

King Wai Chiu Lai

List of Publications by Citations

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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 | Plasmon resonance enhanced colloidal HgSe quantum dot filterless narrowband photodetectors for mid-wave infrared. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 362-369 | 7.1 | 79 |
| 62 | 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> , 2019 , 6, 1970144 | 13.6 | 78 |
| 61 | Scalable Fabrication of Infrared Detectors with Multispectral Photoresponse Based on Patterned Colloidal Quantum Dot Films. <i>ACS Photonics</i> , 2016 , 3, 2396-2404 | 6.3 | 56 |
| 60 | Graphene Field-Effect Transistors for the Sensitive and Selective Detection of Escherichia coli Using Pyrene-Tagged DNA Aptamer. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1700736 | 10.1 | 51 |
| 59 | Investigating dynamic structural and mechanical changes of neuroblastoma cells associated with glutamate-mediated neurodegeneration. <i>Scientific Reports</i> , 2014 , 4, 7074 | 4.9 | 47 |
| 58 | Investigation of human keratinocyte cell adhesion using atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2010 , 6, 191-200 | 6 | 45 |
| 57 | Doping effects of surface functionalization on graphene with aromatic molecule and organic solvents. <i>Applied Surface Science</i> , 2017 , 425, 713-721 | 6.7 | 41 |
| 56 | . <i>IEEE Nanotechnology Magazine</i> , 2010 , 9, 582-589 | 2.6 | 41 |
| 55 | Multiplexed Optogenetic Stimulation of Neurons with Spectrum-Selective Upconversion Nanoparticles. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1700446 | 10.1 | 36 |
| 54 | An ultraflexible polyurethane yarn-based wearable strain sensor with a polydimethylsiloxane infiltrated multilayer sheath for smart textiles. <i>Nanoscale</i> , 2020 , 12, 4110-4118 | 7.7 | 35 |
| 53 | Skin-Integrated Graphene-Embedded Lead Zirconate Titanate Rubber for Energy Harvesting and Mechanical Sensing. <i>Advanced Materials Technologies</i> , 2019 , 4, 1900744 | 6.8 | 34 |
| 52 | Quantitative analysis of human keratinocyte cell elasticity using atomic force microscopy (AFM). <i>IEEE Transactions on Nanobioscience</i> , 2011 , 10, 9-15 | 3.4 | 25 |
| 51 | Cellular level robotic surgery: Nanodissection of intermediate filaments in live keratinocytes. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2015 , 11, 137-45 | 6 | 23 |
| 50 | Topography induced stiffness alteration of stem cells influences osteogenic differentiation. <i>Biomaterials Science</i> , 2020 , 8, 2638-2652 | 7.4 | 23 |
| 49 | Photovoltaic effect in single carbon nanotube-based Schottky diodes. <i>International Journal of Nanoparticles</i> , 2008 , 1, 108 | 0.4 | 23 |
| 48 | Modeling the mechanics of cells in the cell-spreading process driven by traction forces. <i>Physical Review E</i> , 2016 , 93, 042404 | 2.4 | 18 |
| 47 | Characterization of mechanical behavior of an epithelial monolayer in response to epidermal growth factor stimulation. <i>Experimental Cell Research</i> , 2012 , 318, 521-6 | 4.2 | 18 |

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| 46 | Engineering the band gap of carbon nanotube for infrared sensors. <i>Applied Physics Letters</i> , 2009 , 95, 221107 | 3.4 | 18 |
| 45 | Nanoresonant signal boosters for carbon nanotube based infrared detectors. <i>Nanotechnology</i> , 2009 , 20, 185201 | 3.4 | 18 |
| 44 | . <i>IEEE Nanotechnology Magazine</i> , 2019 , 13, 4-14 | 1.7 | 17 |
| 43 | Probing for chemotherapy-induced peripheral neuropathy in live dorsal root ganglion neurons with atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2014 , 10, 1323-33 | 6 | 17 |
| 42 | Video Rate Atomic Force Microscopy: Use of compressive scanning for nanoscale video imaging. <i>IEEE Nanotechnology Magazine</i> , 2013 , 7, 4-8 | 1.7 | 17 |
| 41 | Twisted graphene-assisted photocarrier transfer from HgSe colloidal quantum dots into silicon with enhanced collection and transport efficiency. <i>Applied Physics Letters</i> , 2017 , 110, 241104 | 3.4 | 16 |
| 40 | A ratiometric probe based on coumarin-quinoline for highly selective and sensitive detection of Zn ²⁺ ions in living cells. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2018 , 355, 487-495 | 4.7 | 16 |
| 39 | A highly sensitive and selective turn-on fluorescent probe for Pb(II) ions based on a coumarin-quinoline platform. <i>RSC Advances</i> , 2016 , 6, 100696-100699 | 3.7 | 16 |
| 38 | Simulation of Graphene Field-Effect Transistor Biosensors for Bacterial Detection. <i>Sensors</i> , 2018 , 18, | 3.8 | 16 |
| 37 | Cellular biophysical dynamics and ion channel activities detected by AFM-based nanorobotic manipulator in insulinoma cells. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013 , 9, 636-45 | 6 | 15 |
| 36 | Graphene/HgTe Quantum-Dot Photodetectors with Gate-Tunable Infrared Response. <i>ACS Applied Nano Materials</i> , 2019 , 2, 6701-6706 | 5.6 | 11 |
| 35 | A highly versatile platform based on geometrically well-defined 3D DNA nanostructures for selective recognition and positioning of multiplex targets. <i>Nanoscale</i> , 2016 , 8, 18291-18295 | 7.7 | 11 |
| 34 | 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> , 2017 , 5, 015001 | 3.1 | 10 |
| 33 | Dynamic effect of beta-amyloid 42 on cell mechanics. <i>Journal of Biomechanics</i> , 2019 , 86, 79-88 | 2.9 | 10 |
| 32 | . <i>IEEE Transactions on Automation Science and Engineering</i> , 2006 , 3, 218-227 | 4.9 | 10 |
| 31 | Asphaltenes in asphalt: Direct observation and evaluation of their impacts on asphalt properties. <i>Construction and Building Materials</i> , 2021 , 271, 121862 | 6.7 | 10 |
| 30 | Photoresponse enhancement in graphene/silicon infrared detector by controlling photocarrier collection. <i>Materials Research Express</i> , 2016 , 3, 076203 | 1.7 | 9 |
| 29 | Automated process for selection of carbon nanotube by electronic property using dielectrophoretic manipulation. <i>Journal of Micro-Nano Mechatronics</i> , 2008 , 4, 37-48 | | 9 |

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| 28 | 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> , 2008 , 147, 6-16 | 3.9 | 7 |
| 27 | Substrate Effect on Atomic Force Microscopy-Based Nanolithography of Graphene. <i>IEEE Nanotechnology Magazine</i> , 2016 , 15, 607-613 | 2.6 | 7 |
| 26 | Computational Modeling of Cell Adhesion Under the Effect of Substrate Stiffness. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 402-406 | 2.6 | 5 |
| 25 | Quantitative study of AFM-based nanopatterning of graphene nanoplate 2014 , | | 5 |
| 24 | Cholesterol Modulates the Formation of the A β Ion Channel in Lipid Bilayers. <i>Biochemistry</i> , 2020 , 59, 992-998 | 3.2 | 5 |
| 23 | Facile construction of a DNA tetrahedron in unconventional ladder-like arrangements at room temperature. <i>Nanoscale Advances</i> , 2019 , 1, 1240-1248 | 5.1 | 4 |
| 22 | 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> , 2019 , 6, 1901822 ^{13.6} | | 4 |
| 21 | Cell segmentation and pipette identification for automated patch clamp recording. <i>Robotics and Biomimetics</i> , 2014 , 1, | | 4 |
| 20 | The Development of an Infrared Camera Using Graphene: Achieving Efficient High-Resolution Infrared Images.. <i>IEEE Nanotechnology Magazine</i> , 2012 , 6, 4-7 | 1.7 | 4 |
| 19 | Detection of Bacterial Metabolic Volatile Indole Using a Graphene-Based Field-Effect Transistor Biosensor. <i>Nanomaterials</i> , 2021 , 11, | 5.4 | 4 |
| 18 | Teleoperated service robotic system for on-site surface rust removal and protection of high-rise exterior gas pipes. <i>Automation in Construction</i> , 2021 , 125, 103609 | 9.6 | 4 |
| 17 | An Active Biomechanical Model of Cell Adhesion Actuated by Intracellular Tensioning-Taxis. <i>Biophysical Journal</i> , 2020 , 118, 2656-2669 | 2.9 | 3 |
| 16 | Development of an omnidirectional mobile robot using a RGB-D sensor for indoor navigation 2014 , | | 3 |
| 15 | Interaction of Sp1 and APP promoter elucidates a mechanism for Pb caused neurodegeneration. <i>Archives of Biochemistry and Biophysics</i> , 2020 , 681, 108265 | 4.1 | 2 |
| 14 | Interband and intraband optical transitions in mercury chalcogenide colloidal quantum dots 2017 , | | 2 |
| 13 | Development of 3D hyperspectral camera using compressive sensing 2012 , | | 2 |
| 12 | Multi-objective optimizing for image recovering in compressive sensing 2012 , | | 2 |
| 11 | Compressive Video Recovery Using Block Match Multi-Frame Motion Estimation Based on Single Pixel Cameras. <i>Sensors</i> , 2016 , 16, 318 | 3.8 | 2 |

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| 10 | Design and Analysis of Electrical Resistance Feedback for Automated Patch Clamp on Adherent Cells. <i>IEEE Transactions on Automation Science and Engineering</i> , 2017 , 14, 844-854 | 4.9 | 1 |
| 9 | Biophysical Characteristics of Human Neuroblastoma Cell in Oligomeric β -Amyloid (1-40) Cytotoxicity. <i>IEEE Transactions on Nanobioscience</i> , 2018 , 17, 70-77 | 3.4 | 1 |
| 8 | Neural Stimulation: Multiplexed Optogenetic Stimulation of Neurons with Spectrum-Selective Upconversion Nanoparticles (Adv. Healthcare Mater. 17/2017). <i>Advanced Healthcare Materials</i> , 2017 , 6, | 10.1 | 1 |
| 7 | Development of the Electric Equivalent Model for the Cytoplasmic Microinjection of Small Adherent Cells. <i>Micromachines</i> , 2017 , 8, | 3.3 | 1 |
| 6 | Chemical functionalization of graphene with aromatic molecule 2015 , | | 1 |
| 5 | Tuning graphene/silicon Schottky barrier height by chemical doping 2015 , | | 1 |
| 4 | Design and implementation for image reconstruction of CompressiveSensing using FPGA 2013 , | | 1 |
| 3 | Reversible reconfiguration of high-order DNA nanostructures by employing G-quartet toeholds as adhesive units. <i>Nanoscale</i> , 2020 , 12, 2464-2471 | 7.7 | 1 |
| 2 | Remote Rotary Mixing and Spraying of Plural Component Protective Coating for Underground Pipe Internal Rehabilitation Lining. <i>IEEE Robotics and Automation Letters</i> , 2022 , 7, 3114-3121 | 4.2 | 0 |
| 1 | Identification of energy landscape of Sp1 zinc-finger in Pb(II) or Cd(II) using AFM. <i>Applied Physics Letters</i> , 2019 , 114, 013701 | 3.4 | |