Gil U Lee

List of Publications by Year
in descending order

90 papers	5,773 citations	117625 34 h-index	74163 75 g-index
93 all docs	93 docs citations	93 times ranked	5515 citing authors

#	Article	IF	Citations
1	Influence of viral transport media and freezeâ€“thaw cycling on the sensitivity of qRT-PCR detection of SARS-CoV-2 nucleic acids. Nanoscale, 2021, 13, 15659-15667.	5.6	6
2	Design of micromagnetic arrays for on-chip separation of superparamagnetic bead aggregates and detection of a model protein and double-stranded DNA analytes. Scientific Reports, 2021, 11, 5302.	3.3	8
3	Optical detection of the magnetophoretic transport of superparamagnetic beads on a micromagnetic array. Scientific Reports, 2020, 10, 12876.	3.3	1
4	Rapid and sensitive detection of cardiac troponin I using a force enhanced immunoassay with nanoporous membrane. Nanoscale, 2020, 12, 12568-12577.	5.6	4
5	Direct identification of the herpes simplex virus UL27 gene through single particle manipulation and optical detection using a micromagnetic array. Nanoscale, 2020, 12, 3482-3490.	5.6	9
6	Neurochemistry: Rapid Growth Cone Uptake and Dynein-Mediated Axonal Retrograde Transport of Negatively Charged Nanoparticles in Neurons Is Dependent on Size and Cell Type (Small 2/2019). Small, 2019, 15, 1970012.	10.0	0
7	Rapid Growth Cone Uptake and Dyneinâ€Mediated Axonal Retrograde Transport of Negatively Charged Nanoparticles in Neurons Is Dependent on Size and Cell Type. Small, 2019, 15, e1803758.	10.0	17
8	Charge and topography patterned lithium niobate provides physical cues to fluidically isolated cortical axons. Applied Physics Letters, 2017, 110, .	3.3	19
9	Characterization of carboxylate nanoparticle adhesion with the fungal pathogen Candida albicans. Nanoscale, 2017, 9, 15911-15922.	5.6	15
10	Advances in affinity ligandâ€functionalized nanomaterials for biomagnetic separation. Biotechnology and Bioengineering, 2016, 113, 11-25.	3.3	32
11	Micromagnet arrays enable precise manipulation of individual biological analyteâ€“superparamagnetic bead complexes for separation and sensing. Lab on A Chip, 2016, 16, 3645-3663.	6.0	38
12	Bioâ€Nanoâ€Magnetic Materials for Localized Mechanochemical Stimulation of Cell Growth and Death. Advanced Materials, 2016, 28, 5672-5680.	21.0	53
13	A microfluidic dual gradient generator for conducting cell-based drug combination assays. Integrative Biology (United Kingdom), 2016, 8, 39-49.	1.3	25
14	Neuronal Cell Bodies Remotely Regulate Axonal Growth Response to Localized Netrin-1 Treatment via Second Messenger and DCC Dynamics. Frontiers in Cellular Neuroscience, 2016, 10, 298.	3.7	15
15	Microtechnologies for studying the role of mechanics in axon growth and guidance. Frontiers in Cellular Neuroscience, 2015, 9, 282.	3.7	25
16	Micromagnet arrays for on-chip focusing, switching, and separation of superparamagnetic beads and single cells. Lab on A Chip, 2015, 15, 3370-3379.	6.0	13
17	Neuron Subpopulations with Different Elongation Rates and DCC Dynamics Exhibit Distinct Responses to Isolated Netrin-1 Treatment. ACS Chemical Neuroscience, 2015, 6, 1578-1590.	3.5	16
18	Structure and dynamics of the fibronectin-III domains of Aplysia californica cell adhesion molecules. Physical Chemistry Chemical Physics, 2015, 17, 9634-9643.	2.8	2

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19	Mechanochemical Stimulation of MCF7 Cells with Rodâ€Shaped Feâ€“Au Janus Particles Induces Cell Death Through Paradoxical Hyperactivation of ERK. Advanced Healthcare Materials, 2015, 4, 395-404.	7.6	26
20	Rapid, highly sensitive detection of herpes simplex virus-1 using multiple antigenic peptide-coated superparamagnetic beads. Analyst, The, 2014, 139, 6126-6134.	3.5	19
21	Advances in magnetic tweezers for single molecule and cell biophysics. Integrative Biology (United) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	78
22	In vitro study of the interaction of heregulin-functionalized magneticâ€“optical nanorods with MCF7 and MDA-MB-231 cells. Faraday Discussions, 2014, 175, 189-201.	3.2	1
23	Parallel Magnetic Tweezers for Pulling CNS Axons Towards a Source of Repellent Factors. Biophysical Journal, 2014, 106, 811a.	0.5	0
24	Low Piconewton Towing of CNS Axons against Diffusing and Surface-Bound Repellents Requires the Inhibition of Motor Protein-Associated Pathways. Scientific Reports, 2014, 4, 7128.	3.3	42
25	Characterization of Intermolecular and Intramolecular Interactions with the Atomic Force Microscope. , 2014, , 445-456.		0
26	Analysis of Cellâ€Cell Contact Mediated by Ig Superfamily Cell Adhesion Molecules. Current Protocols in Cell Biology, 2013, 61, 9.5.1-9.5.85.	2.3	4
27	Flow enhanced non-linear magnetophoretic separation of beads based on magnetic susceptibility. Lab on A Chip, 2013, 13, 4400.	6.0	21
28	Synthesis of Superparamagnetic Particles with Tunable Morphologies: The Role of Nanoparticleâ€“Nanoparticle Interactions. Langmuir, 2013, 29, 2546-2553.	3.5	21
29	Creation of recombinant antigen-binding molecules derived from hybridomas secreting specific antibodies. Nature Protocols, 2013, 8, 1125-1148.	12.0	29
30	Resistive pulse sensing of magnetic beads and supraparticle structures using tunable pores. Biomicrofluidics, 2012, 6, 014103.	2.4	32
31	Highly Ordered Feâ€“Au Heterostructured Nanorod Arrays and Their Exceptional Near-Infrared Plasmonic Signature. Langmuir, 2012, 28, 17101-17107.	3.5	13
32	Probing the Soybean Bowmanâ€“Birk Inhibitor Using Recombinant Antibody Fragments. Journal of Agricultural and Food Chemistry, 2012, 60, 6164-6172.	5.2	11
33	Single-Molecule Force Spectroscopy of the Aplysia Cell Adhesion Molecule Reveals Two Homophilic Bonds. Biophysical Journal, 2012, 103, 649-657.	0.5	39
34	Magnetic Tweezers-Based Force Clamp Reveals Mechanically Distinct apCAM Domain Interactions. Biophysical Journal, 2012, 103, 1120-1129.	0.5	13
35	Resistive Pulse Sensing of Analyteâ€Induced Multicomponent Rod Aggregation Using Tunable Pores. Small, 2012, 8, 2436-2444.	10.0	84
36	M13 Bacteriophageâ€Activated Superparamagnetic Beads for Affinity Separation. Small, 2012, 8, 2403-2411.	10.0	33

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37	Magneticâ€Plasmonic Dual Modulated FePtâ€Au Ternary Heterostructured Nanorods as a Promising Nanoâ€Bioprobe. Advanced Materials, 2012, 24, 2485-2490.	21.0	47
38	Isolation of Bowman-Birk-Inhibitor from soybean extracts using novel peptide probes and high gradient magnetic separation. Food Chemistry, 2012, 134, 1831-1838.	8.2	20
39	Magnetic Manipulation and Optical Imaging of an Active Plasmonic Single-Particle Feâ€“Au Nanorod. Langmuir, 2011, 27, 15292-15298.	3.5	25
40	Flow-Enhanced Nonlinear Magnetophoresis for High-Resolution Bioseparation. Langmuir, 2011, 27, 6496-6503.	3.5	15
41	Stable and reproducible electronic conduction through DNA molecular junctions. Applied Physics Letters, 2009, 95, 083106.	3.3	12
42	Mutation of the Membrane-Associated M1 Protease APM1 Results in Distinct Embryonic and Seedling Developmental Defects inArabidopsisÂ Â. Plant Cell, 2009, 21, 1693-1721.	6.6	51
43	Topography and Nanomechanics of Live Neuronal Growth Cones Analyzed by Atomic Force Microscopy. Biophysical Journal, 2009, 96, 5060-5072.	0.5	74
44	Rapid detection of dengue virus in serum using magnetic separation and fluorescence detection. Analyst, The, 2008, 133, 233-240.	3.5	42
45	Immunoassays in Nanoliter Volume Reactors Using Fluorescent Particle Diffusometry. Langmuir, 2008, 24, 2947-2952.	3.5	17
46	Optical Diffusometry Techniques and Applications in Biological Agent Detection. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	1.5	10
47	Sequence specific electronic conduction through polyion-stabilized double-stranded DNA in nanoscale break junctions. Nanotechnology, 2007, 18, 195202.	2.6	29
48	Traveling wave magnetophoresis for high resolution chip based separations. Lab on A Chip, 2007, 7, 1681.	6.0	116
49	Magnetic Tweezers Measurement of the Bond Lifetimeâ^'Force Behavior of the IgGâ^'Protein A Specific Molecular Interaction. Journal of the American Chemical Society, 2007, 129, 6640-6646.	13.7	31
50	Specific Adsorption of Histidine-Tagged Proteins on Silica Surfaces Modified with Ni2+/NTA-Derivatized Poly(ethylene glycol). Langmuir, 2007, 23, 6281-6288.	3.5	50
51	Nanoliter-Scale Reactor Arrays for Biochemical Sensing. Langmuir, 2006, 22, 6723-6726.	3.5	28
52	Properties of Mixed Lipid Monolayers Assembled on Hydrophobic Surfaces through Vesicle Adsorption. Langmuir, 2006, 22, 5057-5063.	3.5	17
53	Synthesis and Characterization of Paramagnetic Microparticles through Emulsion-Templated Free Radical Polymerization. Langmuir, 2006, 22, 2516-2522.	3.5	75
54	Physical properties of porous titania films composed of nanoparticle aggregates. Journal of Materials Research, 2006, 21, 1738-1746.	2.6	4

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55	High-resolution analysis of neuronal growth cone morphology by comparative atomic force and optical microscopy. Journal of Neurobiology, 2006, 66, 1529-1543.	3.6	46
56	Templated synthesis of goldâ€“iron alloy nanoparticles using pulsed laser deposition. Nanotechnology, 2006, 17, 5131-5135.	2.6	13
57	The application of magnetic force differentiation for the measurement of the affinity of peptide libraries. Journal of Magnetism and Magnetic Materials, 2005, 293, 382-388.	2.3	14
58	Mesoporous Membrane Device for Asymmetric Biosensing. Langmuir, 2005, 21, 1153-1157.	3.5	13
59	Transport and functional behaviour of poly(ethylene glycol)-modified nanoporous alumina membranes. Nanotechnology, 2005, 16, 1335-1340.	2.6	31
60	Mesoporous membrane technologies for the collection of airborne biological pathogens. , 2004, , .		1
61	Nanometer Scale Surface Properties of Supported Lipid Bilayers Measured with Hydrophobic and Hydrophilic Atomic Force Microscope Probesâ€. Langmuir, 2003, 19, 1899-1907.	3.5	51
62	Measurement of the Physical and Chemical Properties of Hybrid Lipid Membranes with the Atomic Force Microscope. AIP Conference Proceedings, 2003, , .	0.4	1
63	Dissociation of Multiple Protein Ion Charge States Following a Single Gas-Phase Purification and Concentration Procedure. Analytical Chemistry, 2002, 74, 4653-4661.	6.5	28
64	Gas-Phase Concentration, Purification, and Identification of Whole Proteins from Complex Mixtures. Journal of the American Chemical Society, 2002, 124, 7353-7362.	13.7	103
65	Implementation of Force Differentiation in the Immunoassay. Analytical Biochemistry, 2000, 287, 261-271.	2.4	61
66	Synthesis and characterization of a novel polyimide-based second-order nonlinear optical material. Polymer, 2000, 41, 5237-5245.	3.8	40
67	Atomic Force Microscope Image Contrast Mechanisms on Supported Lipid Bilayers. Biophysical Journal, 2000, 79, 1107-1118.	0.5	121
68	Advances in the characterization of supported lipid films with the atomic force microscope. Biochimica Et Biophysica Acta - Biomembranes, 2000, 1509, 14-41.	2.6	186
69	Atomic Force Microscopy with Patterned Cantilevers and Tip Arrays:Â Force Measurements with Chemical Arrays. Langmuir, 2000, 16, 4009-4015.	3.5	27
70	Microfabricated tip arrays for improving force measurements. Applied Physics Letters, 1999, 74, 1489-1491.	3.3	15
71	Development and characterization of surface chemistries for microfabricated biosensors. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 2623-2628.	2.1	42
72	Structure, force, and energy of a double-stranded DNA oligonucleotide under tensile loads. European Biophysics Journal, 1999, 28, 415-426.	2.2	78

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73	Characterization of the physical properties of model biomembranes at the nanometer scale with the atomic force microscope. Faraday Discussions, 1999, 111, 79-94.	3.2	102
74	Effect of Mechanical Contact on the Molecular Recognition of Biomolecules. Langmuir, 1999, 15, 238-243.	3.5	21
75	A biosensor based on magnetoresistance technology. Biosensors and Bioelectronics, 1998, 13, 731-739.	10.1	757
76	Nanometer-Scale Surface Properties of Mixed Phospholipid Monolayers and Bilayers. Langmuir, 1997, 13, 4779-4784.	3.5	232
77	A high-sensitivity micromachined biosensor. Proceedings of the IEEE, 1997, 85, 672-680.	21.3	100
78	Scanning probe microscopy. Current Opinion in Chemical Biology, 1997, 1, 370-377.	6.1	55
79	Covalent attachment of synthetic DNA to self-assembled monolayer films. Nucleic Acids Research, 1996, 24, 3031-3039.	14.5	304
80	Chemicallyâ€Specific Probes for the Atomic Force Microscope. Israel Journal of Chemistry, 1996, 36, 81-87.	2.3	28
81	Biosensor based on force microscope technology. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 789.	1.6	129
82	Design and calibration of a scanning force microscope for friction, adhesion, and contact potential studies. Review of Scientific Instruments, 1995, 66, 4566-4574.	1.3	51
83	Measuring forces between biological macromolecules with the Atomic Force Microscope: characterization and applications. Proceedings Annual Meeting Electron Microscopy Society of America, 1995, 53, 718-719.	0.0	0
84	Sensing Discrete Streptavidin-Biotin Interactions with Atomic Force Microscopy. Langmuir, 1994, 10, 354-357.	3.5	688
85	Direct measurement of the forces between complementary strands of DNA. Science, 1994, 266, 771-773.	12.6	795
86	Scanning tunneling microscopy and atomic force microscopy visualization of the components of the skeletal muscle glycogenolytic complex. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 1248.	1.6	8
87	Observation of phosphorylase kinase and phosphorylase b at solidâ€“liquid interfaces by scanning tunneling microscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 1236.	1.6	5
88	Helical period of Z-DNA. Nature, 1990, 346, 706-706.	27.8	6
89	Scanning tunneling microscopy of nucleic acids. Science, 1989, 244, 475-477.	12.6	92
90	Scanning tunnelling microscopy of Z-DNA. Nature, 1989, 339, 484-486.	27.8	100