

Cheolgi Kim

List of Publications by Year in descending order

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2,458
citations

201674

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#	ARTICLE	IF	CITATIONS
1	Fe ₃ O ₄ /TiO ₂ core/shell nanocubes: Single-batch surfactantless synthesis, characterization and efficient catalysts for methylene blue degradation. <i>Ceramics International</i> , 2014, 40, 11177-11186.	4.8	120
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. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 556-564.	3.7	118
3	Magnetophoretic circuits for digital control of single particles and cells. <i>Nature Communications</i> , 2014, 5, 3846.	12.8	104
4	Highly stable- silica encapsulating magnetite nanoparticles (Fe ₃ O ₄ /SiO ₂) synthesized using single surfactantless- polyol process. <i>Ceramics International</i> , 2014, 40, 1379-1385.	4.8	97
5	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. <i>Nanoscale</i> , 2015, 7, 12192-12204.	5.6	93
6	Synthesis of high magnetization hydrophilic magnetite (Fe ₃ O ₄) nanoparticles in single reaction—Surfactantless polyol process. <i>Ceramics International</i> , 2013, 39, 7605-7611.	4.8	78
7	Facile sonochemical synthesis of high-moment magnetite (Fe ₃ O ₄) nanocube. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	76
8	Ultra-sensitive 2-nitrophenol detection based on reduced graphene oxide/ZnO nanocomposites. <i>Journal of Electroanalytical Chemistry</i> , 2017, 788, 66-73.	3.8	72
9	Hierarchical gold nanostructures modified electrode for electrochemical detection of cancer antigen CA125. <i>Sensors and Actuators B: Chemical</i> , 2017, 243, 64-71.	7.8	71
10	Size-controlled high magnetization CoFe ₂ O ₄ nanospheres and nanocubes using rapid one-pot sonochemical technique. <i>Ceramics International</i> , 2014, 40, 3269-3276.	4.8	70
11	Electrochemical biosensor for <i>Mycobacterium tuberculosis</i> DNA detection based on gold nanotubes array electrode platform. <i>Biosensors and Bioelectronics</i> , 2016, 78, 483-488.	10.1	67
12	Highly sensitive electrochemical biosensor based on naturally reduced rGO/Au nanocomposite for the detection of miRNA-122 biomarker. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 93, 186-195.	5.8	65
13	One-pot synthesis of high magnetization air-stable FeCo nanoparticles by modified polyol method. <i>Materials Letters</i> , 2013, 91, 326-329.	2.6	63
14	Morphology-controlled synthesis of highly crystalline Fe ₃ O ₄ and CoFe ₂ O ₄ nanoparticles using a facile thermal decomposition method. <i>RSC Advances</i> , 2016, 6, 15861-15867.	3.6	61
15	A facile route to sonochemical synthesis of magnetic iron oxide (Fe ₃ O ₄) nanoparticles. <i>Thin Solid Films</i> , 2011, 519, 8277-8279.	1.8	60
16	Highly sensitive and selective detection of Bis-phenol A based on hydroxyapatite decorated reduced graphene oxide nanocomposites. <i>Electrochimica Acta</i> , 2017, 241, 353-361.	5.2	52
17	Shape and size-controlled synthesis of Ni Zn ferrite nanoparticles by two different routes. <i>Materials Chemistry and Physics</i> , 2014, 147, 443-451.	4.0	49
18	Spin-valve planar Hall sensor for single bead detection. <i>Sensors and Actuators A: Physical</i> , 2010, 157, 42-46.	4.1	43

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19	High field-sensitivity planar Hall sensor based on NiFe/Cu/IrMn trilayer structure. Journal of Applied Physics, 2010, 107, .	2.5	43
20	Nano/micro-scale magnetophoretic devices for biomedical applications. Journal Physics D: Applied Physics, 2017, 50, 033002.	2.8	38
21	Room Temperature Magnetic Detection of Spin Switching in Nanosized Spin Crossover Materials. Angewandte Chemie - International Edition, 2013, 52, 1185-1188.	13.8	37
22	Magnetic Sensor System Using Asymmetric Giant Magnetoimpedance Head. IEEE Transactions on Magnetics, 2009, 45, 2727-2729.	2.1	36
23	Soft chemical synthesis and characterization of Ni _{0.65} Zn _{0.35} Fe ₂ O ₄ nanoparticles. Journal of Applied Physics, 2007, 101, 123902.	2.5	32
24	Translocation of bio-functionalized magnetic beads using smart magnetophoresis. Biosensors and Bioelectronics, 2010, 26, 1755-1758.	10.1	32
25	Planar Hall resistance ring sensor based on NiFe/Cu/IrMn trilayer structure. Journal of Applied Physics, 2013, 113, .	2.5	31
26	A model for asymmetric giant magnetoimpedance in field-annealed amorphous ribbons. Applied Physics Letters, 2004, 85, 3507-3509.	3.3	29
27	Micro-magnetometry for susceptibility measurement of superparamagnetic single bead. Sensors and Actuators A: Physical, 2012, 182, 34-40.	4.1	29
28	Magnetic and electrical properties of bulk BaTiO ₃ +MgFe ₂ O ₄ composite. Journal of Magnetism and Magnetic Materials, 2011, 323, 564-568.	2.3	27
29	An organic substrate based magnetoresistive sensor for rapid bacteria detection. Biosensors and Bioelectronics, 2013, 41, 758-763.	10.1	27
30	Hybrid AMR/PHR ring sensor. Solid State Communications, 2011, 151, 1248-1251.	1.9	26
31	Dynamic trajectory analysis of superparamagnetic beads driven by on-chip micromagnets. Journal of Applied Physics, 2015, 118, 203904.	2.5	24
32	Planar Hall ring sensor for ultra-low magnetic moment sensing. Journal of Applied Physics, 2015, 117, .	2.5	24
33	Facile approach for synthesis of high moment Fe/ferrite and FeCo/ferrite core/shell nanostructures. Materials Letters, 2015, 139, 161-164.	2.6	24
34	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
35	Remote tactile sensing system integrated with magnetic synapse. Scientific Reports, 2017, 7, 16963.	3.3	23
36	Size controlled sonochemical synthesis of highly crystalline superparamagnetic Mn-Zn ferrite nanoparticles in aqueous medium. Journal of Alloys and Compounds, 2015, 644, 774-782.	5.5	22

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37	Concentric manipulation and monitoring of protein-loaded superparamagnetic cargo using magnetophoretic spider web. <i>NPG Asia Materials</i> , 2017, 9, e369-e369.	7.9	22
38	Magnetic Susceptibility Study of Sub- μm Sample Using a Micromagnetometer: An Investigation through Bistable Spin-Crossover Materials. <i>Advanced Materials</i> , 2017, 29, 1703073.	21.0	22
39	The role of exchange coupling on the giant magnetoimpedance of annealed amorphous materials. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 249, 293-299.	2.3	20
40	Planar Hall bead array counter microchip with NiFe/IrMn bilayers. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	19
41	Optimization of Spin-Valve Structure NiFe/Cu/NiFe/IrMn for Planar Hall Effect Based Biochips. <i>IEEE Transactions on Magnetics</i> , 2009, 45, 2378-2382.	2.1	19
42	Mattertronics for programmable manipulation and multiplex storage of pseudo-diamagnetic holes and label-free cells. <i>Nature Communications</i> , 2021, 12, 3024.	12.8	19
43	Multifunctional Fe ₃ O ₄ /Au core/satellite nanocubes: an efficient chemical synthesis, characterization and functionalization of streptavidin protein. <i>Dalton Transactions</i> , 2017, 46, 2303-2309.	3.3	18
44	Hybrid planar Hall-magnetoresistance sensor based on tilted cross-junction. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 055007.	2.8	17
45	Analytes kinetics in lateral flow membrane analyzed by cTnI monitoring using magnetic method. <i>Sensors and Actuators B: Chemical</i> , 2011, 160, 747-752.	7.8	17
46	Autonomous Magnetic Microrobots by Navigating Gates for Multiple Biomolecules Delivery. <i>Small</i> , 2018, 14, e1800504.	10.0	17
47	Reduced thermal dependence of the sensitivity of a planar Hall sensor. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	17
48	Planar Hall resistance sensor for biochip application. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 4053-4057.	1.8	16
49	Facile one-pot chemical approach for synthesis of monodisperse chain-like superparamagnetic maghemite ($\gamma\text{-Fe}_2\text{O}_3$) nanoparticles. <i>Journal of Industrial and Engineering Chemistry</i> , 2015, 31, 43-46.	5.8	16
50	Synthesis of monodisperse and high moment nickel-iron (NiFe) nanoparticles using modified polyol process. <i>Current Applied Physics</i> , 2013, 13, 2010-2013.	2.4	15
51	Optimization of magnetic switches for single particle and cell transport. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	15
52	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. <i>New Journal of Chemistry</i> , 2017, 41, 2724-2734.	2.8	14
53	Scalable production of water-dispersible reduced graphene oxide and its integration in a field effect transistor. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 63, 19-26.	5.8	14
54	Advances and key technologies in magnetoresistive sensors with high thermal stabilities and low field detectivities. <i>APL Materials</i> , 2022, 10, .	5.1	14

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55	Modeling of asymmetric giant magnetoimpedance in amorphous ribbons with a surface crystalline layer. <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 288, 130-136.	2.3	13
56	Modified polyol route for synthesis of Fe ₃ O ₄ /Ag and $\hat{\pm}$ -Fe/Ag nanocomposite. <i>Journal of Alloys and Compounds</i> , 2014, 615, S308-S312.	5.5	13
57	Effect of NiFeCr seed and capping layers on exchange bias and planar Hall voltage response of NiFe/Au/IrMn trilayer structures. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	13
58	Equisensitive adjustment of planar Hall effect sensor's operating field range by material and thickness variation of active layers. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 285001.	2.8	13
59	Real-time monitored photocatalytic activity and electrochemical performance of an rGO/Pt nanocomposite synthesized via a green approach. <i>RSC Advances</i> , 2020, 10, 13722-13731.	3.6	13
60	Translocation of magnetic beads using patterned magnetic pathways for biosensing applications. <i>Journal of Applied Physics</i> , 2009, 105, 07B312.	2.5	12
61	Silica encapsulation of sonochemically synthesized iron oxide nanoparticles. <i>Electronic Materials Letters</i> , 2013, 9, 817-820.	2.2	12
62	Protein immobilization onto electrochemically synthesized CoFe nanowires. <i>International Journal of Nanomedicine</i> , 2015, 10, 645.	6.7	12
63	Free and forced Barkhausen noises in magnetic thin film based cross-junctions. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 458, 292-300.	2.3	12
64	Performance Validation of a Planar Hall Resistance Biosensor through Beta-Amyloid Biomarker. <i>Sensors</i> , 2020, 20, 434.	3.8	12
65	Magnetic Sensor-Based Detection of Picoliter Volumes of Magnetic Nanoparticle Droplets in a Microfluidic Chip. <i>Journal of Magnetism</i> , 2012, 17, 302-307.	0.4	12
66	Optimization of Pathway Pattern Size for Programmable Biomolecule Actuation. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 408-413.	2.1	11
67	Multifarious Transit Gates for Programmable Delivery of Biofunctionalized Matters. <i>Small</i> , 2019, 15, e1901105.	10.0	11
68	Off-diagonal magnetoimpedance in field-annealed Co-based amorphous ribbons. <i>Journal of Applied Physics</i> , 2005, 98, 113908.	2.5	10
69	Magnetically Characterized Molecular Lubrication between Biofunctionalized Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16177-16182.	8.0	10
70	Microvalve-controlled miniaturized electrochemical lab-on-a-chip based biosensor for the detection of \hat{I}^2 -amyloid biomarker. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 97, 349-355.	5.8	10
71	Magnetophoretic Decoupler for Disaggregation and Interparticle Distance Control. <i>Advanced Science</i> , 2021, 8, 2100532.	11.2	9
72	Selective Binding and Detection of Magnetic Labels Using PHR Sensor via Photoresist Micro-Wells. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 4452-4456.	0.9	8

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73	Magnetophoretic Micro-Distributor for Controlled Clustering of Cells. <i>Advanced Science</i> , 2022, 9, e2103579.	11.2	8
74	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
75	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
76	Influence of current amplitude on asymmetric off-diagonal magnetoimpedance in field-annealed amorphous ribbons. <i>IEEE Transactions on Magnetics</i> , 2005, 41, 3646-3648.	2.1	5
77	NiCo sensing layer for enhanced signals in planar hall effect sensors. <i>Metals and Materials International</i> , 2013, 19, 875-878.	3.4	5
78	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
79	The effect of surface crystalline layers on asymmetric off-diagonal magnetoimpedance in field-annealed CoFeSiB amorphous ribbons. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, e186-e188.	2.3	3
80	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
81	Operational Parameters for Sub-Nano Tesla Field Resolution of PHMR Sensors in Harsh Environments. <i>Sensors</i> , 2021, 21, 6891.	3.8	3
82	Phase controlled one-pot synthesis of heterostructured FePt@Fe ₃ O ₄ nanocubes with excellent biocompatibility. <i>RSC Advances</i> , 2020, 10, 43480-43488.	3.6	3
83	Thermal annealing synthesis of Fe ₄ N/Fe nanocomposites from iron oxide (Fe ₃ O ₄) nanoparticles. <i>Journal of the Korean Physical Society</i> , 2014, 65, 1649-1652.	0.7	2
84	Characterization of Superparamagnetic Particles Mobility by On-Chip Micromagnets. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-4.	2.1	2
85	The trajectory of bio-carriers in periodic energy landscape regulated by the multiple collision history in a magnetophoretic system. <i>Journal of Science: Advanced Materials and Devices</i> , 2022, 7, 100482.	3.1	2
86	Novel Planar Hall Sensor for Biomedical Diagnosing Lab-on-a-Chip. , 0, , .		0
87	Role of Spin on Future Biomedical Science: Logical Manipulation of Living Cells for Novel Cells-On-Chip. , 2016, , .		0