

# Cheolgi Kim

## List of Publications by Year in descending order

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87  
papers

2,458  
citations

201674

27  
h-index

233421

45  
g-index

88  
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88  
docs citations

88  
times ranked

3243  
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetophoretic Micro-Distributor for Controlled Clustering of Cells. <i>Advanced Science</i> , 2022, 9, e2103579.	11.2	8
2	Advances and key technologies in magnetoresistive sensors with high thermal stabilities and low field detectivities. <i>APL Materials</i> , 2022, 10, .	5.1	14
3	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
4	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
5	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
6	Microvalve-controlled miniaturized electrochemical lab-on-a-chip based biosensor for the detection of $\beta$ -amyloid biomarker. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 97, 349-355.	5.8	10
7	Magnetophoretic Decoupler for Disaggregation and Interparticle Distance Control. <i>Advanced Science</i> , 2021, 8, 2100532.	11.2	9
8	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
9	Operational Parameters for Sub-Nano Tesla Field Resolution of PHMR Sensors in Harsh Environments. <i>Sensors</i> , 2021, 21, 6891.	3.8	3
10	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
11	Performance Validation of a Planar Hall Resistance Biosensor through Beta-Amyloid Biomarker. <i>Sensors</i> , 2020, 20, 434.	3.8	12
12	Phase controlled one-pot synthesis of heterostructured FePt@Fe <sub>3</sub> O <sub>4</sub> nanocubes with excellent biocompatibility. <i>RSC Advances</i> , 2020, 10, 43480-43488.	3.6	3
13	Reduced thermal dependence of the sensitivity of a planar Hall sensor. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	17
14	Multifarious Transit Gates for Programmable Delivery of Bio-functionalized Matters. <i>Small</i> , 2019, 15, e1901105.	10.0	11
15	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
16	Magnetically Characterized Molecular Lubrication between Biofunctionalized Surfaces. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 16177-16182.	8.0	10
17	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
18	Characterization of Superparamagnetic Particles Mobility by On-Chip Micromagnets. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-4.	2.1	2

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19	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
20	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
21	Autonomous Magnetic Microrobots by Navigating Gates for Multiple Biomolecules Delivery. <i>Small</i> , 2018, 14, e1800504.	10.0	17
22	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
23	Multifunctional Fe <sub>3</sub> O <sub>4</sub> /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
24	A novel and rapid approach for the synthesis of biocompatible and highly stable Fe <sub>3</sub> O <sub>4</sub> /SiO <sub>2</sub> and Fe <sub>3</sub> O <sub>4</sub> /C core/shell nanocubes and nanorods. <i>New Journal of Chemistry</i> , 2017, 41, 2724-2734.	2.8	14
25	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
26	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
27	Nano/micro-scale magnetophoretic devices for biomedical applications. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 033002.	2.8	38
28	Magnetic Susceptibility Study of Sub- $\mu$ m Sample Using a Micromagnetometer: An Investigation through Bistable Spin-Crossover Materials. <i>Advanced Materials</i> , 2017, 29, 1703073.	21.0	22
29	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
30	Remote tactile sensing system integrated with magnetic synapse. <i>Scientific Reports</i> , 2017, 7, 16963.	3.3	23
31	Role of Spin on Future Biomedical Science: Logical Manipulation of Living Cells for Novel Cells-On-Chip. , 2016, , .		0
32	An on-chip micromagnet frictionometer based on magnetically driven colloids for nano-bio interfaces. <i>Lab on A Chip</i> , 2016, 16, 3485-3492.	6.0	23
33	Electrochemical biosensor for Mycobacterium tuberculosis DNA detection based on gold nanotubes array electrode platform. <i>Biosensors and Bioelectronics</i> , 2016, 78, 483-488.	10.1	67
34	Morphology-controlled synthesis of highly crystalline Fe <sub>3</sub> O <sub>4</sub> and CoFe <sub>2</sub> O <sub>4</sub> nanoparticles using a facile thermal decomposition method. <i>RSC Advances</i> , 2016, 6, 15861-15867.	3.6	61
35	Dynamic trajectory analysis of superparamagnetic beads driven by on-chip micromagnets. <i>Journal of Applied Physics</i> , 2015, 118, 203904.	2.5	24
36	Protein immobilization onto electrochemically synthesized CoFe nanowires. <i>International Journal of Nanomedicine</i> , 2015, 10, 645.	6.7	12

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37	Size controlled sonochemical synthesis of highly crystalline superparamagnetic Mn <sup>2+</sup> /Zn ferrite nanoparticles in aqueous medium. <i>Journal of Alloys and Compounds</i> , 2015, 644, 774-782.	5.5	22
38	Facile one-pot chemical approach for synthesis of monodisperse chain-like superparamagnetic maghemite (γ-Fe <sub>2</sub> O <sub>3</sub> ) nanoparticles. <i>Journal of Industrial and Engineering Chemistry</i> , 2015, 31, 43-46.	5.8	16
39	A novel approach for the synthesis of ultrathin silica-coated iron oxide nanocubes decorated with silver nanodots (Fe <sub>3</sub> O <sub>4</sub> /SiO <sub>2</sub> /Ag) and their superior catalytic reduction of 4-nitroaniline. <i>Nanoscale</i> , 2015, 7, 12192-12204.	5.6	93
40	Planar Hall ring sensor for ultra-low magnetic moment sensing. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	24
41	Facile approach for synthesis of high moment Fe/ferrite and FeCo/ferrite core/shell nanostructures. <i>Materials Letters</i> , 2015, 139, 161-164.	2.6	24
42	Thermal annealing synthesis of Fe <sub>4</sub> N/Fe nanocomposites from iron oxide (Fe <sub>3</sub> O <sub>4</sub> ) nanoparticles. <i>Journal of the Korean Physical Society</i> , 2014, 65, 1649-1652.	0.7	2
43	Modified polyol route for synthesis of Fe <sub>3</sub> O <sub>4</sub> /Ag and γ-Fe <sub>2</sub> O <sub>3</sub> /Ag nanocomposite. <i>Journal of Alloys and Compounds</i> , 2014, 615, S308-S312.	5.5	13
44	Highly stable- silica encapsulating magnetite nanoparticles (Fe <sub>3</sub> O <sub>4</sub> /SiO <sub>2</sub> ) synthesized using single surfactantless- polyol process. <i>Ceramics International</i> , 2014, 40, 1379-1385.	4.8	97
45	Size-controlled high magnetization CoFe <sub>2</sub> O <sub>4</sub> nanospheres and nanocubes using rapid one-pot sonochemical technique. <i>Ceramics International</i> , 2014, 40, 3269-3276.	4.8	70
46	Magnetophoretic circuits for digital control of single particles and cells. <i>Nature Communications</i> , 2014, 5, 3846.	12.8	104
47	Optimization of magnetic switches for single particle and cell transport. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	15
48	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
49	Fe <sub>3</sub> O <sub>4</sub> /TiO <sub>2</sub> 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
50	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
51	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
52	Biosynthesis of Gold Nanoparticles Assisted by <i>Sapindus mukorossi</i> Gaertn. Fruit Pericarp and Their Catalytic Application for the Reduction of p-Nitroaniline. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 556-564.	3.7	118
53	Room Temperature Magnetic Detection of Spin Switching in Nanosized Spin-Crossover Materials. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 1185-1188.	13.8	37
54	Planar Hall resistance ring sensor based on NiFe/Cu/IrMn trilayer structure. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	31

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55	Optimization of Pathway Pattern Size for Programmable Biomolecule Actuation. IEEE Transactions on Magnetics, 2013, 49, 408-413.	2.1	11
56	Synthesis of high magnetization hydrophilic magnetite (Fe <sub>3</sub> O <sub>4</sub> ) nanoparticles in single reaction—Surfactantless polyol process. Ceramics International, 2013, 39, 7605-7611.	4.8	78
57	Facile sonochemical synthesis of high-moment magnetite (Fe <sub>3</sub> O <sub>4</sub> ) nanocube. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	76
58	NiCo sensing layer for enhanced signals in planar hall effect sensors. Metals and Materials International, 2013, 19, 875-878.	3.4	5
59	An organic substrate based magnetoresistive sensor for rapid bacteria detection. Biosensors and Bioelectronics, 2013, 41, 758-763.	10.1	27
60	One-pot synthesis of high magnetization air-stable FeCo nanoparticles by modified polyol method. Materials Letters, 2013, 91, 326-329.	2.6	63
61	Silica encapsulation of sonochemically synthesized iron oxide nanoparticles. Electronic Materials Letters, 2013, 9, 817-820.	2.2	12
62	Micro-magnetometry for susceptibility measurement of superparamagnetic single bead. Sensors and Actuators A: Physical, 2012, 182, 34-40.	4.1	29
63	Ultrasonic alignment of bio-functionalized magnetic beads and live cells in PDMS micro-fluidic channel. Biomedical Microdevices, 2012, 14, 1077-1084.	2.8	6
64	Effect of magnetic field on the dielectric properties of multiferroic composites. Journal of the Korean Physical Society, 2012, 61, 1545-1549.	0.7	6
65	Magnetic Sensor-Based Detection of Picoliter Volumes of Magnetic Nanoparticle Droplets in a Microfluidic Chip. Journal of Magnetism, 2012, 17, 302-307.	0.4	12
66	Hybrid AMR/PHR ring sensor. Solid State Communications, 2011, 151, 1248-1251.	1.9	26
67	A facile route to sonochemical synthesis of magnetic iron oxide (Fe <sub>3</sub> O <sub>4</sub> ) nanoparticles. Thin Solid Films, 2011, 519, 8277-8279.	1.8	60
68	Analytes kinetics in lateral flow membrane analyzed by cTnl monitoring using magnetic method. Sensors and Actuators B: Chemical, 2011, 160, 747-752.	7.8	17
69	Magnetic and electrical properties of bulk BaTiO <sub>3</sub> +MgFe <sub>2</sub> O <sub>4</sub> composite. Journal of Magnetism and Magnetic Materials, 2011, 323, 564-568.	2.3	27
70	Selective Binding and Detection of Magnetic Labels Using PHR Sensor via Photoresist Micro-Wells. Journal of Nanoscience and Nanotechnology, 2011, 11, 4452-4456.	0.9	8
71	Spin-valve planar Hall sensor for single bead detection. Sensors and Actuators A: Physical, 2010, 157, 42-46.	4.1	43
72	Translocation of bio-functionalized magnetic beads using smart magnetophoresis. Biosensors and Bioelectronics, 2010, 26, 1755-1758.	10.1	32

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73	High field-sensitivity planar Hall sensor based on NiFe/Cu/IrMn trilayer structure. Journal of Applied Physics, 2010, 107, .	2.5	43
74	Translocation of magnetic beads using patterned magnetic pathways for biosensing applications. Journal of Applied Physics, 2009, 105, 07B312.	2.5	12
75	Hybrid planar Hall-magnetoresistance sensor based on tilted cross-junction. Journal Physics D: Applied Physics, 2009, 42, 055007.	2.8	17
76	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
77	Magnetic Sensor System Using Asymmetric Giant Magnetoimpedance Head. IEEE Transactions on Magnetics, 2009, 45, 2727-2729.	2.1	36
78	Planar Hall bead array counter microchip with NiFe/IrMn bilayers. Journal of Applied Physics, 2008, 104, .	2.5	19
79	Soft chemical synthesis and characterization of Ni <sub>0.65</sub> Zn <sub>0.35</sub> Fe <sub>2</sub> O <sub>4</sub> nanoparticles. Journal of Applied Physics, 2007, 101, 123902.	2.5	32
80	Planar Hall resistance sensor for biochip application. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 4053-4057.	1.8	16
81	The effect of surface crystalline layers on asymmetric off-diagonal magnetoimpedance in field-annealed CoFeSiB amorphous ribbons. Journal of Magnetism and Magnetic Materials, 2006, 304, e186-e188.	2.3	3
82	Modeling of asymmetric giant magnetoimpedance in amorphous ribbons with a surface crystalline layer. Journal of Magnetism and Magnetic Materials, 2005, 288, 130-136.	2.3	13
83	Influence of current amplitude on asymmetric off-diagonal magnetoimpedance in field-annealed amorphous ribbons. IEEE Transactions on Magnetics, 2005, 41, 3646-3648.	2.1	5
84	Off-diagonal magnetoimpedance in field-annealed Co-based amorphous ribbons. Journal of Applied Physics, 2005, 98, 113908.	2.5	10
85	A model for asymmetric giant magnetoimpedance in field-annealed amorphous ribbons. Applied Physics Letters, 2004, 85, 3507-3509.	3.3	29
86	The role of exchange coupling on the giant magnetoimpedance of annealed amorphous materials. Journal of Magnetism and Magnetic Materials, 2002, 249, 293-299.	2.3	20
87	Novel Planar Hall Sensor for Biomedical Diagnosing Lab-on-a-Chip. , 0, , .		0