Ulf Wiedwald

List of Publications by Year
in descending order

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116 papers	3,184 citations	126907 33 h-index	197818 49 g-index
118 all docs	118 docs citations	118 times ranked	4500 citing authors

#	Article	IF	Citations
1	Enhanced Orbital Magnetism inFe50Pt50Nanoparticles. Physical Review Letters, 2006, 97, 117201.	7.8	150
2	Arrangement at the nanoscale: Effect on magnetic particle hyperthermia. Scientific Reports, 2016, 6, 37934.	3.3	131
3	Solvent-surface interactions control the phase structure in laser-generated iron-gold core-shell nanoparticles. Scientific Reports, 2016, 6, 23352.	3.3	113
4	A Micellar Approach to Magnetic Ultrahigh-Density Data-Storage Media: Extending the Limits of Current Colloidal Methods. Advanced Materials, 2007, 19, 406-410.	21.0	103
5	Local density of states effects at the metal-molecule interfaces in a molecular device. Nature Materials, 2006, 5, 394-399.	27.5	98
6	Atomically Layered and Ordered Rare-Earth i-MAX Phases: A New Class of Magnetic Quaternary Compounds. Chemistry of Materials, 2019, 31, 2476-2485.	6.7	89
7	Synthesis, Thermal Stability and Properties of ZnO₂ Nanoparticles. Journal of Physical Chemistry C, 2009, 113, 1320-1324.	3.1	79
8	Controlling the conductivity of Ti₃C₂MXenes by inductively coupled oxygen and hydrogen plasma treatment and humidity. RSC Advances, 2017, 7, 13097-13103.	3.6	79
9	Magnetite-Gold nanohybrids as ideal all-in-one platforms for theranostics. Scientific Reports, 2018, 8, 11295.	3.3	77
10	Lowering of the L10 ordering temperature of FePt nanoparticles by He+ ion irradiation. Applied Physics Letters, 2007, 90, 062508.	3.3	66
11	Ratio of orbital-to-spin magnetic moment in Co core-shell nanoparticles. Physical Review B, 2003, 68, .	3.2	62
12	Ferromagnetic resonance of monodisperse Co particles. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 1773-1776.	2.1	59
13	Temperature-controlled magnetic nanoparticles hyperthermia inhibits primary tumor growth and metastases dissemination. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 25, 102171.	3.3	53
14	Beyond Solid Solution Highâ€Entropy Alloys: Tailoring Magnetic Properties via Spinodal Decomposition. Advanced Functional Materials, 2021, 31, 2007668.	14.9	51
15	Magnetic properties of arrays of interacting Co nanocrystals. Journal of Magnetism and Magnetic Materials, 2002, 240, 40-43.	2.3	48
16	Composition-dependent ratio of orbital-to-spin magnetic moment in structurally disorderedFexPt1â^'xnanoparticles. Physical Review B, 2004, 69, .	3.2	48
17	Preparation and characterization of supported magnetic nanoparticles prepared by reverse micelles. Beilstein Journal of Nanotechnology, 2010, 1, 24-47.	2.8	46
18	2D Molybdenum Carbide MXenes for Enhanced Selective Detection of Humidity in Air. Advanced Materials, 2021, 33, e2104878.	21.0	46

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19	Solid solution magnetic FeNi nanostrandâ€“polymer composites by connecting-coarsening assembly. Journal of Materials Chemistry C, 2015, 3, 10699-10704.	5.5	44
20	Magnetic Anisotropy in the (Cr_{0.5}Mn_{0.5})₂GaC MAX Phase. Materials Research Letters, 2015, 3, 156-160.	8.7	43
21	Shell-ferromagnetic precipitation in martensitic off-stoichiometric Ni-Mn-In Heusler alloys produced by temper-annealing under magnetic field. Acta Materialia, 2017, 127, 117-123.	7.9	43
22	Large uniaxial magnetostriction with sign inversion at the first order phase transition in the nanolaminated Mn2GaC MAX phase. Scientific Reports, 2018, 8, 2637.	3.3	42
23	Magnetic moment of Fe in oxide-free FePt nanoparticles. Physical Review B, 2007, 76, .	3.2	41
24	Splenic red pulp macrophages are intrinsically superparamagnetic and contaminate magnetic cell isolates. Scientific Reports, 2015, 5, 12940.	3.3	41
25	Fe oxidation versus Pt segregation in FePt nanoparticles and thin films. Nanotechnology, 2009, 20, 285706.	2.6	40
26	From Colloidal Co/CoO Core/Shell Nanoparticles to Arrays of Metallic Nanomagnets: Surface Modification and Magnetic Properties. ChemPhysChem, 2005, 6, 2522-2526.	2.1	39
27	Narrowly Size Distributed Zinc-Containing Poly(acrylamide) Latexes via Inverse Miniemulsion Polymerization. Macromolecules, 2010, 43, 3294-3305.	4.8	37
28	Controlling the Interparticle Spacing of Auâ^'Salt Loaded Micelles and Au Nanoparticles on Flat Surfaces. Langmuir, 2007, 23, 10150-10155.	3.5	36
29	Towards quantitative magnetic force microscopy: theory and experiment. New Journal of Physics, 2012, 14, 043044.	2.9	36
30	Formation Mechanism of Laser-Synthesized Iron-Manganese Alloy Nanoparticles, Manganese Oxide Nanosheets and Nanofibers. Particle and Particle Systems Characterization, 2017, 34, 1600225.	2.3	36
31	Structural, magnetic and electrical transport properties of non-conventionally prepared MAX phases V₂AlC and (V/Mn)₂AlC. Materials Chemistry Frontiers, 2018, 2, 483-490.	5.9	36
32	Monodispersed NiO nanoflowers with anomalous magnetic behavior. Nanotechnology, 2010, 21, 425702.	2.6	33
33	A versatile large-scale and green process for synthesizing magnetic nanoparticles with tunable magnetic hyperthermia features. RSC Advances, 2016, 6, 53107-53117.	3.6	33
34	Geometric control of the magnetization reversal in antidot lattices with perpendicular magnetic anisotropy. Physical Review B, 2016, 93, .	3.2	33
35	Magnetic Fe@FeOx, Fe@C and Î±-Fe2O3 Single-Crystal Nanoblends Synthesized by Femtosecond Laser Ablation of Fe in Acetone. Nanomaterials, 2018, 8, 631.	4.1	33
36	Magnetic hardening of Fe₃₀Co₇₀nanowires. Nanotechnology, 2015, 26, 415704.	2.6	32

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37	Size-selected Fe3O4â€“Au hybrid nanoparticles for improved magnetism-based theranostics. Beilstein Journal of Nanotechnology, 2018, 9, 2684-2699.	2.8	32
38	Temperature dependence of exchange anisotropy in monodisperse cobalt nanoparticles with a cobalt oxide shell. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 1508-1509.	2.3	31
39	Magnetic properties of nanolaminated (Mo0.5Mn0.5)2GaC MAX phase. Journal of Applied Physics, 2017, 121, .	2.5	31
40	Tuning the magnetism of ferrite nanoparticles. Journal of Magnetism and Magnetic Materials, 2016, 415, 20-23.	2.3	30
41	Solâ€“gel based synthesis and enhanced processability of MAX phase Cr₂GaC. Journal of Materials Chemistry C, 2019, 7, 6034-6040.	5.5	30
42	Effect of an oxidic overlayer on the magnetism of Co nanoparticles. Phase Transitions, 2005, 78, 85-104.	1.3	28
43	Thin film synthesis and characterization of a chemically ordered magnetic nanolaminate (V,Mn)3GaC2. APL Materials, 2016, 4, .	5.1	28
44	Ultrasmall Yttrium Iron Garnet Nanoparticles with High Coercivity at Low Temperature Synthesized by Laser Ablation and Fragmentation of Pressed Powders. ChemPhysChem, 2017, 18, 1125-1132.	2.1	26
45	Magnetic properties and structural characterization of layered (Cr0.5Mn0.5)2AuC synthesized by thermally induced substitutional reaction in (Cr0.5Mn0.5)2GaC. APL Materials, 2018, 6, .	5.1	25
46	Formation of Coâ€“Au Coreâ€“Shell Nanoparticles with Thin Gold Shells and Soft Magnetic Îµ-Cobalt Cores Ruled by Thermodynamics and Kinetics. Journal of Physical Chemistry C, 2021, 125, 9534-9549.	3.1	25
47	Combined first-order reversal curve and x-ray microscopy investigation of magnetization reversal mechanisms in hexagonal antidot lattices. Physical Review B, 2016, 93, .	3.2	24
48	Limited Elemental Mixing in Nanoparticles Generated by Ultrashort Pulse Laser Ablation of AgCu Bilayer Thin Films in a Liquid Environment: Atomistic Modeling and Experiments. Journal of Physical Chemistry C, 2021, 125, 2132-2155.	3.1	24
49	Transition from anomalous kinetics toward Fickian diffusion for Si dissolution into amorphous Ge. Applied Physics Letters, 2008, 92, .	3.3	23
50	Exchange bias of Ni nanoparticles embedded in an antiferromagnetic IrMn matrix. Nanotechnology, 2013, 24, 455702.	2.6	23
51	Extending the 3Ï‰ method: Thermal conductivity characterization of thin films. Review of Scientific Instruments, 2013, 84, 084904.	1.3	22
52	Nanostructured Pt/GC Model Electrodes Prepared by the Deposition of Metal-Salt-Loaded Micelles. Langmuir, 2007, 23, 5795-5801.	3.5	21
53	Fabrication of two-dimensional Au@FePt core-shell nanoparticle arrays by photochemical metal deposition. Applied Physics Letters, 2010, 96, .	3.3	21
54	Structure-Correlated Exchange Anisotropy in Oxidized Co₈₀Ni₂₀ Nanorods. Chemistry of Materials, 2015, 27, 4015-4022.	6.7	21

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55	Formation of Highly Ordered Alloy Nanoparticles Based on Precursor-Filled Latex Spheres. Chemistry of Materials, 2012, 24, 1048-1054.	6.7	20
56	Effect of large mechanical stress on the magnetic properties of embedded Fe nanoparticles. Beilstein Journal of Nanotechnology, 2011, 2, 268-275.	2.8	19
57	Perpendicular magnetisation from in-plane fields in nano-scaled antidot lattices. Nanotechnology, 2015, 26, 225203.	2.6	19
58	Cobalt Ferrite Nanoparticles for Tumor Therapy: Effective Heating versus Possible Toxicity. Nanomaterials, 2022, 12, 38.	4.1	19
59	Switching modes in easy and hard axis magnetic reversal in a self-assembled antidot array. Nanotechnology, 2013, 24, 465709.	2.6	18
60	Thermally driven solid-phase epitaxy of laser-ablated amorphous AlFe films on (0001)-oriented sapphire single crystals. Applied Physics A: Materials Science and Processing, 2011, 102, 725-730.	2.3	17
61	Optimum nanoscale design in ferrite based nanoparticles for magnetic particle hyperthermia. RSC Advances, 2016, 6, 72918-72925.	3.6	17
62	Planar Au/TiO₂ Model Catalysts: Fabrication, Characterization and Catalytic Activity. ChemPhysChem, 2010, 11, 1430-1437.	2.1	16
63	Long-Range Ordering Effects in Magnetic Nanoparticles. ACS Applied Materials & Interfaces, 2021, 13, 21602-21612.	8.0	16
64	Effective exchange interaction in a quasi-two-dimensional self-assembled nanoparticle array. Physical Review B, 2004, 70, .	3.2	15
65	Magnetic switching of nanoscale antidot lattices. Beilstein Journal of Nanotechnology, 2016, 7, 733-750.	2.8	15
66	Genetically Controlled Lysosomal Entrapment of Superparamagnetic Ferritin for Multimodal and Multiscale Imaging and Actuation with Low Tissue Attenuation. Advanced Functional Materials, 2018, 28, 1706793.	14.9	15
67	Electronic structure and soft-X-ray-induced photoreduction studies of iron-based magnetic polyoxometalates of type {(M)M5}12FeIII30 (M = MoVI, WVI). Dalton Transactions, 2013, 42, 7924.	3.3	14
68	Magnetic Nanoparticles as a Tool for Remote DNA Manipulations at a Single-Molecule Level. ACS Applied Materials & Interfaces, 2021, 13, 14458-14469.	8.0	14
69	Preparation, properties and applications ofÂmagneticÂnanoparticles. Beilstein Journal of Nanotechnology, 2010, 1, 21-23.	2.8	13
70	Structure and Magnetism of Co and CoAg Nanocrystals. Materials Research Society Symposia Proceedings, 2002, 721, 1.	0.1	12
71	Identification of magnetic properties of few nm sized FePt crystalline particles by characterizing the intrinsic atom order using aberration corrected S/TEM. Ultramicroscopy, 2010, 110, 820-825.	1.9	12
72	Geometry-induced spin-ice structures prepared by self-organization on the nanoscale. Nanotechnology, 2013, 24, 055305.	2.6	12

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73	Long-term stability and thickness dependence of magnetism in thin (Cr0.5Mn0.5)2GaC MAX phase films. Materials Research Letters, 2019, 7, 159-163.	8.7	12
74	Structure determination and magnetic properties of the Mn-doped MAX phase Cr₂GaC. Materials Chemistry Frontiers, 2021, 5, 6082-6091.	5.9	12
75	Enhanced spinâ€“orbit coupling in tetragonally strained Feâ€“Coâ€“B films. Journal of Physics Condensed Matter, 2017, 29, 275802.	1.8	11
76	From MAX Phase Carbides to Nitrides: Synthesis of V₂GaC, V₂GaN, and the Carbonitride V₂GaC_{1â€“x}N_x. Inorganic Chemistry, 2022, 61, 10634-10641.	4.0	11
77	Magnetization and Magnetic Anisotropy of Co/W Multilayers. Physica Status Solidi (B): Basic Research, 2001, 225, 449-457.	1.5	9
78	Magnetic Ground-State and Systematic X-ray Photoreduction Studies of an Iron-Based Star-Shaped Complex. Journal of Physical Chemistry Letters, 2011, 2, 1491-1496.	4.6	9
79	Tuning the properties of magnetic thin films by interaction with periodic nanostructures. Beilstein Journal of Nanotechnology, 2012, 3, 831-842.	2.8	9
80	Super spin-glass state and exchange bias in Fe/CoO hybrid nanostructures. Nanotechnology, 2013, 24, 155703.	2.6	9
81	Enhanced magnetocrystalline anisotropy of Fe₃₀Co₇₀nanowires by Cu additives and annealing. Nanotechnology, 2016, 27, 365704.	2.6	9
82	Direct measurement of anisotropic conductivity in a nanolaminated (Mn0.5Cr0.5)2GaC thin film. Applied Physics Letters, 2019, 115, 094101.	3.3	9
83	Shell-ferromagnetism and decomposition in off-stoichiometric Ni50Mn50â€“xSbx Heuslers. Journal of Applied Physics, 2019, 125, .	2.5	9
84	Magnetic and Electronic Properties of Highly Mn-Doped Î²-NaGdF₄ and Î²-NaEuF₄ Nanoparticles with a Narrow Size Distribution. Journal of Physical Chemistry C, 2020, 124, 18194-18202.	3.1	9
85	Atmospheric-pressure Microwave Torch Discharge Generated Î³-Fe2O3 Nanopowder. Physics Procedia, 2013, 44, 206-212.	1.2	8
86	Single coreâ€“shell nanoparticle probes for non-invasive magnetic force microscopy. Nanotechnology, 2014, 25, 255501.	2.6	8
87	Manipulation of the Size and Phase Composition of Yttrium Iron Garnet Nanoparticles by Pulsed Laser Post-Processing in Liquid. Molecules, 2020, 25, 1869.	3.8	8
88	Pulsed laser deposition of epitaxial Cr₂AlC MAX phase thin films on MgO(111) and Al₂O₃(0001). Materials Research Letters, 2021, 9, 343-349.	8.7	8
89	Room temperature synthesized solid solution AuFe nanoparticles and their transformation into Au/Fe Janus nanocrystals. Nanoscale, 2021, 13, 10402-10413.	5.6	8
90	Doubling of the magnetic energy product in ferromagnetic nanowires at ambient temperature by capping their tips with an antiferromagnet. Nanotechnology, 2017, 28, 295402.	2.6	7

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91	Growth modes and epitaxy of FeAl thin films on a-cut sapphire prepared by pulsed laser and ion beam assisted deposition. Journal of Applied Physics, 2014, 115, 023507.	2.5	6
92	Optical and magneto-optical properties of epitaxial Mn2GaC MAX phase thin film. Journal of Magnetism and Magnetic Materials, 2021, 528, 167803.	2.3	6
93	Phase Stability of Nanolaminated Epitaxial (Cr_{1â€“x}Fe_x)₂AlC MAX Phase Thin Films on MgO(111) and Al₂O₃(0001) for Use as Conductive Coatings. ACS Applied Nano Materials, 2021, 4, 13761-13770.	5.0	6
94	Frequency- and Temperature-Dependent Ferromagnetic Resonance of Co/CoO Core-Shell Nanoparticles. Materials Research Society Symposia Proceedings, 2004, 818, 194.	0.1	5
95	Nanoscaled alloy formation from self-assembled elemental Co nanoparticles on top of Pt films. Beilstein Journal of Nanotechnology, 2011, 2, 473-485.	2.8	5
96	Role of developing L1₀chemical order on the (0â€‰0â€‰1)-texture formation of (Fe<sub>1) Tj ETQq0 0 0 rgBT /Overlock Applied Physics, 2015, 48, 085001.	2.8	5
97	Orientation of FePt nanoparticles on top of a-SiO₂/Si(001), MgO(001) and sapphire(0001): effect of thermal treatments and influence of substrate and particle size. Beilstein Journal of Nanotechnology, 2016, 7, 591-604.	2.8	5
98	Unravelling the nucleation, growth, and faceting of magnetiteâ€“gold nanohybrids. Journal of Materials Chemistry B, 2020, 8, 3886-3895.	5.8	5
99	The effect of the composition and pressure on the phase stability and electronic, magnetic, and elastic properties of M₂AX (M = Mn, Fe; A = Al, Ga, Si, Ge; X = C, N) phases. Physical Chemistry Chemical Physics, 2021, 23, 26376-26384.	2.8	5
100	Two-Dimensional Assembly of Magnetic Binuclear Complexes: a Scanning Tunneling Microscopy Study. Langmuir, 2009, 25, 13606-13613.	3.5	4
101	Magnetic Nanoprobes for Spatio-Mechanical Manipulation in Single Cells. Nanomaterials, 2021, 11, 2267.	4.1	4
102	Magnetic response of nanostructured systems: A ferromagnetic resonance investigation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 796-803.	2.1	3
103	Precise Chemical, Electronic, and Magnetic Structure of Binuclear Complexes Studied by Means of X-ray Spectroscopies and Theoretical Methods. Journal of Physical Chemistry C, 2011, 115, 25030-25039.	3.1	3
104	Bolometer detection of magnetic resonances in nanoscaled objects. Nanotechnology, 2014, 25, 425302.	2.6	3
105	Ptychographic imaging and micromagnetic modeling of thermal melting of nanoscale magnetic domains in antidot lattices. AIP Advances, 2020, 10, 125122.	1.3	3
106	Synthesis, phase purification and magnetic characterization of the (Cr1â^'x, Mnx)2AlC MAX-phase. Journal of Materials Chemistry C, 0, , .	5.5	3
107	Using hysteresis behaviour to determine the anisotropy and interactions in complex self-assembled Co metallic nanoparticle systems. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 161-164.	2.3	2
108	Dissolution kinetics of Si into Ge (111) substrate on the nanoscale. Thin Solid Films, 2010, 519, 952-955.	1.8	2

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109	Structural and thermoelectric properties of TMGa3 (TM = Fe, Co) thin films. Beilstein Journal of Nanotechnology, 2013, 4, 461-466.	2.8	2
110	Magnetic response of nanostructured systems: A ferromagnetic resonance investigation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 796.	2.1	2
111	FePt Nanorods and Nanowires for Novel Ferrofluids. Solid State Phenomena, 2009, 154, 89-94.	0.3	1
112	Magnetic phase diagram of (Mo_{2/3}RE_{1/3})₂AlC, RE = Tb and Dy, studied by magnetization, specific heat, and neutron diffraction analysis. Journal of Physics Condensed Matter, 2022, 34, 215801.	1.8	1
113	Ion Implantation Enhanced Exfoliation Efficiency of V₂AlC Single Crystals: Implications for Large V₂CT_z Nanosheet Production. ACS Applied Nano Materials, 2022, 5, 8029-8037.	5.0	1
114	Local structure of monodisperse Co nanoparticles. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E1207-E1209.	2.3	0
115	Combined FORC and X-ray microscopy study of magnetisation reversal in antidot lattices. , 2015, , .		0
116	Exploring structural dependence of magnetic properties in FePt nanoparticle by Cs-corrected HRTEM. , 2008, , 111-112.		0