Silvio Dutz

List of Publications by Year
in descending order

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81 papers	6,444 citations	147566 31 h-index	64668 79 g-index
85 all docs	85 docs citations	85 times ranked	7819 citing authors

#	Article	IF	Citations
1	Magnetic fluid hyperthermia: Focus on superparamagnetic iron oxide nanoparticles. Advances in Colloid and Interface Science, 2011, 166, 8-23.	7.0	1,125
2	Magnetic particle hyperthermia: nanoparticle magnetism and materials development for cancer therapy. Journal of Physics Condensed Matter, 2006, 18, S2919-S2934.	0.7	779
3	Magnetic particle hyperthermiaâ€"biophysical limitations of a visionary tumour therapy. Journal of Magnetism and Magnetic Materials, 2007, 311, 187-192.	1.0	705
4	Magnetic particle hyperthermiaâ€"a promising tumour therapy?. Nanotechnology, 2014, 25, 452001.	1.3	407
5	Magnetic nanoparticle heating and heat transfer on a microscale: Basic principles, realities and physical limitations of hyperthermia for tumour therapy. International Journal of Hyperthermia, 2013, 29, 790-800.	1.1	392
6	Temperature: The â€œIgnoredâ€•Factor at the NanoBio Interface. ACS Nano, 2013, 7, 6555-6562.	7.3	299
7	Effects of size distribution on hysteresis losses of magnetic nanoparticles for hyperthermia. Journal of Physics Condensed Matter, 2008, 20, 385214.	0.7	223
8	Magnetic multicore nanoparticles for hyperthermiaâ€"influence of particle immobilization in tumour tissue on magnetic properties. Nanotechnology, 2011, 22, 265102.	1.3	183
9	Validity limits of the NÃ©el relaxation model of magnetic nanoparticles for hyperthermia. Nanotechnology, 2010, 21, 015706.	1.3	181
10	Synthesis, Characterization, and Applications of Magnetic Nanoparticles Featuring Polyzwitterionic Coatings. Polymers, 2018, 10, 91.	2.0	147
11	Ferrofluids of magnetic multicore nanoparticles for biomedical applications. Journal of Magnetism and Magnetic Materials, 2009, 321, 1501-1504.	1.0	139
12	The effect of field parameters, nanoparticle properties and immobilization on the specific heating power in magnetic particle hyperthermia. Journal of Physics Condensed Matter, 2006, 18, S2935-S2949.	0.7	136
13	Hysteresis losses of magnetic nanoparticle powders in the single domain size range. Journal of Magnetism and Magnetic Materials, 2007, 308, 305-312.	1.0	120
14	Intentional formation of a protein corona on nanoparticles: Serum concentration affects protein corona mass, surface charge, and nanoparticleâ€"cell interaction. International Journal of Biochemistry and Cell Biology, 2016, 75, 196-202.	1.2	118
15	Size-dependent magnetic properties of iron oxide nanoparticles. Journal of Physics and Chemistry of Solids, 2016, 88, 24-30.	1.9	93
16	Metallic cobalt nanoparticles for heating applications. Journal of Magnetism and Magnetic Materials, 2007, 311, 224-227.	1.0	92
17	Injectable, Magnetically Orienting Electrospun Fiber Conduits for Neuron Guidance. ACS Applied Materials & Interfaces, 2019, 11, 356-372.	4.0	79
18	Influence of dextran coating on the magnetic behaviour of iron oxide nanoparticles. Journal of Magnetism and Magnetic Materials, 2007, 311, 51-54.	1.0	67

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19	Structural properties of magnetic nanoparticles determine their heating behavior - an estimation of the in vivo heating potential. Nanoscale Research Letters, 2014, 9, 602.	3.1	48
20	Magnetic NGF-Releasing PLLA/Iron Oxide Nanoparticles Direct Extending Neurites and Preferentially Guide Neurites along Aligned Electrospun Microfibers. ACS Chemical Neuroscience, 2015, 6, 1781-1788.	1.7	48
21	Are Magnetic Multicore Nanoparticles Promising Candidates for Biomedical Applications?. IEEE Transactions on Magnetics, 2016, 52, 1-3.	1.2	47
22	Magnetic heating effect of nanoparticles with different sizes and size distributions. Journal of Magnetism and Magnetic Materials, 2013, 328, 80-85.	1.0	43
23	Nanocrystalline iron oxide and Ba ferrite particles in the superparamagnetismâ€“ferromagnetism transition range with ferrofluid applications. Journal of Physics Condensed Matter, 2006, 18, S2527-S2542.	0.7	42
24	Biocompatible Magnetic Fluids of Co-Doped Iron Oxide Nanoparticles with Tunable Magnetic Properties. Nanomaterials, 2020, 10, 1019.	1.9	42
25	Hybrid Fe3O4@amino cellulose nanoparticles in organic media â€“ Heterogeneous ligands for atom transfer radical polymerizations. Journal of Colloid and Interface Science, 2013, 390, 25-33.	5.0	41
26	Magnetic iron oxide nanopowders produced by CO2 laser evaporation. Journal of Magnetism and Magnetic Materials, 2007, 311, 73-77.	1.0	40
27	Reversible Electrostatic Adsorption of Polyelectrolytes and Bovine Serum Albumin onto Polyzwitterion-Coated Magnetic Multicore Nanoparticles: Implications for Sensing and Drug Delivery. ACS Applied Nano Materials, 2018, 1, 232-244.	2.4	34
28	Magnetic nanoparticles coated with carboxymethylated polysaccharide shellsâ€”Interaction with human cells. Journal of Magnetism and Magnetic Materials, 2009, 321, 1469-1473.	1.0	33
29	Magnetic and fluorescent coreâ€“shell nanoparticles for ratiometric pH sensing. Nanotechnology, 2011, 22, 415501.	1.3	33
30	Challenges and recommendations for magnetic hyperthermia characterization measurements. International Journal of Hyperthermia, 2021, 38, 447-460.	1.1	33
31	Preparation of Core-Shell Hybrid Materials by Producing a Protein Corona Around Magnetic Nanoparticles. Nanoscale Research Letters, 2015, 10, 992.	3.1	31
32	Magnetic Nanoparticles Interact and Pass an In Vitro Co-Culture Blood-Placenta Barrier Model. Nanomaterials, 2018, 8, 108.	1.9	31
33	Magnetic Nanoparticles for Biomedical Heating Applications. Zeitschrift Fur Physikalische Chemie, 2006, 220, 145-151.	1.4	29
34	SPION@polydehydroalanine hybrid particles. RSC Advances, 2015, 5, 31920-31929.	1.7	29
35	Control of the Crystal Phase Composition of Fe_xO_y Nanopowders Prepared by CO₂ Laser Vaporization. Crystal Growth and Design, 2013, 13, 4868-4876.	1.4	26
36	Magnetic iron oxide nanopowders produced by CO2 laser evaporationâ€”â€˜In situâ€™ coating and particle embedding in a ceramic matrix. Journal of Magnetism and Magnetic Materials, 2009, 321, 1381-1385.	1.0	25

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37	Magnetic coreâ€“shell fluorescent pH ratiometric nanosensor using a StÃ¶ber coating method. Analytica Chimica Acta, 2011, 707, 164-170.	2.6	25
38	Electrospun magnetic nanofibre mats â€“ A new bondable biomaterial using remotely activated magnetic heating. Journal of Magnetism and Magnetic Materials, 2015, 380, 330-334.	1.0	25
39	Superspeed Bolus Visualization for Vascular Magnetic Particle Imaging. IEEE Transactions on Medical Imaging, 2020, 39, 2133-2139.	5.4	25
40	A microfluidic spiral for size-dependent fractionation of magnetic microspheres. Journal of Magnetism and Magnetic Materials, 2012, 324, 3791-3798.	1.0	23
41	Energy losses in mechanically modified bacterial magnetosomes. Journal Physics D: Applied Physics, 2016, 49, 365002.	1.3	22
42	Protein corona formation and its constitutional changes on magnetic nanoparticles in serum featuring a polydehydroalanine coating: effects of charge and incubation conditions. Nanotechnology, 2019, 30, 265707.	1.3	22
43	Kinetic studies of surfaceâ€initiated atom transfer radical polymerization in the synthesis of magnetic fluids. Journal of Polymer Science Part A, 2009, 47, 7012-7020.	2.5	18
44	Influence of Sterilization and Preservation Procedures on the Integrity of Serum Protein-Coated Magnetic Nanoparticles. Nanomaterials, 2017, 7, 453.	1.9	18
45	Ferrimagnetic Large Single Domain Iron Oxide Nanoparticles for Hyperthermia Applications. Nanomaterials, 2022, 12, 343.	1.9	18
46	Effect of nanoparticles coated with different modifications of dextran on lysozyme amyloid aggregation. Journal of Magnetism and Magnetic Materials, 2019, 473, 1-6.	1.0	17
47	Synthesis and Characterization of Citrate-Stabilized Gold-Coated Superparamagnetic Iron Oxide Nanoparticles for Biomedical Applications. Molecules, 2020, 25, 4425.	1.7	17
48	Weak Polyampholytes at the Interface of Magnetic Nanocarriers: A Facile Catch-and-Release Platform for Dyes. Langmuir, 2020, 36, 6095-6105.	1.6	17
49	Magnetic nanoparticles adapted for specific biomedical applications. Biomedizinische Technik, 2015, 60, 405-16.	0.9	15
50	Evaluation of a separate-receive coil by magnetic particle imaging of a solid phantom. Journal of Magnetism and Magnetic Materials, 2019, 471, 444-449.	1.0	15
51	Hysteresis losses in iron oxide nanoparticles prepared by glass crystallization or wet chemical precipitation. Journal of Magnetism and Magnetic Materials, 2007, 310, 2399-2401.	1.0	14
52	Asymmetric flow field-flow fractionation of superferrimagnetic iron oxide multicore nanoparticles. Nanotechnology, 2012, 23, 355701.	1.3	14
53	Investigation of magnetically driven passage of magnetic nanoparticles through eye tissues for magnetic drug targeting. Nanotechnology, 2020, 31, 495101.	1.3	14
54	Production of monodispersed magnetic polymeric microspheres in a microfluidic chip and 3D simulation. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	13

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55	ROS-generation and cellular uptake behavior of amino-silica nanoparticles arisen from their uploading by both iron-oxides and hexamolybdenum clusters. Materials Science and Engineering C, 2020, 117, 111305.	3.8	12
56	An investigation on the heat dissipation in Zn-substituted magnetite nanoparticles, coated with citric acid and pluronic F127 for hyperthermia application. Physica B: Condensed Matter, 2022, 625, 413468.	1.3	12
57	Measurement of the distribution parameters of size and magnetic properties of magnetic nanoparticles for medical applications. Journal of Physics: Conference Series, 2009, 149, 012115.	0.3	11
58	Biodegradable magnetic microspheres for drug targeting, temperature controlled drug release, and hyperthermia. Current Directions in Biomedical Engineering, 2019, 5, 161-164.	0.2	11
59	Surface-modified magnetite nanoparticles affect lysozyme amyloid fibrillization. Biochimica Et Biophysica Acta - General Subjects, 2021, 1865, 129941.	1.1	11
60	Scavenging of bacteria or bacterial products by magnetic particles functionalized with a broad-spectrum pathogen recognition receptor motif offers diagnostic and therapeutic applications. Acta Biomaterialia, 2022, 141, 418-428.	4.1	11
61	Precipitated Iron Oxide Particles by Cyclic Growth. Zeitschrift Fur Physikalische Chemie, 2006, 220, 51-57.	1.4	10
62	Investigations on magnetic particles prepared by cyclic growth. Journal of Magnetism and Magnetic Materials, 2011, 323, 1223-1227.	1.0	10
63	Zwitterionic Iron Oxide (Î³â€Fe₂O₃) Nanoparticles Based on P(2VPâ€gradâ€AA) Copolymers. Macromolecular Rapid Communications, 2017, 38, 1600637.	2.0	9
64	Temperature controlled camptothecin release from biodegradable magnetic PLGA microspheres. Journal of Magnetism and Magnetic Materials, 2019, 469, 698-703.	1.0	8
65	Magnetite-Arginine Nanoparticles as a Multifunctional Biomedical Tool. Nanomaterials, 2020, 10, 2014.	1.9	8
66	Heat dissipation in Sm3+ and Zn2+ co-substituted magnetite (Zn0.1SmxFe2.9-xO4) nanoparticles coated with citric acid and pluronic F127 for hyperthermia application. Scientific Reports, 2021, 11, 16795.	1.6	8
67	Long-term stable measurement phantoms for magnetic particle imaging. Journal of Magnetism and Magnetic Materials, 2019, 471, 1-7.	1.0	7
68	Hydroxyapatite-Coated SPIONs and Their Influence on Cytokine Release. International Journal of Molecular Sciences, 2021, 22, 4143.	1.8	7
69	Fractionation of Magnetic Microspheres in a Microfluidic Spiral: Interplay between Magnetic and Hydrodynamic Forces. PLoS ONE, 2017, 12, e0169919.	1.1	7
70	Negatively charged magnetic nanoparticles pass the blood-placenta barrier under continuous flow conditions in a time-dependent manner. Journal of Magnetism and Magnetic Materials, 2021, 521, 167535.	1.0	5
71	T2- and T1 relaxivities and magnetic hyperthermia of iron-oxide nanoparticles combined with paramagnetic Gd complexes. Journal of Chemical Sciences, 2021, 133, 1.	0.7	4
72	Fractionated Magnetic Multicore Nanoparticles for Magnetic Particle Imaging. Springer Proceedings in Physics, 2012, , 81-85.	0.1	4

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73	Hybrid nanomaterials of biomolecule corona coated magnetic nanoparticles and their interaction with biological systems. ChemistrySelect, 2022, 7, 1311-1344.	0.7	4
74	Collagenâ€“iron oxide nanoparticle based ferrogel: large reversible magnetostrains with potential for bioactuation. Multifunctional Materials, 2020, 3, 035001.	2.4	4
75	Bio-nano composite for remote melting. , 2015, , .		2
76	Calibration standard of body tissue with magnetic nanocomposites for MRI and X-ray imaging. Journal of Magnetism and Magnetic Materials, 2016, 405, 78-87.	1.0	2
77	A dynamic bolus phantom for the evaluation of the spatio-temporal resolution of MPI scanners. Journal of Magnetism and Magnetic Materials, 2021, 519, 167446.	1.0	1
78	Magnetic hybrid materials interact with biological matrices. ChemistrySelect, 2022, 7, 1443-1500.	0.7	1
79	A multi-purpose phantom kit for magnetic particle imaging. Current Directions in Biomedical Engineering, 2021, 7, 319-322.	0.2	1
80	Poster session 1. Imaging and image processing I. Biomedizinische Technik, 2017, 62, .	0.9	0
81	Camera calibration and orientation for PCB jet printing inspection. SN Applied Sciences, 2020, 2, 1.	1.5	0