

Byoung Chan Kim

List of Publications by Year in descending order

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56
papers

2,560
citations

185998

28
h-index

189595

50
g-index

56
all docs

56
docs citations

56
times ranked

3485
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of the Toxic Mode of Action of Silver Nanoparticles Using Stress-Specific Bioluminescent Bacteria. <i>Small</i> , 2008, 4, 746-750.	5.2	374
2	Preparation of biocatalytic nanofibres with high activity and stability via enzyme aggregate coating on polymer nanofibres. <i>Nanotechnology</i> , 2005, 16, S382-S388.	1.3	175
3	A cell array biosensor for environmental toxicity analysis. <i>Biosensors and Bioelectronics</i> , 2005, 21, 500-507.	5.3	138
4	A Magnetically Separable, Highly Stable Enzyme System Based on Nanocomposites of Enzymes and Magnetic Nanoparticles Shipped in Hierarchically Ordered, Mesocellular, Mesoporous Silica. <i>Small</i> , 2005, 1, 1203-1207.	5.2	106
5	Immobilization of glucose oxidase into polyaniline nanofiber matrix for biofuel cell applications. <i>Biosensors and Bioelectronics</i> , 2011, 26, 3908-3913.	5.3	101
6	Highly sensitive sandwich-type SPR based detection of whole H5Nx viruses using a pair of aptamers. <i>Biosensors and Bioelectronics</i> , 2016, 86, 293-300.	5.3	101
7	Isolation and characterization of DNA aptamers against Escherichia coli using a bacterial cell-systematic evolution of ligands by exponential enrichment approach. <i>Analytical Biochemistry</i> , 2013, 436, 22-28.	1.1	95
8	Whole-Cell-Based Biosensors for Environmental Biomonitoring and Application. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2004, 87, 269-305.	0.6	87
9	Magnetic mesoporous materials for removal of environmental wastes. <i>Journal of Hazardous Materials</i> , 2011, 192, 1140-1147.	6.5	78
10	A bioluminescent sensor for high throughput toxicity classification. <i>Biosensors and Bioelectronics</i> , 2003, 18, 1015-1021.	5.3	73
11	Highly Efficient Enzyme Immobilization and Stabilization within Meso-Structured Onion-Like Silica for Biodiesel Production. <i>Chemistry of Materials</i> , 2012, 24, 924-929.	3.2	70
12	Aptamer cocktails: Enhancement of sensing signals compared to single use of aptamers for detection of bacteria. <i>Biosensors and Bioelectronics</i> , 2014, 54, 195-198.	5.3	68
13	Highly stable trypsin aggregate coatings on polymer nanofibers for repeated protein digestion. <i>Proteomics</i> , 2009, 9, 1893-1900.	1.3	56
14	Nanobiocatalysis for protein digestion in proteomic analysis. <i>Proteomics</i> , 2010, 10, 687-699.	1.3	55
15	Highly stable enzyme precipitate coatings and their electrochemical applications. <i>Biosensors and Bioelectronics</i> , 2011, 26, 1980-1986.	5.3	54
16	Monitoring and classification of PAH toxicity using an immobilized bioluminescent bacteria. <i>Biosensors and Bioelectronics</i> , 2003, 18, 571-577.	5.3	50
17	Fast and continuous microorganism detection using aptamer-conjugated fluorescent nanoparticles on an optofluidic platform. <i>Biosensors and Bioelectronics</i> , 2015, 67, 303-308.	5.3	50
18	An oxidative stress-specific bacterial cell array chip for toxicity analysis. <i>Biosensors and Bioelectronics</i> , 2007, 22, 2223-2229.	5.3	47

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19	Nanoscale enzyme reactors in mesoporous carbon for improved performance and lifetime of biosensors and biofuel cells. <i>Biosensors and Bioelectronics</i> , 2010, 26, 655-660.	5.3	45
20	Magnetically-separable and highly-stable enzyme system based on crosslinked enzyme aggregates shipped in magnetite-coated mesoporous silica. <i>Journal of Materials Chemistry</i> , 2009, 19, 7864.	6.7	44
21	Broadly reactive aptamers targeting bacteria belonging to different genera using a sequential toggle cell-SELEX. <i>Scientific Reports</i> , 2017, 7, 43641.	1.6	43
22	Stable and continuous long-term enzymatic reaction using an enzyme-“nanofiber composite. <i>Applied Microbiology and Biotechnology</i> , 2007, 75, 1301-1307.	1.7	42
23	Evaluation of a high throughput toxicity biosensor and comparison with a <i>Daphnia magna</i> bioassay. <i>Biosensors and Bioelectronics</i> , 2003, 18, 821-826.	5.3	36
24	A Multi-Channel Continuous Water Toxicity Monitoring System: Its Evaluation and Application to Water Discharged from a Power Plant. <i>Environmental Monitoring and Assessment</i> , 2005, 109, 123-133.	1.3	35
25	An aptamer cocktail-functionalized photocatalyst with enhanced antibacterial efficiency towards target bacteria. <i>Journal of Hazardous Materials</i> , 2016, 318, 247-254.	6.5	33
26	Development of a DNA Microarray Chip for the Identification of Sludge Bacteria Using an Unsequenced Random Genomic DNA Hybridization Method. <i>Environmental Science & Technology</i> , 2004, 38, 6767-6774.	4.6	32
27	Prediction and classification of the modes of genotoxic actions using bacterial biosensors specific for DNA damages. <i>Biosensors and Bioelectronics</i> , 2009, 25, 767-772.	5.3	32
28	Screening of Target-Specific Stress-Responsive Genes for the Development of Cell-Based Biosensors Using a DNA Microarray. <i>Analytical Chemistry</i> , 2005, 77, 8020-8026.	3.2	30
29	Rapid and efficient protein digestion using trypsin-“coated magnetic nanoparticles under pressure cycles. <i>Proteomics</i> , 2011, 11, 309-318.	1.3	30
30	A novel bioluminescent bacterial biosensor using the highly specific oxidative stress-inducible <i>pgi</i> gene. <i>Biosensors and Bioelectronics</i> , 2008, 24, 670-675.	5.3	29
31	Multiple and Simultaneous Detection of Specific Bacteria in Enriched Bacterial Communities Using a DNA Microarray Chip with Randomly Generated Genomic DNA Probes. <i>Analytical Chemistry</i> , 2005, 77, 2311-2317.	3.2	25
32	Trypsin Coatings on Electrospun and Alcohol-Dispersed Polymer Nanofibers for a Trypsin Digestion Column. <i>Analytical Chemistry</i> , 2010, 82, 7828-7834.	3.2	25
33	The continuous monitoring of field water samples with a novel multi-channel two-stage mini-bioreactor system. <i>Environmental Monitoring and Assessment</i> , 2001, 70, 71-81.	1.3	22
34	Construction of a <i>nrdA::luxCDABE</i> Fusion and Its Use in <i>Escherichia coli</i> as a DNA Damage Biosensor. <i>Sensors</i> , 2008, 8, 1297-1307.	2.1	22
35	Continuous Surveillance of Bioaerosols On-Site Using an Automated Bioaerosol-Monitoring System. <i>ACS Sensors</i> , 2020, 5, 395-403.	4.0	22
36	The development of paper discs immobilized with luciferase/D-luciferin for the detection of ATP from airborne bacteria. <i>Sensors and Actuators B: Chemical</i> , 2018, 260, 274-281.	4.0	20

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37	Specific detection of DNA using quantum dots and magnetic beads for large volume samples. <i>Biotechnology and Bioprocess Engineering</i> , 2006, 11, 449-454.	1.4	19
38	A dip-stick type biosensor using bioluminescent bacteria encapsulated in color-coded alginate microbeads for detection of water toxicity. <i>Analyst, The</i> , 2014, 139, 4696-4701.	1.7	19
39	Enzyme precipitate coatings of glucose oxidase onto carbon paper for biofuel cell applications. <i>Biotechnology and Bioengineering</i> , 2012, 109, 318-324.	1.7	17
40	Robust trypsin coating on electrospun polymer nanofibers in rigorous conditions and its uses for protein digestion. <i>Biotechnology and Bioengineering</i> , 2010, 107, 917-923.	1.7	16
41	Rapid isolation of bacteria-specific aptamers with a non-SELEX-based method. <i>Analytical Biochemistry</i> , 2020, 591, 113542.	1.1	16
42	Characterization of <i>gltA</i> : <i>luxCDABE</i> fusion in <i>Escherichia coli</i> as a toxicity biosensor. <i>Biotechnology and Bioprocess Engineering</i> , 2006, 11, 516-521.	1.4	15
43	Efficient protein digestion using highly-stable and reproducible trypsin coatings on magnetic nanofibers. <i>Chemical Engineering Journal</i> , 2016, 288, 770-777.	6.6	15
44	Characterization of superoxide-stress sensing recombinant <i>Escherichia coli</i> constructed using promoters for genes <i>zwf</i> and <i>fpr</i> fused to <i>lux</i> operon. <i>Applied Microbiology and Biotechnology</i> , 2007, 74, 1276-1283.	1.7	13
45	Enzyme precipitate coatings of lipase on polymer nanofibers. <i>Bioprocess and Biosystems Engineering</i> , 2011, 34, 841-847.	1.7	13
46	A sensitive and reliable detection of thrombin via enzyme-precipitate-coating-linked aptamer assay. <i>Chemical Communications</i> , 2012, 48, 5971.	2.2	12
47	Bacterial target-specific photocatalyst for the enhancement of antibacterial property to targets. <i>Applied Catalysis B: Environmental</i> , 2014, 148-149, 568-572.	10.8	10
48	Ethanol-Dispersed Polymer Nanofibers as a Highly Selective Cell Isolation and Release Platform for CD4 ⁺ T Lymphocytes. <i>Advanced Functional Materials</i> , 2012, 22, 4448-4455.	7.8	9
49	Expression analysis of stress-specific responsive genes in two-stage continuous cultures of <i>Escherichia coli</i> using cDNA microarray and real-time RT-PCR analysis. <i>Enzyme and Microbial Technology</i> , 2006, 39, 440-446.	1.6	8
50	DNA aptamers for selective identification and separation of flame retardant chemicals. <i>Analytica Chimica Acta</i> , 2016, 936, 208-215.	2.6	7
51	A colorimetric assay for detection of 6-OH-BDE-47 using 6-OH-BDE-47-specific aptamers and gold nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2017, 248, 298-304.	4.0	7
52	Specific detection of <i>Cronobacter sakazakii</i> in powdered infant formula using ssDNA aptamer. <i>Analyst, The</i> , 2021, 146, 3534-3542.	1.7	6
53	Discrimination of toxic impacts of various chemicals using chemical-gene expression profiling of <i>Escherichia coli</i> DNA microarray. <i>Process Biochemistry</i> , 2007, 42, 392-400.	1.8	5
54	A Subtractively Optimized DNA Microarray Using Non-sequenced Genomic Probes for the Detection of Food-Borne Pathogens. <i>Applied Biochemistry and Biotechnology</i> , 2011, 164, 183-193.	1.4	5

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55	Enzyme-Nanofiber Composites for Biocatalysis Applications. ACS Symposium Series, 2008, , 254-262.	0.5	2
56	Implementation of Random Bacterial Genomic DNA Microarray Chip (RBGDMC) for Screening of Dominant Bacteria in Complex Cultures. Applied Biochemistry and Biotechnology, 2010, 162, 2284-2293.	1.4	1