Kai Wu

List of Publications by Year
in descending order

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	Magnetic nanoparticles in nanomedicine: a review of recent advances. Nanotechnology, 2019, 30, 502003.	1.3	340
2	Giant Magnetoresistance-based Biosensor for Detection of Influenza A Virus. Frontiers in Microbiology, 2016, 7, 400.	1.5	132
3	Nanotechnology: Review of concepts and potential application of sensing platforms in food safety. Food Microbiology, 2018, 75, 47-54.	2.1	131
4	Portable GMR Handheld Platform for the Detection of Influenza A Virus. ACS Sensors, 2017, 2, 1594-1601.	4.0	96
5	Magnetic-Nanosensor-Based Virus and Pathogen Detection Strategies before and during COVID-19. ACS Applied Nano Materials, 2020, 3, 9560-9580.	2.4	81
6	Magnetic Particle Spectroscopy: A Short Review of Applications Using Magnetic Nanoparticles. ACS Applied Nano Materials, 2020, 3, 4972-4989.	2.4	78
7	Development of a multiplexed giant magnetoresistive biosensor array prototype to quantify ovarian cancer biomarkers. Biosensors and Bioelectronics, 2019, 126, 301-307.	5.3	61
8	Magnetic particle spectroscopy-based bioassays: methods, applications, advances, and future opportunities. Journal Physics D: Applied Physics, 2019, 52, 173001.	1.3	58
9	Magnetic Particle Spectroscopy for Detection of Influenza A Virus Subtype H1N1. ACS Applied Materials & Interfaces, 2020, 12, 13686-13697.	4.0	55
10	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
11	Advances in Magnetoresistive Biosensors. Micromachines, 2020, 11, 34.	1.4	53
12	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
13	Magnetic hyperthermia performance of magnetite nanoparticle assemblies under different driving fields. AIP Advances, 2017, 7, .	0.6	36
14	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. ACS Applied Materials & Interfaces, 2021, 13, 44136-44146.	4.0	35
15	Evaluation of Hyperthermia of Magnetic Nanoparticles by Dehydrating DNA. Scientific Reports, 2014, 4, 7216.	1.6	33
16	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
17	Magnetic nanoparticles colourization by a mixing-frequency method. Journal Physics D: Applied Physics, 2014, 47, 155001.	1.3	31
18	Giant Magnetoresistance Biosensors in Biomedical Applications. ACS Applied Materials & Interfaces, 2022, 14, 9945-9969.	4.0	31

#	Article	IF	Citations
19	Superparamagnetic nanoparticle-based viscosity test. Applied Physics Letters, 2015, 107, .	1.5	26
20	Characterizing Physical Properties of Superparamagnetic Nanoparticles in Liquid Phase Using Brownian Relaxation. Small, 2017, 13, 1604135.	5.2	26
21	High-moment magnetic nanoparticles. Journal of Nanoparticle Research, 2020, 22, 1.	0.8	25
22	Magnetic dynamics of ferrofluids: mathematical models and experimental investigations. Journal Physics D: Applied Physics, 2017, 50, 085005.	1.3	24
23	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
24	Magnetic properties of cubic FeCo nanoparticles with anisotropic long chain structure. AIP Advances, 2016, 6, .	0.6	23
25	Investigation of Commercial Iron Oxide Nanoparticles: Structural and Magnetic Property Characterization. ACS Omega, 2021, 6, 6274-6283.	1.6	21
26	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
27	A Portable Magnetic Particle Spectrometer for Future Rapid and Wash-Free Bioassays. ACS Applied Materials & Interfaces, 2021, 13, 7966-7976.	4.0	17
28	Magnetic nanoparticles and magnetic particle spectroscopy-based bioassays: a 15 year recap. Nano Futures, 2022, 6, 022001.	1.0	16
29	Colorize magnetic nanoparticles using a search coil based testing method. Journal of Magnetism and Magnetic Materials, 2015, 380, 251-254.	1.0	14
30	Irregularly Shaped Iron Nitride Nanoparticles as a Potential Candidate for Biomedical Applications: From Synthesis to Characterization. ACS Omega, 2020, 5, 11756-11767.	1.6	14
31	A simulation study on superparamagnetic nanoparticle based multi-tracer tracking. Applied Physics Letters, 2015, 107, .	1.5	13
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	A review on magnetic and spintronic neurostimulation: challenges and prospects. Nanotechnology, 2022, 33, 182004.	1.3	12
34	Spin current nano-oscillator (SCNO) as a potential frequency-based, ultra-sensitive magnetic biosensor: a simulation study. Nanotechnology, 2020, 31, 375501.	1.3	9
35	Tunable magnetic skyrmions in spintronic nanostructures for cellular-level magnetic neurostimulation. Journal Physics D: Applied Physics, 2019, 52, 465002.	1.3	8
36	Magnetic Particle Spectroscopy with One-Stage Lock-In Implementation for Magnetic Bioassays with Improved Sensitivities. Journal of Physical Chemistry C, 2021, 125, 17221-17231.	1.5	8

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37	Magnetization Response Spectroscopy of Superparamagnetic Nanoparticles Under Mixing Frequency Fields. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	7
38	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
39	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
40	Estimating saturation magnetization of superparamagnetic nanoparticles in liquid phase. Journal of Magnetism and Magnetic Materials, 2019, 471, 394-399.	1.0	7
41	Strength-frequency curve for micromagnetic neurostimulation through excitatory postsynaptic potentials (EPSPs) on rat hippocampal neurons and numerical modeling of magnetic microcoil (Î¼coil). Journal of Neural Engineering, 2022, 19, 016018.	1.8	7
42	<italic>In Vitro</italic> Viscosity Measurement on Superparamagnetic Nanoparticle Suspensions. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	6
43	Design and fabrication of integrated magnetic field sensing system with enhanced sensitivity. Journal of Magnetism and Magnetic Materials, 2020, 511, 166728.	1.0	5
44	Stable and Monodisperse Iron Nitride Nanoparticle Suspension for Magnetic Diagnosis and Treatment: Development of Synthesis and Surface Functionalization Strategies. ACS Applied Nano Materials, 2021, 4, 4409-4418.	2.4	5
45	Viscosity effect on the brownian relaxation based detection for immunoassay applications. , 2014, 2014, 2769-72.		4
46	Continuous separation of magnetic beads using a Y-shaped microfluidic system integrated with hard-magnetic elements. Journal Physics D: Applied Physics, 2020, 53, 035004.	1.3	4
47	Magnetic field enhanced coercivity of Fe nanoparticles embedded in antiferromagnetic MnN films. Journal Physics D: Applied Physics, 2020, 53, 035003.	1.3	3
48	Large Superparamagnetic FeCo Nanocubes for Magnetic Theranostics. ACS Applied Nano Materials, 2021, 4, 9382-9390.	2.4	3
49	Magnetic Nanoparticle-Based Biosensing. , 2018, , 247-270.		2
50	Magnetic nanotechnologies for early cancer diagnostics with liquid biopsies: a review. Journal of Cancer Metastasis and Treatment, 0, 2020, .	0.5	2
51	Magnetic Particle Spectroscopy-Based Handheld Device for Wash-Free, Easy-to-Use, and Solution-Phase Immunoassay Applications. , 2020, , .		1
52	Characterization: Characterizing Physical Properties of Superparamagnetic Nanoparticles in Liquid Phase Using Brownian Relaxation (Small 22/2017). Small, 2017, 13, .	5.2	0