

Gil U Lee

List of Publications by Year in descending order

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90
papers

5,773
citations

117453

34
h-index

74018

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 freeze-thaw cycling on the sensitivity of qRT-PCR detection of SARS-CoV-2 nucleic acids. <i>Nanoscale</i> , 2021, 13, 15659-15667.	2.8	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. <i>Scientific Reports</i> , 2021, 11, 5302.	1.6	8
3	Optical detection of the magnetophoretic transport of superparamagnetic beads on a micromagnetic array. <i>Scientific Reports</i> , 2020, 10, 12876.	1.6	1
4	Rapid and sensitive detection of cardiac troponin I using a force enhanced immunoassay with nanoporous membrane. <i>Nanoscale</i> , 2020, 12, 12568-12577.	2.8	4
5	Direct identification of the herpes simplex virus <i>UL27</i> gene through single particle manipulation and optical detection using a micromagnetic array. <i>Nanoscale</i> , 2020, 12, 3482-3490.	2.8	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). <i>Small</i> , 2019, 15, 1970012.	5.2	0
7	Rapid Growth Cone Uptake and Dynein-Mediated Axonal Retrograde Transport of Negatively Charged Nanoparticles in Neurons Is Dependent on Size and Cell Type. <i>Small</i> , 2019, 15, e1803758.	5.2	17
8	Charge and topography patterned lithium niobate provides physical cues to fluidically isolated cortical axons. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	19
9	Characterization of carboxylate nanoparticle adhesion with the fungal pathogen <i>Candida albicans</i> . <i>Nanoscale</i> , 2017, 9, 15911-15922.	2.8	15
10	Advances in affinity ligand-functionalized nanomaterials for biomagnetic separation. <i>Biotechnology and Bioengineering</i> , 2016, 113, 11-25.	1.7	32
11	Micromagnet arrays enable precise manipulation of individual biological analyte-superparamagnetic bead complexes for separation and sensing. <i>Lab on A Chip</i> , 2016, 16, 3645-3663.	3.1	38
12	Bio-Nano-Magnetic Materials for Localized Mechanochemical Stimulation of Cell Growth and Death. <i>Advanced Materials</i> , 2016, 28, 5672-5680.	11.1	53
13	A microfluidic dual gradient generator for conducting cell-based drug combination assays. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 39-49.	0.6	25
14	Neuronal Cell Bodies Remotely Regulate Axonal Growth Response to Localized Netrin-1 Treatment via Second Messenger and DCC Dynamics. <i>Frontiers in Cellular Neuroscience</i> , 2016, 10, 298.	1.8	15
15	Microtechnologies for studying the role of mechanics in axon growth and guidance. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 282.	1.8	25
16	Micromagnet arrays for on-chip focusing, switching, and separation of superparamagnetic beads and single cells. <i>Lab on A Chip</i> , 2015, 15, 3370-3379.	3.1	13
17	Neuron Subpopulations with Different Elongation Rates and DCC Dynamics Exhibit Distinct Responses to Isolated Netrin-1 Treatment. <i>ACS Chemical Neuroscience</i> , 2015, 6, 1578-1590.	1.7	16
18	Structure and dynamics of the fibronectin-III domains of <i>Aplysia californica</i> cell adhesion molecules. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 9634-9643.	1.3	2

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19	Mechanochemical Stimulation of MCF7 Cells with Rod-Shaped Fe-Au Janus Particles Induces Cell Death Through Paradoxical Hyperactivation of ERK. <i>Advanced Healthcare Materials</i> , 2015, 4, 395-404.	3.9	26
20	Rapid, highly sensitive detection of herpes simplex virus-1 using multiple antigenic peptide-coated superparamagnetic beads. <i>Analyst</i> , The, 2014, 139, 6126-6134.	1.7	19
21	Advances in magnetic tweezers for single molecule and cell biophysics. <i>Integrative Biology (United Tj ETQq1 1 0.784314 rgBT /Overlo</i>	0.6	78
22	In vitro study of the interaction of heregulin-functionalized magnetic-optical nanorods with MCF7 and MDA-MB-231 cells. <i>Faraday Discussions</i> , 2014, 175, 189-201.	1.6	1
23	Parallel Magnetic Tweezers for Pulling CNS Axons Towards a Source of Repellent Factors. <i>Biophysical Journal</i> , 2014, 106, 811a.	0.2	0
24	Low Piconewton Towing of CNS Axons against Diffusing and Surface-Bound Repellents Requires the Inhibition of Motor Protein-Associated Pathways. <i>Scientific Reports</i> , 2014, 4, 7128.	1.6	42
25	Characterization of Intermolecular and Intramolecular Interactions with the Atomic Force Microscope. , 2014, , 445-456.		0
26	Analysis of Cell-Cell Contact Mediated by Ig Superfamily Cell Adhesion Molecules. <i>Current Protocols in Cell Biology</i> , 2013, 61, 9.5.1-9.5.85.	2.3	4
27	Flow enhanced non-linear magnetophoretic separation of beads based on magnetic susceptibility. <i>Lab on A Chip</i> , 2013, 13, 4400.	3.1	21
28	Synthesis of Superparamagnetic Particles with Tunable Morphologies: The Role of Nanoparticle-Nanoparticle Interactions. <i>Langmuir</i> , 2013, 29, 2546-2553.	1.6	21
29	Creation of recombinant antigen-binding molecules derived from hybridomas secreting specific antibodies. <i>Nature Protocols</i> , 2013, 8, 1125-1148.	5.5	29
30	Resistive pulse sensing of magnetic beads and supraparticle structures using tunable pores. <i>Biomicrofluidics</i> , 2012, 6, 014103.	1.2	32
31	Highly Ordered Fe-Au Heterostructured Nanorod Arrays and Their Exceptional Near-Infrared Plasmonic Signature. <i>Langmuir</i> , 2012, 28, 17101-17107.	1.6	13
32	Probing the Soybean Bowman-Birk Inhibitor Using Recombinant Antibody Fragments. <i>Journal of Agricultural and Food Chemistry</i> , 2012, 60, 6164-6172.	2.4	11
33	Single-Molecule Force Spectroscopy of the Aplysia Cell Adhesion Molecule Reveals Two Homophilic Bonds. <i>Biophysical Journal</i> , 2012, 103, 649-657.	0.2	39
34	Magnetic Tweezers-Based Force Clamp Reveals Mechanically Distinct apCAM Domain Interactions. <i>Biophysical Journal</i> , 2012, 103, 1120-1129.	0.2	13
35	Resistive Pulse Sensing of Analyte-Induced Multicomponent Rod Aggregation Using Tunable Pores. <i>Small</i> , 2012, 8, 2436-2444.	5.2	84
36	M13 Bacteriophage-Activated Superparamagnetic Beads for Affinity Separation. <i>Small</i> , 2012, 8, 2403-2411.	5.2	33

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37	Magnetic-Plasmonic Dual Modulated FePt-Au Ternary Heterostructured Nanorods as a Promising Nano-Bioprobe. <i>Advanced Materials</i> , 2012, 24, 2485-2490.	11.1	47
38	Isolation of Bowman-Birk-Inhibitor from soybean extracts using novel peptide probes and high gradient magnetic separation. <i>Food Chemistry</i> , 2012, 134, 1831-1838.	4.2	20
39	Magnetic Manipulation and Optical Imaging of an Active Plasmonic Single-Particle Fe-Au Nanorod. <i>Langmuir</i> , 2011, 27, 15292-15298.	1.6	25
40	Flow-Enhanced Nonlinear Magnetophoresis for High-Resolution Bioseparation. <i>Langmuir</i> , 2011, 27, 6496-6503.	1.6	15
41	Stable and reproducible electronic conduction through DNA molecular junctions. <i>Applied Physics Letters</i> , 2009, 95, 083106.	1.5	12
42	Mutation of the Membrane-Associated M1 Protease APM1 Results in Distinct Embryonic and Seedling Developmental Defects in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2009, 21, 1693-1721.	3.1	51
43	Topography and Nanomechanics of Live Neuronal Growth Cones Analyzed by Atomic Force Microscopy. <i>Biophysical Journal</i> , 2009, 96, 5060-5072.	0.2	74
44	Rapid detection of dengue virus in serum using magnetic separation and fluorescence detection. <i>Analyst</i> , 2008, 133, 233-240.	1.7	42
45	Immunoassays in Nanoliter Volume Reactors Using Fluorescent Particle Diffusometry. <i>Langmuir</i> , 2008, 24, 2947-2952.	1.6	17
46	Optical Diffusometry Techniques and Applications in Biological Agent Detection. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2008, 130, .	0.8	10
47	Sequence specific electronic conduction through polyion-stabilized double-stranded DNA in nanoscale break junctions. <i>Nanotechnology</i> , 2007, 18, 195202.	1.3	29
48	Traveling wave magnetophoresis for high resolution chip based separations. <i>Lab on A Chip</i> , 2007, 7, 1681.	3.1	116
49	Magnetic Tweezers Measurement of the Bond Lifetime-Force Behavior of the IgG-Protein A Specific Molecular Interaction. <i>Journal of the American Chemical Society</i> , 2007, 129, 6640-6646.	6.6	31
50	Specific Adsorption of Histidine-Tagged Proteins on Silica Surfaces Modified with Ni ²⁺ /NTA-Derivatized Poly(ethylene glycol). <i>Langmuir</i> , 2007, 23, 6281-6288.	1.6	50
51	Nanoliter-Scale Reactor Arrays for Biochemical Sensing. <i>Langmuir</i> , 2006, 22, 6723-6726.	1.6	28
52	Properties of Mixed Lipid Monolayers Assembled on Hydrophobic Surfaces through Vesicle Adsorption. <i>Langmuir</i> , 2006, 22, 5057-5063.	1.6	17
53	Synthesis and Characterization of Paramagnetic Microparticles through Emulsion-Templated Free Radical Polymerization. <i>Langmuir</i> , 2006, 22, 2516-2522.	1.6	75
54	Physical properties of porous titania films composed of nanoparticle aggregates. <i>Journal of Materials Research</i> , 2006, 21, 1738-1746.	1.2	4

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55	High-resolution analysis of neuronal growth cone morphology by comparative atomic force and optical microscopy. <i>Journal of Neurobiology</i> , 2006, 66, 1529-1543.	3.7	46
56	Templated synthesis of gold-iron alloy nanoparticles using pulsed laser deposition. <i>Nanotechnology</i> , 2006, 17, 5131-5135.	1.3	13
57	The application of magnetic force differentiation for the measurement of the affinity of peptide libraries. <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 293, 382-388.	1.0	14
58	Mesoporous Membrane Device for Asymmetric Biosensing. <i>Langmuir</i> , 2005, 21, 1153-1157.	1.6	13
59	Transport and functional behaviour of poly(ethylene glycol)-modified nanoporous alumina membranes. <i>Nanotechnology</i> , 2005, 16, 1335-1340.	1.3	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 Probes. <i>Langmuir</i> , 2003, 19, 1899-1907.	1.6	51
62	Measurement of the Physical and Chemical Properties of Hybrid Lipid Membranes with the Atomic Force Microscope. <i>AIP Conference Proceedings</i> , 2003, , .	0.3	1
63	Dissociation of Multiple Protein Ion Charge States Following a Single Gas-Phase Purification and Concentration Procedure. <i>Analytical Chemistry</i> , 2002, 74, 4653-4661.	3.2	28
64	Gas-Phase Concentration, Purification, and Identification of Whole Proteins from Complex Mixtures. <i>Journal of the American Chemical Society</i> , 2002, 124, 7353-7362.	6.6	103
65	Implementation of Force Differentiation in the Immunoassay. <i>Analytical Biochemistry</i> , 2000, 287, 261-271.	1.1	61
66	Synthesis and characterization of a novel polyimide-based second-order nonlinear optical material. <i>Polymer</i> , 2000, 41, 5237-5245.	1.8	40
67	Atomic Force Microscope Image Contrast Mechanisms on Supported Lipid Bilayers. <i>Biophysical Journal</i> , 2000, 79, 1107-1118.	0.2	121
68	Advances in the characterization of supported lipid films with the atomic force microscope. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2000, 1509, 14-41.	1.4	186
69	Atomic Force Microscopy with Patterned Cantilevers and Tip Arrays: Force Measurements with Chemical Arrays. <i>Langmuir</i> , 2000, 16, 4009-4015.	1.6	27
70	Microfabricated tip arrays for improving force measurements. <i>Applied Physics Letters</i> , 1999, 74, 1489-1491.	1.5	15
71	Development and characterization of surface chemistries for microfabricated biosensors. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999, 17, 2623-2628.	0.9	42
72	Structure, force, and energy of a double-stranded DNA oligonucleotide under tensile loads. <i>European Biophysics Journal</i> , 1999, 28, 415-426.	1.2	78

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73	Characterization of the physical properties of model biomembranes at the nanometer scale with the atomic force microscope. <i>Faraday Discussions</i> , 1999, 111, 79-94.	1.6	102
74	Effect of Mechanical Contact on the Molecular Recognition of Biomolecules. <i>Langmuir</i> , 1999, 15, 238-243.	1.6	21
75	A biosensor based on magnetoresistance technology. <i>Biosensors and Bioelectronics</i> , 1998, 13, 731-739.	5.3	757
76	Nanometer-Scale Surface Properties of Mixed Phospholipid Monolayers and Bilayers. <i>Langmuir</i> , 1997, 13, 4779-4784.	1.6	232
77	A high-sensitivity micromachined biosensor. <i>Proceedings of the IEEE</i> , 1997, 85, 672-680.	16.4	100
78	Scanning probe microscopy. <i>Current Opinion in Chemical Biology</i> , 1997, 1, 370-377.	2.8	55
79	Covalent attachment of synthetic DNA to self-assembled monolayer films. <i>Nucleic Acids Research</i> , 1996, 24, 3031-3039.	6.5	304
80	Chemically-Specific Probes for the Atomic Force Microscope. <i>Israel Journal of Chemistry</i> , 1996, 36, 81-87.	1.0	28
81	Biosensor based on force microscope technology. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996, 14, 789.	1.6	129
82	Design and calibration of a scanning force microscope for friction, adhesion, and contact potential studies. <i>Review of Scientific Instruments</i> , 1995, 66, 4566-4574.	0.6	51
83	Measuring forces between biological macromolecules with the Atomic Force Microscope: characterization and applications. <i>Proceedings Annual Meeting Electron Microscopy Society of America</i> , 1995, 53, 718-719.	0.0	0
84	Sensing Discrete Streptavidin-Biotin Interactions with Atomic Force Microscopy. <i>Langmuir</i> , 1994, 10, 354-357.	1.6	688
85	Direct measurement of the forces between complementary strands of DNA. <i>Science</i> , 1994, 266, 771-773.	6.0	795
86	Scanning tunneling microscopy and atomic force microscopy visualization of the components of the skeletal muscle glycogenolytic complex. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1991, 9, 1248.	1.6	8
87	Observation of phosphorylase kinase and phosphorylase b at solid-liquid interfaces by scanning tunneling microscopy. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1991, 9, 1236.	1.6	5
88	Helical period of Z-DNA. <i>Nature</i> , 1990, 346, 706-706.	13.7	6
89	Scanning tunneling microscopy of nucleic acids. <i>Science</i> , 1989, 244, 475-477.	6.0	92
90	Scanning tunnelling microscopy of Z-DNA. <i>Nature</i> , 1989, 339, 484-486.	13.7	100