

Cathrine Frandsen

List of Publications by Year in descending order

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69
papers

4,018
citations

136950

32
h-index

118850

62
g-index

72
all docs

72
docs citations

72
times ranked

6274
citing authors

#	ARTICLE	IF	CITATIONS
1	Direction-Specific Interactions Control Crystal Growth by Oriented Attachment. <i>Science</i> , 2012, 336, 1014-1018.	12.6	958
2	Magnetic interactions between nanoparticles. <i>Beilstein Journal of Nanotechnology</i> , 2010, 1, 182-190.	2.8	299
3	Electrified methane reforming: A compact approach to greener industrial hydrogen production. <i>Science</i> , 2019, 364, 756-759.	12.6	299
4	Electron Small Polarons and Their Mobility in Iron (Oxyhydr)oxide Nanoparticles. <i>Science</i> , 2012, 337, 1200-1203.	12.6	166
5	Experimental and theoretical studies of nanoparticles of antiferromagnetic materials. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 213202.	1.8	163
6	Relating Magnetic Properties and High Hyperthermia Performance of Iron Oxide Nanoflowers. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3068-3077.	3.1	107
7	Thermoinduced Magnetization in Nanoparticles of Antiferromagnetic Materials. <i>Physical Review Letters</i> , 2004, 92, 217201.	7.8	104
8	Investigating Processes of Nanocrystal Formation and Transformation via Liquid Cell TEM. <i>Microscopy and Microanalysis</i> , 2014, 20, 425-436.	0.4	94
9	Aggregation-induced growth and transformation of Fe^{2+} -FeOOH nanorods to micron-sized Fe^{3+} - Fe^{2+} - O spindles. <i>CrystEngComm</i> , 2014, 16, 1451-1458.	2.6	93
10	Composition and structure of an iron-bearing, layered double hydroxide (LDH) "Green rust sodium sulphate. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 3579-3592.	3.9	89
11	Formation Mechanism of Maghemite Nanoflowers Synthesized by a Polyol-Mediated Process. <i>ACS Omega</i> , 2017, 2, 7172-7184.	3.5	82
12	Spin Rotation in Fe^{2+} - Fe^{3+} Nanoparticles by Interparticle Interactions. <i>Physical Review Letters</i> , 2005, 94, 027202.	7.8	81
13	On the "centre of gravity" method for measuring the composition of magnetite/maghemite mixtures, or the stoichiometry of magnetite-maghemite solid solutions, via ^{57}Fe Mössbauer spectroscopy. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 265005.	2.8	75
14	Dual-Function Cobalt-Nickel Nanoparticles Tailored for High-Temperature Induction-Heated Steam Methane Reforming. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 10569-10573.	13.8	75
15	Colloidal Flower-Shaped Iron Oxide Nanoparticles: Synthesis Strategies and Coatings. <i>Particle and Particle Systems Characterization</i> , 2017, 34, 1700094.	2.3	71
16	Precipitation pathways for ferrihydrite formation in acidic solutions. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 172, 247-264.	3.9	67
17	^{57}Fe -Mössbauer spectroscopy and electrochemical activities of graphitic layer encapsulated iron electrocatalysts for the oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2018, 221, 406-412.	20.2	61
18	Spin Structures in Magnetic Nanoparticles. <i>Journal of Nanomaterials</i> , 2013, 2013, 1-8.	2.7	57

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19	Electrified Methane Reforming: Understanding the Dynamic Interplay. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 23380-23388.	3.7	53
20	Inter-particle interactions in composites of antiferromagnetic nanoparticles. <i>Journal of Magnetism and Magnetic Materials</i> , 2003, 266, 36-48.	2.3	52
21	In Situ Structural Characterization of Ferric Iron Dimers in Aqueous Solutions: Identification of μ_4 -Oxo Species. <i>Inorganic Chemistry</i> , 2013, 52, 6788-6797.	4.0	51
22	Magnetization of exsolution intergrowths of hematite and ilmenite: Mineral chemistry, phase relations, and magnetic properties of hemo-ilmenite ores with micron-to nanometer-scale lamellae from Allard Lake, Quebec. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	49
23	Improving performance of induction-heated steam methane reforming. <i>Catalysis Today</i> , 2020, 342, 13-20.	4.4	47
24	Magnetic Properties of Nanoparticles of Antiferromagnetic Materials. <i>Hyperfine Interactions</i> , 2002, 144/145, 347-357.	0.5	45
25	Uniform excitations in magnetic nanoparticles. <i>Beilstein Journal of Nanotechnology</i> , 2010, 1, 48-54.	2.8	43
26	Reversible Guest Binding in a Non-Porous Fe^{II} Coordination Polymer Host Toggles Spin Crossover. <i>Chemistry - A European Journal</i> , 2015, 21, 16066-16072.	3.3	41
27	Glycine buffered synthesis of layered iron(II)-iron(III) hydroxides (green rusts). <i>Journal of Colloid and Interface Science</i> , 2017, 497, 429-438.	9.4	41
28	Formation and transformation of a short range ordered iron carbonate precursor. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 164, 94-109.	3.9	39
29	Halogen-Bonding-Assisted Iodosylbenzene Activation by a Homogenous Iron Catalyst. <i>Chemistry - A European Journal</i> , 2016, 22, 3810-3820.	3.3	38
30	Electrified methane reforming: Elucidating transient phenomena. <i>Chemical Engineering Journal</i> , 2021, 425, 131509.	12.7	38
31	On the interpretation of Mössbauer spectra of magnetic nanoparticles. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 445, 11-21.	2.3	36
32	Composition-dependent variation of magnetic properties and interstitial ordering in homogeneous expanded austenite. <i>Acta Materialia</i> , 2016, 106, 32-39.	7.9	35
33	Dual-Function Cobalt-Nickel Nanoparticles Tailored for High-Temperature Induction-Heated Steam Methane Reforming. <i>Angewandte Chemie</i> , 2018, 130, 10729-10733.	2.0	34
34	Direct observation of the thermal demagnetization of magnetic vortex structures in nonideal magnetite recorders. <i>Geophysical Research Letters</i> , 2016, 43, 8426-8434.	4.0	31
35	An aqueous non-heme Fe(IV)oxo complex with a basic group in the second coordination sphere. <i>Chemical Communications</i> , 2012, 48, 10880.	4.1	30
36	Modelling the effect of different core sizes and magnetic interactions inside magnetic nanoparticles on hyperthermia performance. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 477, 198-202.	2.3	30

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37	Enhanced intrinsic saturation magnetization of $Zn_{x/4}Co_{1-x/4}Fe_2O_4$ nanocrystallites with metastable spinel inversion. <i>Materials Chemistry Frontiers</i> , 2019, 3, 668-679.	5.9	29
38	Interparticle interactions in agglomerates of γ - Fe_2O_3 nanoparticles: influence of grinding. <i>Journal of Colloid and Interface Science</i> , 2004, 279, 132-136.	9.4	26
39	Directing a Non-Heme Iron(III)-Hydroperoxide Species on a Trifurcated Reactivity Pathway. <i>Chemistry - A European Journal</i> , 2018, 24, 5134-5145.	3.3	20
40	Magnetic clusters in ilmenite-hematite solid solutions. <i>Physical Review B</i> , 2010, 81, .	3.2	18
41	Ultrafast electron and energy transfer in dye-sensitized iron oxide and oxyhydroxide nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 17303.	2.8	16
42	Simulated clustering dynamics of colloidal magnetic nanoparticles. <i>Nanoscale</i> , 2021, 13, 1970-1981.	5.6	16
43	Optimized CoNi Nanoparticle Composition for Curie-Temperature-Controlled Induction-Heated Catalysis. <i>ACS Applied Nano Materials</i> , 2021, 4, 11537-11544.	5.0	14
44	Reversible aggregation and magnetic coupling of γ - Fe_2O_3 nanoparticles. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 7079-7084.	1.8	13
45	Magnetic, Structural, and Particle Size Analysis of Single- and Multi-Core Magnetic Nanoparticles. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	2.1	13
46	In Situ Studies of Fe^{4+} Stability in $Li_3Fe_2(PO_4)_3$ Cathodes for Li Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A531-A537.	2.9	13
47	Polarized neutron powder diffraction studies of antiferromagnetic order in bulk and nanoparticle NiO. <i>Physical Review B</i> , 2015, 91, .	3.2	13
48	Spin reorientation in γ - Fe_2O_3 nanoparticles induced by interparticle exchange interactions in γ - Fe_2O_3 /NiO nanocomposites. <i>Physical Review B</i> , 2011, 84, .	3.2	12
49	Effect of maghemization on the magnetic properties of nonstoichiometric pseudo-single-domain magnetite particles. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 2969-2979.	2.5	12
50	Uncertainty budget for determinations of mean isomer shift from Mössbauer spectra. <i>Hyperfine Interactions</i> , 2016, 237, 1.	0.5	12
51	Temperature dependence of the magnetization of canted spin structures. <i>Journal of Magnetism and Magnetic Materials</i> , 2012, 324, 3218-3222.	2.3	11
52	Spin orientation in solid solution hematite-ilmenite. <i>American Mineralogist</i> , 2017, 102, 1234-1243.	1.9	11
53	Photoinduced O_2 -Dependent Stepwise Oxidative Deglycation of a Nonheme Iron(III) Complex. <i>Journal of the American Chemical Society</i> , 2018, 140, 14150-14160.	13.7	11
54	Longitudinal domain wall formation in elongated assemblies of ferromagnetic nanoparticles. <i>Scientific Reports</i> , 2015, 5, 14536.	3.3	10

#	ARTICLE	IF	CITATIONS
55	1.04 Magnetic Nanoparticles. , 2019, , 89-140.		8
56	Prenormative verification and validation of a protocol for measuring magnetiteâ€“maghemite ratios in magnetic nanoparticles. Metrologia, 2022, 59, 015001.	1.2	8
57	A MÃ¶ssbauer study of the magnetization of \hat{A} -Fe ₂ O ₃ nanoparticles in applied fields: the influence of interaction with CoO. Journal of Physics Condensed Matter, 2004, 16, 6977-6981.	1.8	7
58	MÃ¶rup and Frandsen Reply:. Physical Review Letters, 2005, 94, .	7.8	6
59	MÃ¶rup and Frandsen Reply:. Physical Review Letters, 2005, 94, .	7.8	6
60	Magnetic phases in hemo-ilmenite: Insight from low-velocity and high-field MÃ¶ssbauer spectroscopy. Geophysical Research Letters, 2007, 34, .	4.0	6
61	Correction to â€œMagnetic phases in hemo-ilmenite: Insight from low-velocity and high-field MÃ¶ssbauer spectroscopyâ€• Geophysical Research Letters, 2007, 34, .	4.0	5
62	Magnetic dipolar ordering and hysteresis of geometrically defined nanoparticle clusters. Journal of Applied Physics, 2017, 122, 133902.	2.5	5
63	Anomalous Particle Size Dependence of Magnetic Relaxation Phenomena in Goethite Nanoparticles. Croatica Chemica Acta, 2015, 88, 481-485.	0.4	5
64	Influence of cation disorder on the magnetic properties of ball-milled ilmenite (FeTiO ₃). Materials Chemistry and Physics, 2012, 136, 184-189.	4.0	4
65	Off-axis spin orientation in goethite nanoparticles. Physical Review B, 2017, 96, .	3.2	4
66	Effect of carbon on interstitial ordering and magnetic properties of $\hat{\mu}$ -Fe ₂ (N,C)1-. Journal of Alloys and Compounds, 2017, 694, 282-291.	5.5	3
67	Induced Mesocrystal-Formation, Hydrothermal Growth and Magnetic Properties of $\hat{\pm}$ -Fe ₂ O ₃ Nanoparticles in Salt-Rich Aqueous Solutions. Crystals, 2017, 7, 248.	2.2	3
68	Order and Disorder in Layered Double Hydroxides: Lessons Learned from the Green Rust Sulfateâ€•Nikischerite Series. ACS Earth and Space Chemistry, 2022, 6, 322-332.	2.7	3
69	Crystal structure and magnetism of Fe₂(OH)[B₂O₄(OH)]. Journal of Physics Condensed Matter, 2014, 26, 266002.	1.8	0