

# King Wai Chiu Lai

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

63

papers

996

citations

18

h-index

30

g-index

74

ext. papers

1,275

ext. citations

4.9

avg, IF

4.72

L-index

#	Paper	IF	Citations
63	Remote Rotary Mixing and Spraying of Plural Component Protective Coating for Underground Pipe Internal Rehabilitation Lining. <i>IEEE Robotics and Automation Letters</i> , <b>2022</b> , 7, 3114-3121	4.2	0
62	Detection of Bacterial Metabolic Volatile Indole Using a Graphene-Based Field-Effect Transistor Biosensor. <i>Nanomaterials</i> , <b>2021</b> , 11,	5.4	4
61	Teleoperated service robotic system for on-site surface rust removal and protection of high-rise exterior gas pipes. <i>Automation in Construction</i> , <b>2021</b> , 125, 103609	9.6	4
60	Asphaltenes in asphalt: Direct observation and evaluation of their impacts on asphalt properties. <i>Construction and Building Materials</i> , <b>2021</b> , 271, 121862	6.7	10
59	An Active Biomechanical Model of Cell Adhesion Actuated by Intracellular Tensioning-Taxis. <i>Biophysical Journal</i> , <b>2020</b> , 118, 2656-2669	2.9	3
58	Interaction of Sp1 and APP promoter elucidates a mechanism for Pb caused neurodegeneration. <i>Archives of Biochemistry and Biophysics</i> , <b>2020</b> , 681, 108265	4.1	2
57	Topography induced stiffness alteration of stem cells influences osteogenic differentiation. <i>Biomaterials Science</i> , <b>2020</b> , 8, 2638-2652	7.4	23
56	Cholesterol Modulates the Formation of the A $\beta$ Ion Channel in Lipid Bilayers. <i>Biochemistry</i> , <b>2020</b> , 59, 992-998	3.2	5
55	Reversible reconfiguration of high-order DNA nanostructures by employing G-quartet toeholds as adhesive units. <i>Nanoscale</i> , <b>2020</b> , 12, 2464-2471	7.7	1
54	An ultraflexible polyurethane yarn-based wearable strain sensor with a polydimethylsiloxane infiltrated multilayer sheath for smart textiles. <i>Nanoscale</i> , <b>2020</b> , 12, 4110-4118	7.7	35
53	. <i>IEEE Nanotechnology Magazine</i> , <b>2019</b> , 13, 4-14	1.7	17
52	Facile construction of a DNA tetrahedron in unconventional ladder-like arrangements at room temperature. <i>Nanoscale Advances</i> , <b>2019</b> , 1, 1240-1248	5.1	4
51	Identification of energy landscape of Sp1 zinc-finger in Pb(II) or Cd(II) using AFM. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 013701	3.4	
50	Dynamic effect of beta-amyloid 42 on cell mechanics. <i>Journal of Biomechanics</i> , <b>2019</b> , 86, 79-88	2.9	10
49	Skin-Integrated Graphene-Embedded Lead Zirconate Titanate Rubber for Energy Harvesting and Mechanical Sensing. <i>Advanced Materials Technologies</i> , <b>2019</b> , 4, 1900744	6.8	34
48	Graphene/HgTe Quantum-Dot Photodetectors with Gate-Tunable Infrared Response. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 6701-6706	5.6	11
47	Extracellular Nanomatrix-Induced Self-Organization of Neural Stem Cells into Miniature Substantia Nigra-Like Structures with Therapeutic Effects on Parkinsonian Rats. <i>Advanced Science</i> , <b>2019</b> , 6, 1901822 <sup>13.6</sup>		4

46	Parkinson's Disease: Extracellular Nanomatrix-Induced Self-Organization of Neural Stem Cells into Miniature Substantia Nigra-Like Structures with Therapeutic Effects on Parkinsonian Rats (Adv. Sci. 24/2019). <i>Advanced Science</i> , <b>2019</b> , 6, 1970144	13.6	78
45	Biophysical Characteristics of Human Neuroblastoma Cell in Oligomeric $\beta$ -Amyloid (1-40) Cytotoxicity. <i>IEEE Transactions on Nanobioscience</i> , <b>2018</b> , 17, 70-77	3.4	1
44	Computational Modeling of Cell Adhesion Under the Effect of Substrate Stiffness. <i>IEEE Nanotechnology Magazine</i> , <b>2018</b> , 17, 402-406	2.6	5
43	A ratiometric probe based on coumarin-quinoline for highly selective and sensitive detection of Zn <sup>2+</sup> ions in living cells. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , <b>2018</b> , 355, 487-495	4.7	16
42	Simulation of Graphene Field-Effect Transistor Biosensors for Bacterial Detection. <i>Sensors</i> , <b>2018</b> , 18,	3.8	16
41	A turn-on fluorescent probe based on coumarin-anhydride for highly sensitive detection of hydrazine in the aqueous solution and gas states. <i>Methods and Applications in Fluorescence</i> , <b>2017</b> , 5, 015001	2.1	10
40	Plasmon resonance enhanced colloidal HgSe quantum dot filterless narrowband photodetectors for mid-wave infrared. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 362-369	7.1	79
39	Twisted graphene-assisted photocarrier transfer from HgSe colloidal quantum dots into silicon with enhanced collection and transport efficiency. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 241104	3.4	16
38	Design and Analysis of Electrical Resistance Feedback for Automated Patch Clamp on Adherent Cells. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2017</b> , 14, 844-854	4.9	1
37	Interband and intraband optical transitions in mercury chalcogenide colloidal quantum dots <b>2017</b> ,		2
36	Neural Stimulation: Multiplexed Optogenetic Stimulation of Neurons with Spectrum-Selective Upconversion Nanoparticles (Adv. Healthcare Mater. 17/2017). <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6,	10.1	1
35	Multiplexed Optogenetic Stimulation of Neurons with Spectrum-Selective Upconversion Nanoparticles. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1700446	10.1	36
34	Graphene Field-Effect Transistors for the Sensitive and Selective Detection of Escherichia coli Using Pyrene-Tagged DNA Aptamer. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1700736	10.1	51
33	Doping effects of surface functionalization on graphene with aromatic molecule and organic solvents. <i>Applied Surface Science</i> , <b>2017</b> , 425, 713-721	6.7	41
32	Development of the Electric Equivalent Model for the Cytoplasmic Microinjection of Small Adherent Cells. <i>Micromachines</i> , <b>2017</b> , 8,	3.3	1
31	Modeling the mechanics of cells in the cell-spreading process driven by traction forces. <i>Physical Review E</i> , <b>2016</b> , 93, 042404	2.4	18
30	Photoresponse enhancement in graphene/silicon infrared detector by controlling photocarrier collection. <i>Materials Research Express</i> , <b>2016</b> , 3, 076203	1.7	9
29	A highly sensitive and selective turn-on fluorescent probe for Pb(II) ions based on a coumarin-quinoline platform. <i>RSC Advances</i> , <b>2016</b> , 6, 100696-100699	3.7	16

28	Compressive Video Recovery Using Block Match Multi-Frame Motion Estimation Based on Single Pixel Cameras. <i>Sensors</i> , <b>2016</b> , 16, 318	3.8	2
27	Scalable Fabrication of Infrared Detectors with Multispectral Photoresponse Based on Patterned Colloidal Quantum Dot Films. <i>ACS Photonics</i> , <b>2016</b> , 3, 2396-2404	6.3	56
26	Substrate Effect on Atomic Force Microscopy-Based Nanolithography of Graphene. <i>IEEE Nanotechnology Magazine</i> , <b>2016</b> , 15, 607-613	2.6	7
25	A highly versatile platform based on geometrically well-defined 3D DNA nanostructures for selective recognition and positioning of multiplex targets. <i>Nanoscale</i> , <b>2016</b> , 8, 18291-18295	7.7	11
24	Cellular level robotic surgery: Nanodissection of intermediate filaments in live keratinocytes. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2015</b> , 11, 137-45	6	23
23	Chemical functionalization of graphene with aromatic molecule <b>2015</b> ,		1
22	Tuning graphene/silicon Schottky barrier height by chemical doping <b>2015</b> ,		1
21	Investigating dynamic structural and mechanical changes of neuroblastoma cells associated with glutamate-mediated neurodegeneration. <i>Scientific Reports</i> , <b>2014</b> , 4, 7074	4.9	47
20	Quantitative study of AFM-based nanopatterning of graphene nanoplate <b>2014</b> ,		5
19	Cell segmentation and pipette identification for automated patch clamp recording. <i>Robotics and Biomimetics</i> , <b>2014</b> , 1,		4
18	Development of an omnidirectional mobile robot using a RGB-D sensor for indoor navigation <b>2014</b> ,		3
17	Probing for chemotherapy-induced peripheral neuropathy in live dorsal root ganglion neurons with atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2014</b> , 10, 1323-33	6	17
16	Cellular biophysical dynamics and ion channel activities detected by AFM-based nanorobotic manipulator in insulinoma cells. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2013</b> , 9, 636-45	6	15
15	Video Rate Atomic Force Microscopy: Use of compressive scanning for nanoscale video imaging. <i>IEEE Nanotechnology Magazine</i> , <b>2013</b> , 7, 4-8	1.7	17
14	Design and implementation for image reconstruction of CompressiveSensing using FPGA <b>2013</b> ,		1
13	Characterization of mechanical behavior of an epithelial monolayer in response to epidermal growth factor stimulation. <i>Experimental Cell Research</i> , <b>2012</b> , 318, 521-6	4.2	18
12	Development of 3D hyperspectral camera using compressive sensing <b>2012</b> ,		2
11	The Development of an Infrared Camera Using Graphene: Achieving Efficient High-Resolution Infrared Images.. <i>IEEE Nanotechnology Magazine</i> , <b>2012</b> , 6, 4-7	1.7	4

10	Multi-objective optimizing for image recovering in compressive sensing <b>2012</b> ,		2
9	Quantitative analysis of human keratinocyte cell elasticity using atomic force microscopy (AFM). <i>IEEE Transactions on Nanobioscience</i> , <b>2011</b> , 10, 9-15	3.4	25
8	. <i>IEEE Nanotechnology Magazine</i> , <b>2010</b> , 9, 582-589	2.6	41
7	Investigation of human keratinocyte cell adhesion using atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2010</b> , 6, 191-200	6	45
6	Engineering the band gap of carbon nanotube for infrared sensors. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 221107	3.4	18
5	Nanoresonant signal boosters for carbon nanotube based infrared detectors. <i>Nanotechnology</i> , <b>2009</b> , 20, 185201	3.4	18
4	Photovoltaic effect in single carbon nanotube-based Schottky diodes. <i>International Journal of Nanoparticles</i> , <b>2008</b> , 1, 108	0.4	23
3	Automated process for selection of carbon nanotube by electronic property using dielectrophoretic manipulation. <i>Journal of Micro-Nano Mechatronics</i> , <b>2008</b> , 4, 37-48		9
2	An efficient approach of handling and deposition of micro and nano entities using sensorized microfluidic end-effector system. <i>Sensors and Actuators A: Physical</i> , <b>2008</b> , 147, 6-16	3.9	7
1	. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2006</b> , 3, 218-227	4.9	10