



**Issue 61 (November 2024)**

**Faculty Achievement**



Department of Materials Science and Engineering

Prof Johnny HO and his team published a paper titled Birdlike Neuromorphic Visual Sensors in *Nature Communications*. The paper discusses wearable bionic devices fueled by AI. Overcoming energy loss challenges in traditional silicon chips, this innovation offers non-volatile storage, low-light vision, and ultra-low power modes. With 94% in-memory computing and colour recognition accuracy, the system excels in fusion visual imaging, providing a promising co-design of material and device for a broadband and highly biomimetic optoelectronic neuromorphic system.

**Faculty Achievement**



Department of Materials Science and Engineering

A team led by Prof WANG Feng published a paper titled Multicolour stretchable perovskite electroluminescent devices for user-interactive displays, which was highlighted on the cover of *Nature Photonics*. The paper introduced a material design strategy that has led to the development of skin-conformable PeACEL devices, which offer narrow emission spectra, adjustable wavelengths, good stretchability, and high luminance. These devices can emit pure red and green light, broadening the colour range by 250%. This new strategy opens new possibilities for integrating wearable electronics into various daily applications.

**Faculty Achievement**



Department of Materials Science and Engineering

Prof ZENG Xiaocheng and his team recently published a paper titled Chaperone solvent-assisted assembly of polymers at the interface of two immiscible liquids in *Nature Communications*. It discusses a new method for bringing different types of molecules together at the boundary between two liquids that don't normally mix. They also showed how this method can be used for different practical applications.

**Student Achievement**



Department of Biomedical Engineering

Miss CHEN Zilin, a PhD student supervised by Prof Kannie CHAN, won the Best Oral Presentation at the 10th International Workshop on Chemical Exchange Saturation Transfer Imaging 2024 with the paper titled The effect of aquaporin-4 inhibition on cerebrospinal fluid-tissue water exchange in mouse brain detected by magnetization transfer indirect spin labelling MRI.

**Alumni Achievement**



Department of Electrical Engineering

Congratulations to the following two graduates for winning the HKEIA Innovation & Technology Project Competition Award 2024.

Awardee	Project Title
<b>Bronze Prize</b>	
Mr YUEN Chun Pong	Use of Hardware-in-the-Loop to Design a Maximum Power Point Tracking PV System
Supervisor: Prof Henry CHUNG	
<b>Merit Prize</b>	
Mr DUAN Weilun	An iPhone Obstacle Detector App for the Visually Impaired
Supervisor: Prof Kelvin YUEN	

HKEIA stands for the Hong Kong Electronic Industries Association.

**Faculty Achievement**



Department of Architecture and Civil Engineering

Prof LEUNG Mei-yung has been honoured with the Merit Paper in Research Award at the 2024 Pacific Association of Quantity Surveyors (PAQS) for her paper titled Initial Findings from a Survey on How Digital Tools Perform in Quantity Surveying. Leading a diverse research team encompassing nine countries/regions, Prof Leung undertook an international investigation into the use of digital tools within Quantity Surveying practices across PAQS member territories.

**Faculty Achievement**



Department of Biomedical Engineering

Prof WANG Lidai and his team member Dr ZHANG Yachao received the Silver Award in the 2nd HK Tech 300 National Start-up Competition for their innovative work. Their start-up, Zhuhai MOORE TECH, has created advanced biometric digital chips powered by artificial intelligence and new energy technologies. Zhuhai MOORE TECH is the only company in Mainland China which has successfully implemented this cutting-edge technology on an industrial scale, addressing critical technical challenges and filling a significant domestic gap by importing foreign chips.

**Faculty Achievement**



Department of Materials Science and Engineering

Prof ZENG Zhiyuan, Prof ZHANG Wenjun, Prof FAN Jun and Prof ZENG Xiaocheng have jointly published a paper titled Metallic 1T/1T' phase TMD nanosheets with enhanced chemisorption sites for ultrahigh-efficiency lead removal in *Nature Communications*. The paper discusses new metallic nanosheets made from special materials that can quickly and effectively remove harmful lead ions from water, surpassing standard purification levels. These nanosheets have tiny structures that trap lead ions efficiently, enhancing water safety. Devices using these nanosheets can purify large amounts of water more effectively compared to conventional materials.

**Alumni Achievement**



Department of Systems Engineering

At the 2024 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC), PhD graduate Dr MO Huadong was awarded the IEEE SMC Early Career Award for his significant contributions to the theory and industrial applications of resilient systems engineering. Dr Mo, currently a Senior Lecturer at the University of New South Wales, is the only award recipient in 2024.

**Alumni Achievement**



Department of Electrical Engineering

Mr YUEN Chun Pong, a 2024 graduate majoring in Electronic and Electrical Engineering has been awarded the Outstanding Power and Energy Engineering Graduate Award by the Power and Energy Section of the Institution of Engineering and Technology Hong Kong. Under the supervision of Prof Henry CHUNG, Mr Yuen's winning project was titled Use of Hardware-in-the-Loop to Design a Maximum Power Point Tracking PV System.