Uwe Steinhoff

List of Publications by Year
in descending order

98 papers	1,811 citations	279487 23 h-index	288905 40 g-index
106 all docs	106 docs citations	106 times ranked	1647 citing authors

#	Article	IF	Citations
1	Fetal magnetocardiography measurements with an array of microfabricated optically pumped magnetometers. Physics in Medicine and Biology, 2015, 60, 4797-4811.	1.6	137
2	Aggregation behaviour of magnetic nanoparticle suspensions investigated by magnetorelaxometry. Journal of Physics Condensed Matter, 2006, 18, S2829-S2846.	0.7	128
3	Magnetorelaxometry Assisting Biomedical Applications of Magnetic Nanoparticles. Pharmaceutical Research, 2012, 29, 1189-1202.	1.7	121
4	Integrated YBa2Cu3O7âˆ'x magnetometer for biomagnetic measurements. Applied Physics Letters, 1996, 68, 1421-1423.	1.5	114
5	Whither Magnetic Hyperthermia? A Tentative Roadmap. Materials, 2021, 14, 706.	1.3	76
6	Quantification of Magnetic Nanoparticles by Magnetorelaxometry and Comparison to Histology After Magnetic Drug Targeting. Journal of Nanoscience and Nanotechnology, 2006, 6, 3222-3225.	0.9	66
7	Magnetorelaxometry for localization and quantification of magnetic nanoparticles for thermal ablation studies. Physics in Medicine and Biology, 2010, 55, 623-633.	1.6	63
8	Characterization of magnetic nanoparticle systems with respect to their magnetic particle imaging performance. Biomedizinische Technik, 2013, 58, 535-45.	0.9	60
9	Classification of Magnetic Nanoparticle Systemsâ€"Synthesis, Standardization and Analysis Methods in the NanoMag Project. International Journal of Molecular Sciences, 2015, 16, 20308-20325.	1.8	59
10	Standardisation of magnetic nanoparticles in liquid suspension. Journal Physics D: Applied Physics, 2017, 50, 383003.	1.3	56
11	Quantitative imaging of magnetic nanoparticles by magnetorelaxometry with multiple excitation coils. Physics in Medicine and Biology, 2014, 59, 6607-6620.	1.6	44
12	Quantification of drug-loaded magnetic nanoparticles in rabbit liver and tumor after in vivo administration. Journal of Magnetism and Magnetic Materials, 2009, 321, 1465-1468.	1.0	43
13	How shape and internal structure affect the magnetic properties of anisometric magnetite nanoparticles. Acta Materialia, 2017, 125, 416-424.	3.8	43
14	Magnetic nanoparticle imaging by means of minimum norm estimates from remanence measurements. Medical and Biological Engineering and Computing, 2008, 46, 1177-1185.	1.6	41
15	Quantification of specific bindings of biomolecules by magnetorelaxometry. Journal of Nanobiotechnology, 2008, 6, 4.	4.2	41
16	Advancements in Magnetic Nanoparticle Reconstruction Using Sequential Activation of Excitation Coil Arrays Using Magnetorelaxometry. IEEE Transactions on Magnetics, 2012, 48, 1313-1316.	1.2	36
17	Specific binding of magnetic nanoparticle probes to platelets in whole blood detected by magnetorelaxometry. Journal of Magnetism and Magnetic Materials, 2009, 321, 1617-1620.	1.0	35
18	Improved sensitivity and limit-of-detection using a receive-only coil in magnetic particle imaging. Physics in Medicine and Biology, 2018, 63, 13NT02.	1.6	35

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19	Challenges and recommendations for magnetic hyperthermia characterization measurements. International Journal of Hyperthermia, 2021, 38, 447-460.	1.1	33
20	Magnetorelaxometry procedures for quantitative imaging and characterization of magnetic nanoparticles in biomedical applications. Biomedizinische Technik, 2015, 60, 427-43.	0.9	30
21	Binding kinetics of magnetic nanoparticles on latex beads and yeast cells studied by magnetorelaxometry. Journal of Magnetism and Magnetic Materials, 2005, 289, 435-438.	1.0	29
22	Comparison of magnetocardiography and electrocardiography: a study of automatic measurement of dispersion of ventricular repolarization. Europace, 2006, 8, 887-893.	0.7	29
23	Magnetocardiographic analysis of the two-dimensional distribution of intra-QRS fractionated activation. Physics in Medicine and Biology, 1999, 44, 105-120.	1.6	28
24	Multi-color magnetic nanoparticle imaging using magnetorelaxometry. Physics in Medicine and Biology, 2017, 62, 3139-3157.	1.6	24
25	Size analysis of single-core magnetic nanoparticles. Journal of Magnetism and Magnetic Materials, 2017, 427, 19-24.	1.0	23
26	Pseudo current density maps of electrophysiological heart, nerve or brain function and their physical basis. Biomagnetic Research and Technology, 2006, 4, 5.	2.0	22
27	Towards quantitative magnetic particle imaging: A comparison with magnetic particle spectroscopy. AIP Advances, 2018, 8, .	0.6	21
28	Fragmentation of bandpass-filtered QRS-complex of patients prone to malignant arrhythmia. Medical and Biological Engineering and Computing, 1998, 36, 723-728.	1.6	20
29	Magnetocardiography for pharmacology safety studies requiring high patient throughput and reliability. Journal of Electrocardiology, 2004, 37, 187-192.	0.4	20
30	Comparability of measurement results obtained with multi-SQUID-systems of different sensor configurations. IEEE Transactions on Applied Superconductivity, 1997, 7, 3465-3468.	1.1	18
31	Binding kinetics of magnetic nanoparticles on latex beads studied by magnetorelaxometry. Applied Organometallic Chemistry, 2004, 18, 542-547.	1.7	18
32	Quantification of biomolecule agglutination by magnetorelaxometry. Applied Physics Letters, 2009, 95, .	1.5	18
33	Multichannel SQUID System With Integrated Magnetic Shielding for Magnetocardiography of Mice. IEEE Transactions on Applied Superconductivity, 2007, 17, 827-830.	1.1	16
34	Thermal magnetic noise spectra of nanoparticle ensembles. Applied Physics Letters, 2015, 107, .	1.5	14
35	Interpreting the magnetorelaxometry signal of suspended magnetic nanoparticles with Kaczmarzâ€™ algorithm. Journal Physics D: Applied Physics, 2017, 50, 195002.	1.3	14
36	Value of Magnetocardiographic QRST Integral Maps in the Identification of Patients at Risk of Ventricular Arrhythmias. PACE - Pacing and Clinical Electrophysiology, 1999, 22, 1292-1304.	0.5	13

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37	MCG to ECG source differences: Measurements and a two-dimensional computer model study. Journal of Electrocardiology, 2004, 37, 123-127.	0.4	13
38	Magnetic, Structural, and Particle Size Analysis of Single- and Multi-Core Magnetic Nanoparticles. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	13
39	Optimizing Excitation Coil Currents for Advanced Magnetorelaxometry Imaging. Journal of Mathematical Imaging and Vision, 2020, 62, 238-252.	0.8	13
40	Finding the magnetic size distribution of magnetic nanoparticles from magnetization measurements via the iterative Kaczmarz algorithm. Journal of Magnetism and Magnetic Materials, 2017, 431, 33-37.	1.0	11
41	Magnetorelaxometry for In-Vivo Quantification of Magnetic Nanoparticle Distributions after Magnetic Drug Targeting in a Rabbit Carcinoma Model. Springer Proceedings in Physics, 2012, , 301-305.	0.1	11
42	Uncertainty of reconstructions of spatially distributed magnetic nanoparticles under realistic noise conditions. Journal of Applied Physics, 2014, 115, .	1.1	10
43	Identification of post-myocardial infarction patients with ventricular tachycardia by time-domain intra-QRS analysis of signal-averaged electrocardiogram and magnetocardiogram. Medical and Biological Engineering and Computing, 2000, 38, 659-665.	1.6	9
44	Probing particle-matrix interactions during magnetic particle spectroscopy. Journal of Magnetism and Magnetic Materials, 2019, 475, 421-428.	1.0	9
45	Magnetometry of evoked fields from human peripheral nerve, brachial plexus and primary somatosensory cortex using a liquid nitrogen cooled superconducting quantum interference device. Neuroscience Letters, 1996, 206, 204-206.	1.0	8
46	Errors in Repolarization Measurement Using Magnetocardiography. PACE - Pacing and Clinical Electrophysiology, 2002, 25, 1223-1229.	0.5	8
47	Comparison of Automatic Repolarization Measurement Techniques in the Normal Magnetocardiogram. PACE - Pacing and Clinical Electrophysiology, 2003, 26, 2096-2102.	0.5	7
48	Quantitative reconstruction of a magnetic nanoparticle distribution using a non-negativity constraint. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	7
49	The complementarity and similarity of magnetorelaxometry and thermal magnetic noise spectroscopy for magnetic nanoparticle characterization. Journal Physics D: Applied Physics, 2017, 50, 085004.	1.3	7
50	A sensor configuration for a 304 SQUID vector magnetometer. Neurology, Neurophysiology and Neuroscience, 2004, 2004, 70.	0.0	7
51	Magnetocardiographic mapping of QRS fragmentation in patients with a history of malignant tachyarrhythmias. Clinical Cardiology, 2001, 24, 682-688.	0.7	6
52	Localization of Curved Current Sources in Magnetocardiography. Biomedizinische Technik, 2001, 46, 141-143.	0.9	5
53	Safety pharmacology and prolongation of the QT interval. Journal of Electrocardiology, 2007, 40, S58-S61.	0.4	5
54	European Research on Magnetic Nanoparticles for Biomedical Applications: Standardisation Aspects. Advances in Intelligent Systems and Computing, 2020, , 316-326.	0.5	5

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55	Spatially Resolved Measurement of Magnetic Nanoparticles Using Inhomogeneous Excitation Fields in the Linear Susceptibility Range (<1mT). Springer Proceedings in Physics, 2012, , 295-300.	0.1	5
56	Magnetocardiographic turbulence analysis in patients with the long QT syndrome. Journal of Electrocardiology, 1998, 30, 105-113.	0.4	4
57	COMPARISON OF CARDIAC MAGNETIC FIELD DISTRIBUTIONS DURING DEPOLARIZATION AND REPOLARIZATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3783-3789.	0.7	4
58	A physical phantom modeling extended magnetic nanoparticle distributions in biological systems. IFMBE Proceedings, 2009, , 293-296.	0.2	4
59	Spatial distribution of cardiac magnetic vector fields acquired from 3120 SQUID positions. Neurology, Neurophysiology and Neuroscience, 2004, 2004, 59.	0.0	4
60	Complex narrow band-pass filters for QRS detection in contactless magnetocardiograms of small animals. , 2005, , .		3
61	Nonlinear Spectroscopic Characterization and Volterra Series Inspired Modeling of Magnetic Nanoparticles. IEEE Transactions on Magnetics, 2017, 53, 1-12.	1.2	3
62	AC susceptometry and magnetorelaxometry for magnetic nanoparticle based biomolecule detection. IFMBE Proceedings, 2009, , 2317-2321.	0.2	3
63	Experimental demonstration of improved magnetorelaxometry imaging performance using optimized coil configurations. Medical Physics, 2022, , .	1.6	3
64	Heart rate variability determined as heart frequency deviation. , 0, , .		2
65	Ein Algorithmus zur Quantifizierung der Fragmentation des MKGs im QRS-Komplex. Biomedizinische Technik, 2009, , 279-280.	0.9	2
66	Quantitative and binding-specific imaging of magnetic nanoparticle distributions. , 2015, , .		2
67	A Phenomenological Description of the MPS Signal Using a Model for the Field Dependence of the Effective Relaxation Time. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	2
68	Localization of a magnetic nanoparticle spot from features of the magnetic field pattern and comparison to a magnetic dipole fit. IFMBE Proceedings, 2009, , 2347-2351.	0.2	2
69	Robuste Parameter zur Beschreibung von magnetokardiografischen Feldern. Biomedizinische Technik, 1996, 41, 296-297.	0.9	1
70	Analysis of QRS shape variability and short-term heart rate variability of CAD patients. , 0, , .		1
71	Non-invasively measured cardiac magnetic field maps improve the estimation of the current distribution. , 0, , .		1
72	Relation between spatial properties of repolarisation interval and T-wave amplitude using magnetocardiography. , 0, , .		1

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73	Analysis of spatial variation in the atrial fibrillation frequency from the multi-channel magnetocardiogram. , 2003, , .		1
74	Track J. Biomedizinische Technik, 2014, 59, s649-99.	0.9	1
75	Characterizing the imaging performance of magnetic tracers by Magnetic Particle Spectroscopy in an offset field. , 2015, , .		1
76	IMAGING CHARACTERISTICS OF DIFFERENT MULTICHANNEL MAGNETOCARDIOGRAPHIC SYSTEMS. Biomedizinische Technik, 2002, 47, 445-448.	0.9	1
77	Der EinfluÃŸ der Sensorkonfiguration auf biomagnetische MeÃŸsignale. Biomedizinische Technik, 1996, 41, 302-303.	0.9	0
78	Magnetocardiography using HTS rf SQUIDs with coplanar resonators. Applied Superconductivity, 1999, 6, 705-710.	0.5	0
79	Effects of filtering on automatic repolarisation measurements using magnetocardiography. , 0, , .		0
80	Effect of averaging for the automatic measurement of QT dispersion using multichannel magnetocardiography and electrocardiography. , 0, , .		0
81	Spatial and temporal variability of ECG waveforms observed in sinus rhythm and during atrio-ventricular stimulation in a patient with implanted ICD: case study. , 2005, , .		0
82	Effect of channel exclusion for the automatic measurement of QT dispersion in multichannel magnetocardiograms. , 2005, , .		0
83	MODELLIERUNG UND MESSUNG DES ELEKTROMAGNETISCHEN FELDES AUSGEDEHNTER STROMQUELLEN IM MENSCHLICHEN HERZEN. Biomedizinische Technik, 2009, , 85-86.	0.9	0
84	AbschÃtzung der derzeit erreichbaren AuflÃ¶sung im OberflÃchen-EKG und MKG. Biomedizinische Technik, 2009, , 207-208.	0.9	0
85	LOCALIZATION AND QUANTIFICATION OF MAGNETIC NANOPARTICLES BY MULTICHANNEL MAGNETORELAXOMETRY FOR THERMAL ABLATION STUDIES. , 2010, , .		0
86	Quality evaluation of a pediatric ECG database for assessment of arrhythmia detection algorithms in Automated External Defibrillators. Biomedizinische Technik, 2012, 57, .	0.9	0
87	Magnetic Separation to Enhance the MPI Performance of ResovistÂ®. Biomedizinische Technik, 2012, 57, .	0.9	0
88	Spatial reconstruction of a magnetic nanoparticle distribution using a single sensor and multiple magnetizing coils. Biomedizinische Technik, 2012, 57, .	0.9	0
89	Principal moments of a multipole expansion to quantify the magnetic nanoparticle distributions in arteries. Biomedizinische Technik, 2012, 57, .	0.9	0
90	Comparison of pediatric ECG from digital devices or scanned images. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0

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91	Quantification and Localization of Extended Nanoparticle Distributions in Tissue Using Multipole Expansion. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
92	Improving the sensitivity in magnetorelaxometry imaging of magnetic nanoparticles. , 2015, , .		0
93	Optimization of MNPs by size fractionation for MPI application. , 2015, , .		0
94	The volume fraction of iron oxide in a certain particle size range determines the harmonic spectrum of magnetic tracers. , 2015, , .		0
95	NanoMag — Standardization of analysis methods for magnetic nanoparticles. , 2015, , .		0
96	Parameterization of the harmonic content of the complex MPI signal of magnetic tracers using a set of polynomial coefficients. Journal of Magnetism and Magnetic Materials, 2015, 380, 276-279.	1.0	0
97	A model for uncertainty influences on static magnetisation measurements on magnetic nanoparticles. Journal of Physics: Conference Series, 2018, 1065, 072030.	0.3	0
98	Comparison of magnetocardiography and electrocardiography. Anatolian Journal of Cardiology, 2007, 7 Suppl 1, 20-2.	0.4	0