Three-Dimensional Quantum Confinement of Charge Carriers in Self-Organized AlGaIn Nanowires: A Viable Route to Electrically Injected Deep Ultraviolet Lasers. Nano Letters, 2015, 15, 7801-7807.	4.5	80
10	Atmosphere-dependent stability and mobility of catalytic Pt single atoms and clusters on $\beta\text{-Al}_2\text{O}_3$. Nanoscale, 2019, 11, 6897-6904.	2.8	66
11	Three-Dimensional Self-Organization in Nanocomposite Layered Systems by Ultrafast Laser Pulses. ACS Nano, 2017, 11, 5031-5040.	7.3	65
12	XPS and EELS characterization of Mn_2SiO_4 , $MnSiO_3$ and $MnAl_2O_4$. Applied Surface Science, 2016, 379, 242-248.	3.1	63
13	Epitaxial growth and electrical transport properties of Cr_2GeC thin films. Physical Review B, 2011, 84, .	1.1	56
14	Spatially resolved surface valence gradient and structural transformation of lithium transition metal oxides in lithium-ion batteries. Physical Chemistry Chemical Physics, 2016, 18, 29064-29075.	1.3	51
15	Magneto-Thermal Metrics Can Mirror the Long-Term Intracellular Fate of Magneto-Plasmonic Nanohybrids and Reveal the Remarkable Shielding Effect of Gold. Advanced Functional Materials, 2017, 27, 1605997.	7.8	51
16	Contribution of core-loss fine structures to the characterization of ion irradiation damages in the nanolaminated ceramic Ti_3AlC_2 . Acta Materialia, 2013, 61, 7348-7363.	3.8	45
17	Direct Visualization and Control of Atomic Mobility at {100} Surfaces of Ceria in the Environmental Transmission Electron Microscope. Nano Letters, 2017, 17, 7652-7658.	4.5	45
18	Shape-selective synthesis of nanoceria for degradation of paraoxon as a chemical warfare simulant. Physical Chemistry Chemical Physics, 2019, 21, 5455-5465.	1.3	45

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19	Precipitation and grain growth modelling in Ti-Nb microalloyed steels. <i>Materialia</i> , 2019, 5, 100233.	1.3	42
20	Molecular beam epitaxial growth and characterization of Al(Ga)N nanowire deep ultraviolet light emitting diodes and lasers. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 364006.	1.3	41
21	Stability of the nitrogen-deficient Ti ₂ AlN x MAX phase in Ar ²⁺ -irradiated (Ti,Al)N/Ti ₂ AlN x multilayers. <i>Journal of Materials Science</i> , 2010, 45, 5547-5552.	1.7	39
22	Experimental evidence of Cr magnetic moments at low temperature in Cr ₂ A(A=Al, Ge)C. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 176002.	0.7	36
23	Atomic Ordering in InGaN Alloys within Nanowire Heterostructures. <i>Nano Letters</i> , 2015, 15, 6413-6418.	4.5	32
24	Anisotropy of $\langle \mathbf{m} \rangle$ response investigated by <i>ab initio</i> calculations and electron energy-loss spectroscopy. <i>Physical Review B</i> , 2010, 81, .	1.1	31
25	Artificial Solids by Design: Assembly and Electron Microscopy Study of Nanosheet-Derived Heterostructures. <i>Chemistry of Materials</i> , 2013, 25, 4892-4900.	3.2	29
26	Evidence of Eu ²⁺ <i>f</i> electrons in the valence band spectra of EuTiO ₃ and EuZrO ₃ . <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	28
27	Surface Segregation of Fe in Pt-Fe Alloy Nanoparticles: Its Precedence and Effect on the Ordered Phase Evolution during Thermal Annealing. <i>ChemCatChem</i> , 2015, 7, 3655-3664.	1.8	25
28	Metallic nanoparticle-based strain sensors elaborated by atomic layer deposition. <i>Applied Physics Letters</i> , 2017, 110, 123103.	1.5	25
29	Chemically sensitive amorphization process in the nanolaminated Cr ₂ AC (A=Al or Ge) system from TEM in situ irradiation. <i>Journal of Nuclear Materials</i> , 2013, 441, 133-137.	1.3	23
30	Enhanced figure of merit in Mg ₂ Si _{0.877} Ge _{0.1} Bi _{0.023} /multi wall carbon nanotube nanocomposites. <i>RSC Advances</i> , 2015, 5, 65328-65336.	1.7	20
31	Real-space localization and quantification of hole distribution in chain-ladder Sr ₃ Ca ₁₁ Cu ₂₄ O ₄₁ superconductor. <i>Science Advances</i> , 2016, 2, e1501652.	4.7	20
32	Synthesis routes of CeO ₂ nanoparticles dedicated to organophosphorus degradation: a benchmark. <i>CrystEngComm</i> , 2020, 22, 1725-1737.	1.3	20
33	Interplay between many-body effects and charge transfers in CrAlC bulk plasmon excitation. <i>Physical Review B</i> , 2012, 86, .	1.1	19
34	Effect of Silicon Carbide Nanoparticles on the Grain Boundary Segregation and Thermoelectric Properties of Bismuth Doped Mg ₂ Si _{0.7} Ge _{0.3} . <i>Journal of Electronic Materials</i> , 2016, 45, 6052-6058.	1.0	19
35	Laser-Empowered Random Metasurfaces for White Light Printed Image Multiplexing. <i>Advanced Functional Materials</i> , 2021, 31, 2010430.	7.8	19
36	Experimental and first-principles investigation of the electronic structure anisotropy of CrAlC. <i>Physical Review B</i> , 2014, 90, .	1.1	17

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37	Real-space mapping of electronic orbitals. Ultramicroscopy, 2017, 177, 26-29.	0.8	17
38	Laser-driven plasmonic gratings for hiding multiple images. Materials Horizons, 2019, 6, 978-983.	6.4	17
39	Atomic structure and bonding of the interfacial bilayer between Au nanoparticles and epitaxially regrown MgAl ₂ O ₄ substrates. Applied Physics Letters, 2014, 105, .	1.5	16
40	Oxygen 1s excitation and tetragonal distortion from core-hole effect in BaTiO ₃ . Physical Review B, 2013, 88, .	1.1	15
41	Temperature-dependent high energy-resolution EELS of ferroelectric and paraelectric BaTiO ₃ . Physical Review B, 2016, 93, .	1.1	15
42	Biom mineralization at Titanium Revealed by Correlative 4D Tomographic and Spectroscopic Methods. Advanced Materials Interfaces, 2018, 5, 1800262.	1.9	13
43	Three-dimensional structure and formation mechanisms of Y ₂ O ₃ hollow-precipitates in a Cu-based metallic glass. Materials and Design, 2019, 168, 107660.	3.3	13
44	On the variety and formation sequence of second-phase particles in nickel-based superalloys fabricated by laser powder bed fusion. Materialia, 2021, 15, 101037.	1.3	12
45	Imaging the Spatial Distribution of Electronic States in Graphene Using Electron Energy-Loss Spectroscopy: Prospect of Orbital Mapping. Physical Review Letters, 2022, 128, 116401.	2.9	12
46	Structural and electronic distortions in individual carbon nanotubes under laser irradiation in the electron microscope. Physical Review B, 2013, 87, .	1.1	11
47	Studying Tomorrow's Materials Today: Insights with Quantitative STEM, EELS. Microscopy and Microanalysis, 2014, 20, 78-79.	0.2	11
48	A High-Resolution TEM/EELS Study of the Effect of Doping Elements on the Sliding Mechanisms of Sputtered WS ₂ Coatings. Tribology Transactions, 2015, 58, 113-118.	1.1	11
49	Crystal Growth Mechanisms of BiFeO ₃ Nanoparticles. Inorganic Chemistry, 2019, 58, 11364-11371.	1.9	11
50	Heterogeneous diamond phases in compressed graphite studied by electron energy-loss spectroscopy. Diamond and Related Materials, 2016, 64, 190-196.	1.8	10
51	Wurtzite phase control for self-assisted GaAs nanowires grown by molecular beam epitaxy. Nanotechnology, 2021, 32, 155602.	1.3	10
52	Influence of an amorphous surface layer on the mechanical properties of metallic nanoparticles under compression. Physical Review Materials, 2019, 3, .	0.9	10
53	The origin of anisotropy and high density of states in the electronic structure of Cr ₂ GeC by means of polarized soft x-ray spectroscopy and ab initio calculations. Journal of Physics Condensed Matter, 2015, 27, 415501.	0.7	9
54	Coupling of bias-induced crystallographic shear planes with charged domain walls in ferroelectric oxide thin films. Physical Review B, 2016, 94, .	1.1	9

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55	Electronic Structure Sensitivity to Surface Disorder and Nanometer-Scale Impurity of 2D Titanium Carbide MXene Sheets as Revealed by Electron Energy-Loss Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2020, 124, 27071-27081.	1.5	9
56	2D Monolayer of the 1T ⁺ Phase of Alloyed WSSe from Colloidal Synthesis. <i>Journal of Physical Chemistry C</i> , 2021, 125, 11058-11065.	1.5	9
57	Temperature-Induced Atomic Reconstruction At Au/MgAl ₂ O ₄ Interfaces. <i>Advanced Materials Interfaces</i> , 2018, 5, 1701664.	1.9	8
58	Improvement of mechanical, thermal, and corrosion properties of Ni- and Al-free Cu-Zr-Ti metallic glass with yttrium addition. <i>Materialia</i> , 2018, 1, 249-257.	1.3	8
59	Atomic-Scale Study of Metal-Oxide Interfaces and Magnetoelastic Coupling in Self-Assembled Epitaxial Vertically Aligned Magnetic Nanocomposites. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900549.	1.9	7
60	Crystal Growth in Mesoporous TiO ₂ Optical Thin Films. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6070-6079.	1.5	7
61	Two-dimensional photonic metasurfaces for slow light-controlled photocatalysis. <i>Nano Select</i> , 2022, 3, 108-117.	1.9	7
62	Interplay between local structure and magnetic properties of graded exchange-coupled Co@FePt nanocomposite films. <i>Physical Review B</i> , 2020, 102, .	1.1	4
63	Core-Shell Nanocuboid Dimers with Nanometric Gaps. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18690-18697.	1.5	3
64	Hexagonal Ge Grown by Molecular Beam Epitaxy on Self-Assisted GaAs Nanowires. <i>Crystal Growth and Design</i> , 0, , .	1.4	2
65	Insights into the Arsenic Shell Decapping Mechanisms in As/GaAs Nanowires by X-ray and Electron Microscopy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 28136-28142.	1.5	2
66	High-Resolution Near-Edge Structures in EuTiO ₃ , SrTiO ₃ and BaTiO ₃ . <i>Microscopy and Microanalysis</i> , 2012, 18, 1460-1461.	0.2	1
67	Electronic Structure and Chemistry of Nanomaterials Embedded in a Matrix Using Atomically Resolved Near-edge Structures: The Example of Ferromagnetic Ni Nanowires Grown in SrTiO ₃ . <i>Microscopy and Microanalysis</i> , 2020, 26, 1070-1072.	0.2	1
68	Advances in Electron Energy-Loss Spectroscopy with High Spatial and Energy Resolution. <i>Microscopy and Microanalysis</i> , 2014, 20, 2176-2177.	0.2	0
69	Aberration corrected STEM-EELS study of the hole distribution in cuprate superconductors. <i>Microscopy and Microanalysis</i> , 2015, 21, 665-666.	0.2	0
70	Surface Segregation of Fe in Pt-Fe Alloy Nanoparticles: Its Precedence and Effect on the Ordered-Phase Evolution during Thermal Annealing. <i>ChemCatChem</i> , 2015, 7, 3597-3597.	1.8	0
71	Atomic Resolution Imaging and Spectroscopy of Pt-alloy Electrocatalytic Nanoparticles. <i>Microscopy and Microanalysis</i> , 2015, 21, 2247-2248.	0.2	0
72	High-Speed Analysis of Pt Based Alloys at High Spatial Resolution using EELS. <i>Microscopy and Microanalysis</i> , 2015, 21, 2129-2130.	0.2	0

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73	Microscopy and Spectroscopy of Catalysts and Energy Storage Materials. Microscopy and Microanalysis, 2016, 22, 854-855.	0.2	0
74	Electrically injected AlGaIn nanowire deep ultraviolet lasers. , 2016, , .		0
75	Understanding Properties of Functional Materials with Atomic-Resolved Electron Energy Loss Spectroscopy. Microscopy and Microanalysis, 2017, 23, 364-365.	0.2	0
76	Visualizing and Quantifying the Cationic Mobility at {100} Surfaces of Ceria: Application to CO2 Adsorption/Desorption Phenomena in the Environmental Transmission Electron Microscope. Microscopy and Microanalysis, 2018, 24, 1940-1941.	0.2	0
77	Can the environmental TEM confirm atomistic models of adsorbed molecules at surfaces of solids?. Microscopy and Microanalysis, 2019, 25, 1440-1441.	0.2	0
78	Imaging the spatial distribution of π^* states in graphene using aberration-corrected and monochromated STEM-EELS: towards orbital mapping. Microscopy and Microanalysis, 2021, 27, 134-135.	0.2	0