

Kai Wu

List of Publications by Year in descending order

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Version: 2024-02-01

52
papers

1,756
citations

279487

23
h-index

276539

41
g-index

53
all docs

53
docs citations

53
times ranked

1907
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on magnetic and spintronic neurostimulation: challenges and prospects. <i>Nanotechnology</i> , 2022, 33, 182004.	1.3	12
2	Strength-frequency curve for micromagnetic neurostimulation through excitatory postsynaptic potentials (EPSPs) on rat hippocampal neurons and numerical modeling of magnetic microcoil (1/4coil). <i>Journal of Neural Engineering</i> , 2022, 19, 016018.	1.8	7
3	Giant Magnetoresistance Biosensors in Biomedical Applications. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 9945-9969.	4.0	31
4	Magnetic nanoparticles and magnetic particle spectroscopy-based bioassays: a 15 year recap. <i>Nano Futures</i> , 2022, 6, 022001.	1.0	16
5	A Portable Magnetic Particle Spectrometer for Future Rapid and Wash-Free Bioassays. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 7966-7976.	4.0	17
6	Investigation of Commercial Iron Oxide Nanoparticles: Structural and Magnetic Property Characterization. <i>ACS Omega</i> , 2021, 6, 6274-6283.	1.6	21
7	Stable and Monodisperse Iron Nitride Nanoparticle Suspension for Magnetic Diagnosis and Treatment: Development of Synthesis and Surface Functionalization Strategies. <i>ACS Applied Nano Materials</i> , 2021, 4, 4409-4418.	2.4	5
8	Magnetic Particle Spectroscopy with One-Stage Lock-In Implementation for Magnetic Bioassays with Improved Sensitivities. <i>Journal of Physical Chemistry C</i> , 2021, 125, 17221-17231.	1.5	8
9	Large Superparamagnetic FeCo Nanocubes for Magnetic Theranostics. <i>ACS Applied Nano Materials</i> , 2021, 4, 9382-9390.	2.4	3
10	One-Step, Wash-free, Nanoparticle Clustering-Based Magnetic Particle Spectroscopy Bioassay Method for Detection of SARS-CoV-2 Spike and Nucleocapsid Proteins in the Liquid Phase. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 44136-44146.	4.0	35
11	Magnetic field enhanced coercivity of Fe nanoparticles embedded in antiferromagnetic MnN films. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 035003.	1.3	3
12	Advances in Magnetoresistive Biosensors. <i>Micromachines</i> , 2020, 11, 34.	1.4	53
13	Continuous separation of magnetic beads using a Y-shaped microfluidic system integrated with hard-magnetic elements. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 035004.	1.3	4
14	Magnetic-Nanosensor-Based Virus and Pathogen Detection Strategies before and during COVID-19. <i>ACS Applied Nano Materials</i> , 2020, 3, 9560-9580.	2.4	81
15	Magnetic Particle Spectroscopy: A Short Review of Applications Using Magnetic Nanoparticles. <i>ACS Applied Nano Materials</i> , 2020, 3, 4972-4989.	2.4	78
16	Irregularly Shaped Iron Nitride Nanoparticles as a Potential Candidate for Biomedical Applications: From Synthesis to Characterization. <i>ACS Omega</i> , 2020, 5, 11756-11767.	1.6	14
17	Spin current nano-oscillator (SCNO) as a potential frequency-based, ultra-sensitive magnetic biosensor: a simulation study. <i>Nanotechnology</i> , 2020, 31, 375501.	1.3	9
18	Magnetic Particle Spectroscopy for Detection of Influenza A Virus Subtype H1N1. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 13686-13697.	4.0	55

#	ARTICLE	IF	CITATIONS
19	Design and fabrication of integrated magnetic field sensing system with enhanced sensitivity. Journal of Magnetism and Magnetic Materials, 2020, 511, 166728.	1.0	5
20	High-moment magnetic nanoparticles. Journal of Nanoparticle Research, 2020, 22, 1.	0.8	25
21	Deterministic field-free switching of a perpendicularly magnetized ferromagnetic layer via the joint effects of the Dzyaloshinskiiâ€“Moriya interaction and damping- and field-like spinâ€“orbit torques: an appraisal. Journal Physics D: Applied Physics, 2020, 53, 205002.	1.3	24
22	Magnetic Particle Spectroscopy-Based Handheld Device for Wash-Free, Easy-to-Use, and Solution-Phase Immunoassay Applications. , 2020, , .		1
23	Tunable magnetic skyrmions in spintronic nanostructures for cellular-level magnetic neurostimulation. Journal Physics D: Applied Physics, 2019, 52, 465002.	1.3	8
24	Magnetic nanoparticles in nanomedicine: a review of recent advances. Nanotechnology, 2019, 30, 502003.	1.3	340
25	Spinâ€“Orbit Torque and Spin Hall Effect-Based Cellular Level Therapeutic Spintronic Neuromodulator: A Simulation Study. Journal of Physical Chemistry C, 2019, 123, 24963-24972.	1.5	7
26	Detection of Influenza a Virus in Swine Nasal Swab Samples With a Wash-Free Magnetic Bioassay and a Handheld Giant Magnetoresistance Sensing System. Frontiers in Microbiology, 2019, 10, 1077.	1.5	53
27	Magnetic Nanoparticle Relaxation Dynamics-Based Magnetic Particle Spectroscopy for Rapid and Wash-Free Molecular Sensing. ACS Applied Materials & Interfaces, 2019, 11, 22979-22986.	4.0	37
28	Investigating the effect of magnetic dipoleâ€“dipole interaction on magnetic particle spectroscopy: implications for magnetic nanoparticle-based bioassays and magnetic particle imaging. Journal Physics D: Applied Physics, 2019, 52, 335002.	1.3	32
29	Magnetic particle spectroscopy-based bioassays: methods, applications, advances, and future opportunities. Journal Physics D: Applied Physics, 2019, 52, 173001.	1.3	58
30	Tunable magnetic domain walls for therapeutic neuromodulation at cellular level: Stimulating neurons through magnetic domain walls. Journal of Applied Physics, 2019, 126, .	1.1	7
31	Development of a multiplexed giant magnetoresistive biosensor array prototype to quantify ovarian cancer biomarkers. Biosensors and Bioelectronics, 2019, 126, 301-307.	5.3	61
32	Large-area GMR bio-sensors based on reverse nucleation switching mechanism. Journal of Magnetism and Magnetic Materials, 2019, 473, 484-489.	1.0	13
33	Estimating saturation magnetization of superparamagnetic nanoparticles in liquid phase. Journal of Magnetism and Magnetic Materials, 2019, 471, 394-399.	1.0	7
34	Nanotechnology: Review of concepts and potential application of sensing platforms in food safety. Food Microbiology, 2018, 75, 47-54.	2.1	131
35	Magnetic Nanoparticle-Based Biosensing. , 2018, , 247-270.		2
36	Magnetic dynamics of ferrofluids: mathematical models and experimental investigations. Journal Physics D: Applied Physics, 2017, 50, 085005.	1.3	24

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37	Characterization: Characterizing Physical Properties of Superparamagnetic Nanoparticles in Liquid Phase Using Brownian Relaxation (Small 22/2017). Small, 2017, 13, .	5.2	0
38	Characterizing Physical Properties of Superparamagnetic Nanoparticles in Liquid Phase Using Brownian Relaxation. Small, 2017, 13, 1604135.	5.2	26
39	Magnetic hyperthermia performance of magnetite nanoparticle assemblies under different driving fields. AIP Advances, 2017, 7, .	0.6	36
40	Portable GMR Handheld Platform for the Detection of Influenza A Virus. ACS Sensors, 2017, 2, 1594-1601.	4.0	96
41	Localized detection of reversal nucleation generated by high moment magnetic nanoparticles using a large-area magnetic sensor. Journal of Applied Physics, 2017, 122, 123901.	1.1	19
42	Giant Magnetoresistance-based Biosensor for Detection of Influenza A Virus. Frontiers in Microbiology, 2016, 7, 400.	1.5	132
43	Magnetic properties of cubic FeCo nanoparticles with anisotropic long chain structure. AIP Advances, 2016, 6, .	0.6	23
44	<italic>In Vitro</italic> Viscosity Measurement on Superparamagnetic Nanoparticle Suspensions. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	6
45	Magnetization Response Spectroscopy of Superparamagnetic Nanoparticles Under Mixing Frequency Fields. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	7
46	A simulation study on superparamagnetic nanoparticle based multi-tracer tracking. Applied Physics Letters, 2015, 107, .	1.5	13
47	Colorize magnetic nanoparticles using a search coil based testing method. Journal of Magnetism and Magnetic Materials, 2015, 380, 251-254.	1.0	14
48	Superparamagnetic nanoparticle-based viscosity test. Applied Physics Letters, 2015, 107, .	1.5	26
49	Viscosity effect on the brownian relaxation based detection for immunoassay applications. , 2014, 2014, 2769-72.		4
50	Magnetic nanoparticles colourization by a mixing-frequency method. Journal Physics D: Applied Physics, 2014, 47, 155001.	1.3	31
51	Evaluation of Hyperthermia of Magnetic Nanoparticles by Dehydrating DNA. Scientific Reports, 2014, 4, 7216.	1.6	33
52	Magnetic nanotechnologies for early cancer diagnostics with liquid biopsies: a review. Journal of Cancer Metastasis and Treatment, 0, 2020, .	0.5	2