

Cheol Gi Kim

List of Publications by Year in descending order

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96
papers

1,865
citations

304743

22
h-index

302126

39
g-index

104
all docs

104
docs citations

104
times ranked

2385
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetoresistive Sensor Development Roadmap (Non-Recording Applications). IEEE Transactions on Magnetics, 2019, 55, 1-30.	2.1	138
2	Biosynthesis of Gold Nanoparticles Assisted by <i>Sapindus mukorossi</i> Gaertn. Fruit Pericarp and Their Catalytic Application for the Reduction of <i>p</i> -Nitroaniline. Industrial & Engineering Chemistry Research, 2013, 52, 556-564.	3.7	118
3	Magnetophoretic circuits for digital control of single particles and cells. Nature Communications, 2014, 5, 3846.	12.8	104
4	A novel approach for the synthesis of ultrathin silica-coated iron oxide nanocubes decorated with silver nanodots (Fe ₃ O ₄ /SiO ₂ /Ag) and their superior catalytic reduction of 4-nitroaniline. Nanoscale, 2015, 7, 12192-12204.	5.6	93
5	Facile sonochemical synthesis of high-moment magnetite (Fe ₃ O ₄) nanocube. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	76
6	Direct in Situ Conversion of Metals into Metal-Organic Frameworks: A Strategy for the Rapid Growth of MOF Films on Metal Substrates. ACS Applied Materials & Interfaces, 2016, 8, 32414-32420.	8.0	71
7	Hierarchical gold nanostructures modified electrode for electrochemical detection of cancer antigen CA125. Sensors and Actuators B: Chemical, 2017, 243, 64-71.	7.8	71
8	Electrochemical biosensor for Mycobacterium tuberculosis DNA detection based on gold nanotubes array electrode platform. Biosensors and Bioelectronics, 2016, 78, 483-488.	10.1	67
9	Highly sensitive electrochemical biosensor based on naturally reduced rGO/Au nanocomposite for the detection of miRNA-122 biomarker. Journal of Industrial and Engineering Chemistry, 2021, 93, 186-195.	5.8	65
10	Morphology-controlled synthesis of highly crystalline Fe ₃ O ₄ and CoFe ₂ O ₄ nanoparticles using a facile thermal decomposition method. RSC Advances, 2016, 6, 15861-15867.	3.6	61
11	High field-sensitivity planar Hall sensor based on NiFe/Cu/IrMn trilayer structure. Journal of Applied Physics, 2010, 107, .	2.5	43
12	Nano/micro-scale magnetophoretic devices for biomedical applications. Journal Physics D: Applied Physics, 2017, 50, 033002.	2.8	38
13	Room Temperature Magnetic Detection of Spin Switching in Nanosized Spin-Crossover Materials. Angewandte Chemie - International Edition, 2013, 52, 1185-1188.	13.8	37
14	Magnetic Sensor System Using Asymmetric Giant Magnetoimpedance Head. IEEE Transactions on Magnetics, 2009, 45, 2727-2729.	2.1	36
15	Translocation of bio-functionalized magnetic beads using smart magnetophoresis. Biosensors and Bioelectronics, 2010, 26, 1755-1758.	10.1	32
16	Planar Hall resistance ring sensor based on NiFe/Cu/IrMn trilayer structure. Journal of Applied Physics, 2013, 113, .	2.5	31
17	Highly Sensitive Planar Hall Magnetoresistive Sensor for Magnetic Flux Leakage Pipeline Inspection. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	30
18	Micro-magnetometry for susceptibility measurement of superparamagnetic single bead. Sensors and Actuators A: Physical, 2012, 182, 34-40.	4.1	29

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19	Hybrid AMR/PHR ring sensor. Solid State Communications, 2011, 151, 1248-1251.	1.9	26
20	Dynamic trajectory analysis of superparamagnetic beads driven by on-chip micromagnets. Journal of Applied Physics, 2015, 118, 203904.	2.5	24
21	Planar Hall ring sensor for ultra-low magnetic moment sensing. Journal of Applied Physics, 2015, 117, .	2.5	24
22	On-chip magnetometer for characterization of superparamagnetic nanoparticles. Lab on A Chip, 2015, 15, 696-703.	6.0	23
23	An on-chip micromagnet frictionometer based on magnetically driven colloids for nano-bio interfaces. Lab on A Chip, 2016, 16, 3485-3492.	6.0	23
24	Remote tactile sensing system integrated with magnetic synapse. Scientific Reports, 2017, 7, 16963.	3.3	23
25	Concentric manipulation and monitoring of protein-loaded superparamagnetic cargo using magnetophoretic spider web. NPC Asia Materials, 2017, 9, e369-e369.	7.9	22
26	Magnetic Susceptibility Study of Sub- μm Sample Using a Micromagnetometer: An Investigation through Bistable Spin-Crossover Materials. Advanced Materials, 2017, 29, 1703073.	21.0	22
27	Thickness dependence of parallel and perpendicular anisotropic resistivity in Ta/NiFe/IrMn/Ta multilayer studied by anisotropic magnetoresistance and planar Hall effect. Journal of Applied Physics, 2007, 101, 053702.	2.5	19
28	Planar Hall bead array counter microchip with NiFe/IrMn bilayers. Journal of Applied Physics, 2008, 104, .	2.5	19
29	Optimization of Spin-Valve Structure NiFe/Cu/NiFe/IrMn for Planar Hall Effect Based Biochips. IEEE Transactions on Magnetics, 2009, 45, 2378-2382.	2.1	19
30	Optimization of the Multilayer Structures for a High Field-Sensitivity Biochip Sensor Based on the Planar Hall Effect. IEEE Transactions on Magnetics, 2009, 45, 4518-4521.	2.1	19
31	Mattertronics for programmable manipulation and multiplex storage of pseudo-diamagnetic holes and label-free cells. Nature Communications, 2021, 12, 3024.	12.8	19
32	Multifunctional Fe ₃ O ₄ /Au core/satellite nanocubes: an efficient chemical synthesis, characterization and functionalization of streptavidin protein. Dalton Transactions, 2017, 46, 2303-2309.	3.3	18
33	Autonomous Magnetic Microrobots by Navigating Gates for Multiple Biomolecules Delivery. Small, 2018, 14, e1800504.	10.0	17
34	Reduced thermal dependence of the sensitivity of a planar Hall sensor. Applied Physics Letters, 2019, 115, .	3.3	17
35	Planar Hall resistance sensor for biochip application. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 4053-4057.	1.8	16
36	Optimization of magnetic switches for single particle and cell transport. Journal of Applied Physics, 2014, 115, .	2.5	15

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37	Accurate, hysteresis-free temperature sensor for health monitoring using a magnetic sensor and pristine polymer. RSC Advances, 2019, 9, 7885-7889.	3.6	15
38	A novel and rapid approach for the synthesis of biocompatible and highly stable Fe ₃ O ₄ /SiO ₂ and Fe ₃ O ₄ /C core/shell nanocubes and nanorods. New Journal of Chemistry, 2017, 41, 2724-2734.	2.8	14
39	Scalable production of water-dispersible reduced graphene oxide and its integration in a field effect transistor. Journal of Industrial and Engineering Chemistry, 2018, 63, 19-26.	5.8	14
40	Advances and key technologies in magnetoresistive sensors with high thermal stabilities and low field detectivities. APL Materials, 2022, 10, .	5.1	14
41	Structural and magnetic properties of electrodeposited cobalt nanowires in polycarbonate membrane. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 667-670.	1.8	13
42	Effect of NiFeCr seed and capping layers on exchange bias and planar Hall voltage response of NiFe/Au/IrMn trilayer structures. Journal of Applied Physics, 2018, 123, .	2.5	13
43	Equisensitive adjustment of planar Hall effect sensor's operating field range by material and thickness variation of active layers. Journal Physics D: Applied Physics, 2019, 52, 285001.	2.8	13
44	Real-time monitored photocatalytic activity and electrochemical performance of an rGO/Pt nanocomposite synthesized via a green approach. RSC Advances, 2020, 10, 13722-13731.	3.6	13
45	Translocation of magnetic beads using patterned magnetic pathways for biosensing applications. Journal of Applied Physics, 2009, 105, 07B312.	2.5	12
46	Silica encapsulation of sonochemically synthesized iron oxide nanoparticles. Electronic Materials Letters, 2013, 9, 817-820.	2.2	12
47	Protein immobilization onto electrochemically synthesized CoFe nanowires. International Journal of Nanomedicine, 2015, 10, 645.	6.7	12
48	Free and forced Barkhausen noises in magnetic thin film based cross-junctions. Journal of Magnetism and Magnetic Materials, 2018, 458, 292-300.	2.3	12
49	Performance Validation of a Planar Hall Resistance Biosensor through Beta-Amyloid Biomarker. Sensors, 2020, 20, 434.	3.8	12
50	Optimization of Pathway Pattern Size for Programmable Biomolecule Actuation. IEEE Transactions on Magnetics, 2013, 49, 408-413.	2.1	11
51	Multifarious Transit Gates for Programmable Delivery of Biofunctionalized Matters. Small, 2019, 15, e1901105.	10.0	11
52	(111)-Oriented Co _{0.8} Fe _{2.2} O ₄ thin film grown by pulsed laser deposition: structural and magnetic properties. Journal of Materials Science, 2013, 48, 6960-6969.	3.7	10
53	Magnetically Characterized Molecular Lubrication between Biofunctionalized Surfaces. ACS Applied Materials & Interfaces, 2018, 10, 16177-16182.	8.0	10
54	Planar Hall Resistance Sensor With Improved Thermal Stability. IEEE Magnetics Letters, 2019, 10, 1-5.	1.1	10

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55	Size effect on NiFe/Cu/NiFe/IrMn spin-valve structure for an array of PHR sensor element. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 4075-4078.	1.8	9
56	Magnetophoretic Decoupler for Disaggregation and Interparticle Distance Control. <i>Advanced Science</i> , 2021, 8, 2100532.	11.2	9
57	Controllable synthesis of single-layer graphene over cobalt nanoparticles and insight into active sites for efficient oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12060-12073.	10.3	9
58	Electrodeposited CoNiP Hard Magnetic Nanowires in Polycarbonate Membrane. <i>IEEE Transactions on Magnetics</i> , 2009, 45, 2475-2477.	2.1	8
59	Magnetophoretic Micro-Distributor for Controlled Clustering of Cells. <i>Advanced Science</i> , 2022, 9, e2103579.	11.2	8
60	The cryogenic treatment effect on the magneto-impedance properties of the Co- and Fe-based amorphous ribbons. <i>Physica Status Solidi A</i> , 2004, 201, 1988-1991.	1.7	6
61	NONLINEAR PARAMETERS FOR A DIAGNOSIS OF MICRO-SCALE CRACKS USING A NONLINEAR RESONANT ULTRASOUND SPECTROSCOPY (NRUS). , 2010, , .		6
62	Ultrasonic alignment of bio-functionalized magnetic beads and live cells in PDMS micro-fluidic channel. <i>Biomedical Microdevices</i> , 2012, 14, 1077-1084.	2.8	6
63	Effect of magnetic field on the dielectric properties of multiferroic composites. <i>Journal of the Korean Physical Society</i> , 2012, 61, 1545-1549.	0.7	6
64	Ultrasonic flow-through filtration of microparticles in a microfluidic channel using frequency sweep technique. <i>Journal of Mechanical Science and Technology</i> , 2013, 27, 825-830.	1.5	6
65	NiCo sensing layer for enhanced signals in planar hall effect sensors. <i>Metals and Materials International</i> , 2013, 19, 875-878.	3.4	5
66	Bridge Resistance Compensation for Noise Reduction in a Self-Balanced PHMR Sensor. <i>Sensors</i> , 2021, 21, 3585.	3.8	5
67	Magnetic Properties of (111)-Oriented $\text{Co}_{0.8-x}\text{Mn}_x\text{Fe}_{2.2}\text{O}_4$ ($x = 0 \sim 0.3$) Thin Films Grown by Pulsed Laser Deposition. <i>Journal of Superconductivity and Novel Magnetism</i> , 2014, 27, 2515-2519.	1.8	4
68	Micromagnet Conductors for High-Resolution Separation of Magnetically Driven Beads and Cells at Multiple Frequencies. <i>IEEE Magnetics Letters</i> , 2016, 7, 1-4.	1.1	4
69	Functionalization of Biotinylated Polyethylene Glycol on Live Magnetotactic Bacteria Carriers for Improved Stealth Properties. <i>Biology</i> , 2021, 10, 993.	2.8	4
70	Tailoring matter orbitals mediated using a nanoscale topographic interface for versatile colloidal current devices. <i>Materials Horizons</i> , 2022, 9, 2353-2363.	12.2	4
71	Investigation of core loss characteristics of 3% SiFe using the laser scribing method. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 1641-1644.	1.5	3
72	Ultrasonic manipulation of magnetic particles in a microfluidic channel. <i>International Journal of Precision Engineering and Manufacturing</i> , 2014, 15, 1411-1416.	2.2	3

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73	Magnetic Behaviors of Arrays of Co-Ni-P Nanorod: Effects of Applied Magnetic Field. Materials Transactions, 2015, 56, 1327-1330.	1.2	3
74	Operational Parameters for Sub-Nano Tesla Field Resolution of PHMR Sensors in Harsh Environments. Sensors, 2021, 21, 6891.	3.8	3
75	Phase controlled one-pot synthesis of heterostructured FePt@Fe ₃ O ₄ nanocubes with excellent biocompatibility. RSC Advances, 2020, 10, 43480-43488.	3.6	3
76	Micromachining of FM/M/FM films using an active Q-switched Nd:YAG laser. Physica Status Solidi (B): Basic Research, 2004, 241, 1650-1653.	1.5	2
77	Doped Cobalt Ferrites for Stress Sensor Applications. , 2007, , .		2
78	Thermal annealing synthesis of Fe ₄ N/Fe nanocomposites from iron oxide (Fe ₃ O ₄) nanoparticles. Journal of the Korean Physical Society, 2014, 65, 1649-1652.	0.7	2
79	Characterization of Superparamagnetic Particles Mobility by On-Chip Micromagnets. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	2
80	Highly Reliable Magnetic-Based Pressure Sensor Utilizing Simple Microstructured PDMS: Mechanical and Design Analysis via Finite Element Analysis. IEEE Sensors Journal, 2021, 21, 16560-16567.	4.7	2
81	The trajectory of bio-carriers in periodic energy landscape regulated by the multiple collision history in a magnetophoretic system. Journal of Science: Advanced Materials and Devices, 2022, 7, 100482.	3.1	2
82	Etching Effect on Exchange Anisotropy in NiFe/Cu/NiFe/IrMn Spin-valve Structure for an Array of PHR Sensor Element. , 2007, , .		1
83	Fabrication of Nanowire Arrays Using Diblock Copolymer. , 2007, , .		1
84	Use of frequency swept ultrasound to manipulate Nb ₂ -11 live cells in a microfluidic channel. Journal of the Korean Physical Society, 2014, 64, 226-231.	0.7	1
85	Electrochemical Synthesis of Co-Rich Nanowires for Barcodes. IEEE Magnetics Letters, 2017, 8, 1-4.	1.1	1
86	Microscopic manipulations of interatomic coupling density for tailoring of exchange bias mediated by mesoscopic interface topology. Applied Surface Science, 2021, 558, 149861.	6.1	1
87	Development of a Temperature Sensor Using Spin-Crossover Fe(pyrazine)[Pt(CN) ₄] Nanoparticles. IEEE Magnetics Letters, 2022, 13, 1-5.	1.1	1
88	Annealing temperature dependence of transverse permeability spectrum in Co-based amorphous ribbon. Physica Status Solidi A, 2004, 201, 1897-1900.	1.7	0
89	Neutron-scattering investigation of Co- and Fe-based amorphous alloys. Physica Status Solidi (B): Basic Research, 2004, 241, 1689-1692.	1.5	0
90	Role of Spin on Future Biomedical Science: Logical Manipulation of Living Cells for Novel Cells-On-Chip. , 2016, , .		0

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91	Magnetically Driven Dynamics of Bio-Functionalized Beads via On-Chip Micromagnets. , 2016, , .		0
92	Spinâ€Crossover Materials: Magnetic Susceptibility Study of Subâ€Picoâ€emu Sample Using a Micromagnetometer: An Investigation through Bistable Spinâ€Crossover Materials (Adv. Mater. 46/2017). Advanced Materials, 2017, 29, .	21.0	0
93	Microstructures: Autonomous Magnetic Microrobots by Navigating Gates for Multiple Biomolecules Delivery (Small 25/2018). Small, 2018, 14, 1870116.	10.0	0
94	Programmable Delivery: Multifarious Transit Gates for Programmable Delivery of Bioâ€functionalized Matters (Small 28/2019). Small, 2019, 15, 1970150.	10.0	0
95	Correction to â€œElectrochemical Synthesis of Co-Rich Nanowires for Barcodesâ€ IEEE Magnetics Letters, 2019, 10, 1-1.	1.1	0
96	A pin type current probe using Planar Hall Resistance magnetic sensor. Journal of Sensor Science and Technology, 2021, 30, 342-348.	0.2	0