

Bernard Doudin

List of Publications by Year in descending order

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140
papers

5,249
citations

94415

37
h-index

91872

69
g-index

142
all docs

142
docs citations

142
times ranked

5935
citing authors

#	ARTICLE	IF	CITATIONS
1	Conductivity in organic semiconductors hybridized with the vacuum field. <i>Nature Materials</i> , 2015, 14, 1123-1129.	27.5	433
2	Giant magnetoresistance of nanowires of multilayers. <i>Applied Physics Letters</i> , 1994, 65, 3019-3021.	3.3	408
3	Nucleation of Magnetization Reversal in Individual Nanosized Nickel Wires. <i>Physical Review Letters</i> , 1996, 77, 1873-1876.	7.8	384
4	Magnetoelectronics with magnetoelectrics. <i>Journal of Physics Condensed Matter</i> , 2005, 17, L39-L44.	1.8	246
5	Random and exchange anisotropy in consolidated nanostructured Fe and Ni: Role of grain size and trace oxides on the magnetic properties. <i>Physical Review B</i> , 1998, 57, 2915-2924.	3.2	171
6	Light-triggered self-construction of supramolecular organic nanowires as metallic interconnects. <i>Nature Chemistry</i> , 2012, 4, 485-490.	13.6	164
7	Resonant Inversion of Tunneling Magnetoresistance. <i>Physical Review Letters</i> , 2003, 90, 186602.	7.8	152
8	Measurements of magnetization switching in individual nickel nanowires. <i>Physical Review B</i> , 1997, 55, 11552-11559.	3.2	133
9	Magnetic anisotropies of aligned carbon nanotubes. <i>Physical Review B</i> , 1995, 52, R6963-R6966.	3.2	123
10	Characterization of the native Cr ₂ O ₃ oxide surface of CrO ₂ . <i>Applied Physics Letters</i> , 2001, 79, 3122-3124.	3.3	101
11	Magnetic properties of nanosized wires. <i>Journal of Applied Physics</i> , 1996, 79, 6010.	2.5	96
12	Anisotropic magnetoresistance as a probe of magnetization reversal in individual nono-sized nickel wires. <i>IEEE Transactions on Magnetics</i> , 1998, 34, 903-905.	2.1	93
13	Quantized magnetoresistance in atomic-size contacts. <i>Nature Nanotechnology</i> , 2007, 2, 171-175.	31.5	83
14	Liquid flow and control without solid walls. <i>Nature</i> , 2020, 581, 58-62.	27.8	80
15	Distance Dependence of the Energy Transfer Rate from a Single Semiconductor Nanostructure to Graphene. <i>Nano Letters</i> , 2015, 15, 1252-1258.	9.1	78
16	Spin Transition in Arrays of Gold Nanoparticles and Spin Crossover Molecules. <i>ACS Nano</i> , 2015, 9, 4496-4507.	14.6	77
17	Arrays of multilayered nanowires (invited). <i>Journal of Applied Physics</i> , 1996, 79, 6090.	2.5	76
18	The spin state of a molecular adsorbate driven by the ferroelectric substrate polarization. <i>Chemical Communications</i> , 2014, 50, 2255.	4.1	74

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19	Electrically controlled exchange bias for spintronic applications. Journal of Applied Physics, 2005, 97, 10C514.	2.5	73
20	Magnetoresistance Governed by Fluctuations in Ultrasmall Ni/NiO/Co Junctions. Physical Review Letters, 1997, 79, 933-936.	7.8	67
21	Reconfigurable 2D/0D Graphene/HgTe Nanocrystal Heterostructure for Infrared Detection. ACS Nano, 2020, 14, 4567-4576.	14.6	60
22	Photoconduction in [Fe(Htrz) ₂ (trz)](BF ₄)·H ₂ O nanocrystals. Chemical Communications, 2011, 47, 9663.	4.1	59
23	Nanoplatelets Bridging a Nanotrench: A New Architecture for Photodetectors with Increased Sensitivity. Nano Letters, 2015, 15, 1736-1742.	9.1	59
24	Comparative study of the magnetoresistance of electrodeposited Co/Cu multilayered nanowires made by single and dual bath techniques. Journal of Magnetism and Magnetic Materials, 1997, 165, 34-37.	2.3	58
25	Locking and Unlocking the Molecular Spin Crossover Transition. Advanced Materials, 2017, 29, 1702257.	21.0	55
26	Pore size distributions of nanoporous track-etched membranes. Scripta Materialia, 1993, 2, 637-642.	0.5	52
27	Electron transport in multilayered Co/Cu nanowires. Journal of Magnetism and Magnetic Materials, 1995, 151, 388-395.	2.3	52
28	Wavelength dependence of photoinduced deformation in BiFeO ₃ . Physical Review B, 2012, 85, .	3.2	52
29	Voltage-controlled inversion of tunnel magnetoresistance in epitaxial nickel/graphene/MgO/cobalt junctions. Applied Physics Letters, 2014, 105, .	3.3	51
30	The microstructure of electrodeposited cobalt-based nanowires and its effect on their magnetic and transport properties. Journal of Magnetism and Magnetic Materials, 1999, 205, 241-248.	2.3	50
31	Influence of grain size and oxidation on the magnetic properties of nanostructured Fe and Ni. Scripta Materialia, 1997, 9, 523-526.	0.5	48
32	Complexities in the Molecular Spin Crossover Transition. Journal of Physical Chemistry C, 2015, 119, 16293-16302.	3.1	41
33	HgSe Self-Doped Nanocrystals as a Platform to Investigate the Effects of Vanishing Confinement. ACS Applied Materials & Interfaces, 2017, 9, 36173-36180.	8.0	40
34	Electrical read-out of light-induced spin transition in thin film spin crossover/graphene heterostructures. Journal of Materials Chemistry C, 2021, 9, 2712-2720.	5.5	40
35	Enhancing the Molecular Signature in Molecule-Nanoparticle Networks Via Inelastic Cotunneling. Advanced Materials, 2013, 25, 400-404.	21.0	38
36	Self-assembly of strongly dipolar molecules on metal surfaces. Journal of Chemical Physics, 2015, 142, 101921.	3.0	38

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37	Altering the Static Dipole on Surfaces through Chemistry: Molecular Films of Zwitterionic Quinonoids. <i>Journal of the American Chemical Society</i> , 2012, 134, 8494-8506.	13.7	37
38	Comparison of the π -conjugated ring orientations in polyaniline and polypyrrole. <i>Chemical Physics Letters</i> , 2001, 343, 193-200.	2.6	35
39	Electronic Structure of a Spin Crossover Molecular Adsorbate. <i>Journal of Physical Chemistry C</i> , 2012, 116, 23291-23296.	3.1	35
40	Heterojunction diode fabrication from polyaniline and a ferroelectric polymer. <i>Applied Physics Letters</i> , 2002, 81, 4281-4283.	3.3	33
41	Ballistic magnetoresistance?. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 083201.	1.8	33
42	Size-induced enhanced magnetoelectric effect and multiferroicity in chromium oxide nanoclusters. <i>Nature Communications</i> , 2014, 5, 3167.	12.8	32
43	Dipole driven bonding schemes of quinonoid zwitterions on surfaces. <i>Chemical Communications</i> , 2012, 48, 7143.	4.1	31
44	Co-tunneling Enhancement of the Electrical Response of Nanoparticle Networks. <i>Small</i> , 2012, 8, 108-115.	10.0	31
45	Nanotrench for nano and microparticle electrical interconnects. <i>Nanotechnology</i> , 2010, 21, 335303.	2.6	30
46	The interface bonding and orientation of a quinonoid zwitterion. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10329.	2.8	30
47	Flux Quantization in Magnetic Nanowires Imaged by Electron Holography. <i>Physical Review Letters</i> , 1995, 75, 4630-4633.	7.8	27
48	Study of Co, Ni and Co/Cu nanowires: Magnetic flux imaging by off-axis electron holography. <i>Journal of Magnetism and Magnetic Materials</i> , 1996, 164, 77-90.	2.3	27
49	In situ magnetoresistance of Ni nanocontacts. <i>Applied Physics Letters</i> , 2004, 84, 2865-2867.	3.3	27
50	A new method to construct nanostructured materials of controlled morphology. <i>Scripta Materialia</i> , 1995, 6, 521-524.	0.5	26
51	Structure analysis of the high-temperature phases of $[\text{NH}_3(\text{C}_3\text{H}_7)]_2\text{CuCl}_4$. I. The commensurate phases. <i>Acta Crystallographica Section B: Structural Science</i> , 1990, 46, 175-180.	1.8	25
52	Study of the modulated phase of $(\text{C}_3\text{H}_7\text{NH}_3)_2\text{CdCl}_4$ by single-crystal X-ray diffraction. <i>Acta Crystallographica Section B: Structural Science</i> , 1988, 44, 495-502.	1.8	24
53	Wire-shaped magnetic multilayers for \hat{c} -current perpendicular to plane \hat{c} ™ magnetoresistance measurements. <i>Journal of Magnetism and Magnetic Materials</i> , 1995, 148, 317-318.	2.3	24
54	Mesoscopic effects in magnetism: Submicron to nanometer size single particle measurements. <i>Journal of Applied Physics</i> , 1997, 81, 5543-5545.	2.5	24

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55	Magnetic and transport properties of electrodeposited nanostructured nanowires. IEEE Transactions on Magnetism, 1998, 34, 968-972.	2.1	24
56	Light controlled magnetoresistance and magnetic field controlled photoresistance in CoFe film deposited on BiFeO ₃ . Applied Physics Letters, 2012, 100, .	3.3	24
57	Ionic Glass-“Gated 2D Material”-Based Phototransistor: MoSe ₂ over LaF ₃ as Case Study. Advanced Functional Materials, 2019, 29, 1902723.	14.9	24
58	Measurement of the remanent magnetization of single Co/Cu and Ni nanowires by off-axis TEM electron holography. Ultramicroscopy, 1997, 67, 143-151.	1.9	23
59	Room temperature dry processing of patterned CVD graphene devices. Carbon, 2015, 86, 256-263.	10.3	22
60	Coverage-Dependent Interactions at the Organics-Metal Interface: Quinonoid Zwitterions on Au(111). Journal of Physical Chemistry C, 2013, 117, 16406-16415.	3.1	21
61	Surface-Driven Magnetotransport in Perovskite Nanocrystals. Advanced Materials, 2017, 29, 1604745.	21.0	21
62	Room temperature optoelectronic devices operating with spin crossover nanoparticles. Materials Horizons, 2021, 8, 2310-2315.	12.2	20
63	Zero-bias anomaly in CrO ₂ junctions. Europhysics Letters, 2002, 58, 448-454.	2.0	19
64	Resonance Raman Study of Spin-Crossover [Fe(Htrz) ₂ (trz)](BF ₄)·H ₂ O Particles Coated with Gold. European Journal of Inorganic Chemistry, 2012, 2012, 5837-5842.	2.0	19
65	Approaching an organic semimetal: Electron pockets at the Fermi level for a p-benzoquinonemonoimine zwitterion. Physica Status Solidi (B): Basic Research, 2012, 249, 1571-1576.	1.5	18
66	Influence of steric hindrance on the molecular packing and the anchoring of quinonoid zwitterions on gold surfaces. New Journal of Chemistry, 2016, 40, 5782-5796.	2.8	18
67	In situ monitoring of quantum conductance in electrodeposited magnetic point contacts. Journal of Physics Condensed Matter, 2002, 14, L765-L771.	1.8	17
68	Temperature dependent induced spin polarization in Cr ₂ O ₃ overlayers on epitaxial CrO ₂ films. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 302, 211-216.	2.1	17
69	Superlattice Nanowires. Materials Research Society Symposia Proceedings, 1995, 384, 3.	0.1	16
70	Weak screening of a large dipolar molecule adsorbed on graphene. Carbon, 2012, 50, 1981-1986.	10.3	16
71	Janus Microspheres for Visual Assessment of Molecular Interconnects. Chemistry - A European Journal, 2014, 20, 1263-1266.	3.3	16
72	Structure analysis of the high-temperature phases of [NH ₃ (C ₃ H ₇) ₂ CuCl ₄]. II. The modulated phase. Acta Crystallographica Section B: Structural Science, 1990, 46, 180-186.	1.8	15

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73	Magnetic relaxation of nanowires: beyond the Néel-Brown activation process. Europhysics Letters, 1997, 38, 329-334.	2.0	15
74	The electronic structure of metal/alkane thiol self-assembled monolayers/metal junctions for magnetoelectronics applications. Chemical Physics Letters, 2003, 381, 7-13.	2.6	15
75	The adsorption of orthocarborane on cobalt. Thin Solid Films, 2003, 428, 253-256.	1.8	15
76	Magnetotransport properties of CrO ₂ films down to single-grain sizes. Journal of Applied Physics, 2003, 93, 6850-6852.	2.5	15
77	Different approaches to adjusting band offsets at intermolecular interfaces. Applied Surface Science, 2008, 254, 4238-4244.	6.1	15
78	Magnetoconductance anisotropy of a polymer thin film at the onset of metallicity. Applied Physics Letters, 2015, 106, .	3.3	15
79	Sub-coercive and multi-level ferroelastic remnant states with resistive readout. Applied Physics Letters, 2014, 104, 232905.	3.3	14
80	Multistate nonvolatile straintronics controlled by a lateral electric field. Journal of Physics Condensed Matter, 2014, 26, 292202.	1.8	14
81	Enhancing gas sensing properties of graphene by using a nanoporous substrate. 2D Materials, 2016, 3, 011007.	4.4	14
82	Lock and Key Adsorption Chemistry: Preferential Absorption of an Isomer of Di-iodobenzene on Molecular Films of Quinonoid Zwitterions. Journal of Physical Chemistry C, 2011, 115, 2812-2818.	3.1	13
83	Tuning graphene transistors through <i>ad hoc</i> electrostatics induced by a nanometer-thick molecular underlayer. Nanoscale, 2019, 11, 19705-19712.	5.6	13
84	Nanostructuring Materials for Spin Electronics. Europhysics News, 1997, 28, 14.	0.3	13
85	Magnetoconductance in boron carbide junctions. Applied Physics Letters, 2003, 83, 3743-3745.	3.3	12
86	Defect contributions to conductivity in poly(3-hexylthiophene)?. Physica Status Solidi (B): Basic Research, 2006, 243, 1321-1330.	1.5	12
87	Optically switchable molecular device using microsphere based junctions. Applied Physics Letters, 2011, 99, 233104.	3.3	12
88	0D/2D Heterostructures Vertical Single Electron Transistor. Advanced Functional Materials, 2021, 31, 2008255.	14.9	12
89	Nanostructuring Materials for Spin Electronics. Europhysics News, 1997, 28, 14-17.	0.3	11
90	Fabrication and quantum conductance of electroplated Ni nanocontacts. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 352, 331-334.	2.1	11

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91	Resonant tunneling in magnetoresistive Ni/NiO/Co nanowire junctions. Journal of Applied Physics, 2003, 93, 7029-7031.	2.5	10
92	The Dipole Mediated Surface Chemistry of p-Benzoquinonemonoimine Zwitterions. Topics in Catalysis, 2013, 56, 1096-1103.	2.8	10
93	Spin blockade effects in chromium oxide intergrain magnetoresistance. Journal of Applied Physics, 2002, 91, 8801.	2.5	9
94	The origin of the gamma incommensurate structure in n-propylammonium tetrachlorometallates. Journal of Physics Condensed Matter, 1990, 2, 3237-3246.	1.8	8
95	Magnetization reversal of individual nanowires with controlled defects. Journal of Applied Physics, 2002, 91, 7059.	2.5	8
96	Anisotropy magnetoresistance of quantum ballistic nickel nanocontacts. Journal of Magnetism and Magnetic Materials, 2005, 286, 186-190.	2.3	8
97	Electrical switching in Fe/V/MgO/Fe tunnel junctions. Physical Review B, 2010, 81, .	3.2	8
98	Multi-state and non-volatile control of graphene conductivity with surface electric fields. Applied Physics Letters, 2015, 107, .	3.3	8
99	Electrical Writing of Magnetic and Resistive Multistates in CoFe Films Deposited Onto Pb[Zr _x Ti _{1-x}]O ₃ . Physics Procedia, 2015, 75, 956-966.	1.2	8
100	Controlling the magnetic anisotropy in epitaxial CrO_3 clusters by an electric field. Physical Review B, 2015, 91, .	3.2	8
101	Versatile Molten Salt Synthesis of Manganite Perovskite Oxide Nanocrystals and Their Magnetic Properties. ChemNanoMat, 2019, 5, 358-363.	2.8	8
102	Photovoltaic Ferroelectric Materials for the Realization of All-Optical Devices. Advanced Optical Materials, 2022, 10, .	7.3	8
103	Structure of bis(n-butylammonium) tetrachlorocadmate(II). Acta Crystallographica Section C: Crystal Structure Communications, 1992, 48, 1218-1220.	0.4	7
104	Magnetic Properties of Nanostructured Ferromagnetic Metals. Materials Science Forum, 1997, 235-238, 699-704.	0.3	7
105	The coadsorption and interaction of molecular icosahedra with mercury. Applied Physics A: Materials Science and Processing, 2005, 81, 1613-1618.	2.3	7
106	Atomic motion in ferromagnetic break junctions. Nature Nanotechnology, 2007, 2, 522-523.	31.5	7
107	Voltage-induced switching with magnetoresistance signature in magnetic nano-filaments. Journal of Physics Condensed Matter, 2009, 21, 485303.	1.8	7
108	Magnetoresistance signature of resonant states in electromigrated Ni nanocontacts. Applied Physics Letters, 2011, 98, 142504.	3.3	7

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109	Perturbing the spin crossover transition activation energies in Fe(H ₂ B(pz) ₂) ₂ (bipy) with zwitterionic additions. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 305503.	1.8	7
110	Interface composition and electronic properties of chromium (III, IV) oxides junctions. <i>Materials Letters</i> , 2004, 58, 2016-2018.	2.6	6
111	Adsorption of TCNQH-functionalized quinonoid zwitterions on gold and graphene: evidence for dominant intermolecular interactions. <i>RSC Advances</i> , 2013, 3, 10956.	3.6	6
112	X-ray study of the reentrant modulated phase of Bis-Propylammonium Tetrachlorocuprate(II) at high temperature. <i>Phase Transitions</i> , 1989, 16, 185-190.	1.3	5
113	Random barrier double-well model for resistive switching in tunnel barriers. <i>Journal of Applied Physics</i> , 2011, 109, 083712.	2.5	5
114	The magnetoelectrochemical switch. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 10433-10437.	7.1	5
115	Changes in molecular film metallicity with minor modifications of the constitutive quinonoid zwitterions. <i>RSC Advances</i> , 2017, 7, 21906-21917.	3.6	5
116	The influence of molecular mobility on the properties of networks of gold nanoparticles and organic ligands. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 1664-1674.	2.8	4
117	Carbon-passivated Ni Electrodes for Charge Injection in Organic Semiconductors. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500501.	3.7	4
118	Manipulation of the molecular spin crossover transition of Fe(H ₂ B(pz) ₂) ₂ (bipy) by addition of polar molecules. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 034001.	1.8	4
119	Limits of the Patterson method for the determination of one-dimensionally modulated structures. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 1989, 45, 5-8.	0.3	3
120	In-Situ Characterization Of Ultra-Small Magnetic Junctions Made By Electrochemical Techniques. <i>Materials Research Society Symposia Proceedings</i> , 2001, 674, 1.	0.1	3
121	Heteronanojunctions with atomic size control using a lab-on-chip electrochemical approach with integrated microfluidics. <i>Nanotechnology</i> , 2011, 22, 215302.	2.6	3
122	Beeli, Doudin, and Stadelmann Reply.. <i>Physical Review Letters</i> , 1996, 77, 978-978.	7.8	2
123	Off-Axis Electron Holography of Single Ferromagnetic Nanowires. <i>Materials Characterization</i> , 1999, 42, 175-182.	4.4	2
124	Influence of electric polarization on Coulomb blockade in a super-paraelectric clusters assembly. <i>Applied Physics Letters</i> , 2019, 115, 262901.	3.3	2
125	Fluid Drag Reduction by Magnetic Confinement. <i>Langmuir</i> , 2022, 38, 719-726.	3.5	2
126	Mercury and C ₂ B ₁₀ Icosahedra Interaction. <i>Materials Research Society Symposia Proceedings</i> , 2004, 848, 348.	0.1	1

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127	Lab-On-Chip Fabrication of Atomic Scale Magnetic Junctions. ECS Transactions, 2009, 16, 3-10.	0.5	1
128	Voltage-dependent magnetic phase transition in magneto-electric epitaxial Cr ₂ O ₃ nanoclusters. Nanotechnology, 2016, 27, 245706.	2.6	1
129	Epitaxial ferromagnetic single clusters and smooth continuous layers on large area MgO/CVD graphene substrates. Materials Research Express, 2018, 5, 025606.	1.6	1
130	Current crowding issues on nanoscale planar organic transistors for spintronic applications. Nanotechnology, 2018, 29, 365201.	2.6	1
131	Magnetism and Transport in Diluted Magnetic Semiconductor Quantum Dots. , 2016, , 616-635.		1
132	The study of incommensurate modulated phases by diffraction methods. Phase Transitions, 1991, 31, 3-10.	1.3	0
133	Magnetic Transport Properties of Electrodeposited, Nanostructured Nanowires. , 0, , .		0
134	Magnetoresistance And Magnetization Reversal In Individual Nanowires. , 0, , .		0
135	Bistable memory effect in chromium oxide junctions. Materials Research Society Symposia Proceedings, 2002, 746, 1.	0.1	0
136	Metal/Self-Assembled Monolayer/Metal Junctions for Magnetoelectronic Applications.. Materials Research Society Symposia Proceedings, 2002, 746, 1.	0.1	0
137	On the Importance of Defects in Magnetic Tunnel Junctions. , 0, , 309-329.		0
138	Back Cover: Approaching an organic semimetal: Electron pockets at the Fermi level for a <i>p</i> -benzoquinonemonoimine zwitterion (Phys. Status Solidi B 8/2012). Physica Status Solidi (B): Basic Research, 2012, 249, .	1.5	0
139	Nanotrenches: An Optical Lithography Process for High-Aspect-Ratio sub-100 nm Gaps. , 2012, , 129-146.		0
140	Carbon Nanotubes and Aligned Carbon Nanotube Films. , 1996, , 437-442.		0