

Research outputs

Phase-based Quantification of Sports Performance Metrics Using a Smart IoT Sensor

Chen, M., Szu, H. F., Lin, H. Y., Liu, Y., Chan, H., Wang, Y., Zhao, Y., & 3 others Zhang, G., Yao, J. D. & Li, W. J., 11 Apr 2023, (Online published) In: IEEE Internet of Things Journal.

AI-Enabled Micro Motion Sensors for Revealing the Random Daily Activities of Caged Mice

Liu, Y., Chen, M., Chan, C., Chan, H., Wang, J., Yu, X., Li, X., & 1 others Li, W. J., Apr 2023, In: Advanced Intelligent Systems. 5, 4, 2200220.

Development of the high angular resolution 360° LiDAR based on scanning MEMS mirror

Yang, D., Liu, Y., Chen, Q., Chen, M., Zhan, S., Cheung, N., Chan, H., & 2 others Wang, Z. & Li, W. J., 2023, In: Scientific Reports. 13, 1540. Scopus citations: 3

Mapping of Spatiotemporal Auricular Electrophysiological Signals Reveals Human Biometric Clusters

Huang, Q., Wu, C., Hou, S., Yao, K., Sun, H., Wang, Y., Chen, Y., & 11 others Law, J., Yang, M., Chan, H., Roy, V. A. L., Zhao, Y., Wang, D., Song, E., Yu, X., Lao, L., Sun, Y. & Li, W. J., 7 Dec 2022, In: Advanced Healthcare Materials. 11, 23, 2201404.

Wide-Bandwidth Nanocomposite-Sensor Integrated Smart Mask for Tracking Multiphase Respiratory Activities

Suo, J., Liu, Y., Wu, C., Chen, M., Huang, Q., Liu, Y., Yao, K., & 14 others Chen, Y., Pan, Q., Chang, X., Leung, A. Y. L., Chan, H., Zhang, G., Yang, Z., Daoud, W., Li, X., Roy, V. A. L., Shen, J., Yu, X., Wang, J. & Li, W. J., 3 Nov 2022, In: Advanced Science. 9, 31, 2203565. Scopus citations: 15

Wireless AI-Powered IoT Sensors for Laboratory Mice Behavior Recognition

Chen, M., Liu, Y., Tam, J. C., Chan, H., Li, X., Chan, C. & Li, W. J., 1 Feb 2022, In: IEEE Internet of Things Journal. 9, 3, p. 1899-1912 14 p. Scopus citations: 4

Sphygmopalpation using Tactile Robotic Fingers Reveals Fundamental Arterial Pulse Patterns

KONG, K. W., CHAN, H., HUANG, Q., LEE, F. C. S., LEUNG, A. Y. L., GUAN, B., SHEN, J., & 2 others WONG, V. C. T. & LI, W. J., 2022, In: IEEE Access. 10, p. 12252-12261 10 p. Scopus citations: 4

Wearable Three-dimensional Auricular Multi-point Acquisition, Health Status Monitoring, And Bio-stimulation Device

CHAN, H. Y., HUANG, Q. & LI, W. J., 28 Oct 2021, (Accepted/In press/Filed) Priority No. 17/512,672

Artificial intelligence meets traditional Chinese medicine: a bridge to opening the magic box of sphygmopalpation for pulse pattern recognition

LEUNG, Y. A., GUAN, B., CHEN, S., CHAN, H., KONG, K., LI, W. & SHEN, J., Mar 2021, In: Digital Chinese Medicine. 4, 1, p. 1-8 Scopus citations: 18

Rapid nanomolding of nanotopography on flexible substrates to control muscle cell growth with enhanced maturation

Wu, C., Chin, C. S. M., Huang, Q., Chan, H., Yu, X., Roy, V. A. L. & Li, W. J., 2021, In: Microsystems and Nanoengineering. 7, 89. Scopus citations: 7

Determination of Microsphere-Lens Magnification Using Micro-Robotic Scanning Superlens Nanoscopy

JIA, B., LI, P., WANG, F., CHAN, H. Y., ZHANG, G. & LI, W. J., 2020, In: IEEE Open Journal of Nanotechnology. 1, p. 65-76 3013431. Scopus citations: 3

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SUN, Q., YEUNG, C., CHAN, H., LI, W. J. & VELLAISAMY, A. L. R., 2020, *Soft Matter and Biomaterials on the Nanoscale: The WSPC Reference on Functional Nanomaterials — Part I*. Kim, J., Roper, K., Li, W. J. & Gang, O. (eds.). World Scientific, Vol. 4: Nanomedicine: Nanoscale Materials in Nano/Bio Medicine. p. 309-359 (World Scientific Series in Nanoscience and Nanotechnology; vol. 20).

Nanotopography-induced Cell Growth with Enhanced Maturation on Polymer Substrates

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Micro-Dispensing of Graphene Oxide based Capacitive Tactile Sensors for Human Pressure-Pulse Detection

KONG, K. W., LAW, J., CHEN, M., SUO, Z., JIA, B., Roy, V. A. L., CHAN, H., & 1 othersLI, W. J., Jul 2018, *Proceedings of MARSS 2018: International Conference on Manipulation, Automation and Robotics at Small Scales*. HALIYO, S., SILL, A., ARAI, F. & FATIKOW, S. (eds.). IEEE, 8481149. (International Conference on Manipulation, Automation and Robotics at Small Scales (MARSS)).

Robust control of dielectric elastomer diaphragm actuator for human pulse signal tracking

Ye, Z., Chen, Z., Asmatulu, R. & Chan, H., Aug 2017, In: *Smart Materials and Structures*. 26, 8, 085043.Scopus citations: 17

A low-cost reusable micro-Newton scale micro-thruster

Law, J., Sun, W., Wu, Z., Chan, H., Zhou, Y. & Li, W. J., 21 Jun 2017, *TRANSDUCERS 2017 - The 19th International Conference on Solid-State Sensors, Actuators and Microsystems*. IEEE, p. 2055-2058 7994477Scopus citations: 1

3D Bio-printing of Cell-embedded Gelatin Methacrylate Hydrogel Micro-actuators

WU, C., YU, H., Liu, N., CHAN, H. Y. & LI, W. J., Apr 2017.

Atomization of High-Viscosity Fluids for Aromatherapy Using Micro-heaters for Heterogeneous Bubble Nucleation

Law, J., Kong, K. W., Chan, H., Sun, W., Li, W. J., Chau, E. B. F. & Chan, G. K. M., 2017, In: *Scientific Reports*. 7, 40289. Scopus citations: 6

Micro bubble generation using monolayer graphene heating elements

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Ye, Z., Chen, Z., Kong, K. W. & Chan, H., Aug 2016, *2016 IEEE International Conference on Automation Science and Engineering (CASE)*. IEEE, p. 188-193 7743379Scopus citations: 8

A pulse-sensing robotic hand for tactile arterial palpation

Kong, K. W., Lau, W., Wong, K. S., Chan, H., Lee, F. C. S., Shen, J., Wong, V. T. C. W., & 1 othersLi, W. J., Jun 2016, *2016 IEEE International Conference on Cyber Technology in Automation, Control, and Intelligent Systems (CYBER)*. IEEE, p. 141-145 7574811. (IEEE Annual International Conference on Cyber Technology in Automation Control and Intelligent Systems).Scopus citations: 11

Improving atomic force microscopy imaging by a direct inverse asymmetric PI hysteresis model

Wang, D., Yu, P., Wang, F., Chan, H., Zhou, L., Dong, Z., Liu, L., & 1 othersLi, W. J., Feb 2015, In: *Sensors (Switzerland)*. 15, 2, p. 3409-3425Scopus citations: 20

Towards High Resolution Pico-Projector Applications: Design Improvements on MEMS Scanning Mirror

Ma, W., Chan, H., Wong, C. C., Yiu, C., Chan, Y. C. & Lee, F. C. S., Feb 2011, *Proceedings of the 2011 6th IEEE International Conference on Nano/Micro Engineered and Molecular Systems*. IEEE, p. 831-834 6017482. (IEEE International Conference on Nano/Micro Engineered and Molecular Systems (NEMS)).Scopus citations: 2

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基于光学聚焦方法的热驱动微执行器位移测量

廖磊, 董再励, 陈浩然, 李文荣 & 王越超, Dec 2005, In: *红外与激光工程/Infrared and Laser Engineering*. 34, 6, p. 691-695

Identify the model of micro robotic gripper using the sequence of microscopic images

Miao, L., Dong, Z., Chan, H., Li, W. J. & Wang, Y., Mar 2005, In: *WSEAS Transactions on Systems*. 4, 3, p. 191-196

A biomimetic flying silicon microchip: feasibility study

Chan, H., Lam, J. H. M. & Li, W. J., Aug 2004, *Proceedings of the 2004 IEEE International Conference on Robotics and Biomimetics*. IEEE, p. 447-451 Scopus citations: 13

Modeling the Micro Robotic Gripper Using Microscopic Images Sequence for Manipulation of Biological Cells

Miao, L., Dong, Z. & Chan, H., Aug 2004, *Proceedings - 2004 International Conference on Intelligent Mechatronics and Automation*. IEEE, p. 239-243 (Proceedings - International Conference on Intelligent Mechatronics and Automation).

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Liu, Z., Chan, H., Li, W. J., Dong, Z. & Wang, Y., Jun 2004, *Proceedings of the 2004 International Conference on Information Acquisition*. IEEE, p. 88-91 Scopus citations: 1

Measurement the Displacement of the Micro Robotic Gripper Using Microscopic Images

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Polymer MEMS actuators for underwater micromanipulation

Zhou, J. W. L., Chan, H., To, T. K. H., Lai, K. W. C. & Li, W. J., Jun 2004, In: *IEEE/ASME Transactions on Mechatronics*. 9, 2, p. 334-342Scopus citations: 115

Design and fabrication of a micro thermal actuator for cellular grasping

Chan (陈浩然), H. & Li (李文荣), W. J., Apr 2004, In: *Acta Mechanica Sinica*. 20, 2, p. 132-139Scopus citations: 8

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To, T. K. H., Zhou, J. W. L., Chan, H., Li, W. J. & Liu, Y., Oct 2003, *Proceedings of the 2003 IEEE International Conference on Robotics, Intelligent Systems and Signal Processing*. IEEE, p. 704-709 1285670Scopus citations: 2

A thermally actuated polymer micro robotic gripper for manipulation of biological cells

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A polymer-based micro thermal actuator for micromanipulations in aqueous environment

Chan, H. & Li, W. J., Dec 2002, In: International Journal of Nonlinear Sciences and Numerical Simulation. 3, 3-4, p. 775-778 Scopus citations: 3

Grants

Projects

ITF: A MEMS-based Light Detection and Ranging (LIDAR) System with Super-resolution Microlens for Enhanced Structured-light 3D Imaging and Mapping

LI, W. J., CHAN, H. Y., CHEUNG, N. & Wang, Z.

15/07/19 → 14/07/21

ITF: An Implantable Micro-Sensing System for Tracking Animal Motion Behaviors

LI, W. J., CHAN, H. Y., CHAN, H. M. & CHAN, C. S.

1/11/17 → 30/09/19

ITF: A Pen-sized Biocompatible MEMS Atomizer for Aromatherapy and Wellbeing Applications

LI, W. J., CHAN, H. Y. & CHAU, B. F.

1/11/14 → 31/10/16

HMRP: Artificial Intelligence Recognitions for Traditional Chinese Medicine Pulse Patterns and its Correlation Study with Body Constitution Types in Healthy Human Subjects

LI, W. J., CHAN, H. Y., SHEN, J. & Siu, C. W.

1/07/20 → ...

ITF: Audio-Fingerprint Activated Scent Releasing Platform

LI, W. J., CHAN, H. Y. & CHAN, K. M.

15/01/18 → 14/01/19

ITF: Eco-Cosmetic Intelligent Packaging System Based on Industrial IoT

LI, W. J., CHAN, H. Y., JEN, A., MAH, J. S. & ZHANG, G.

1/05/21 → 30/04/23