

ENGINEERING THE FUTURE:
IGNITING OPEN INNOVATION

Issue 76
(Feb 2026)

RANKING

Three engineering-related subjects rank top 100 positions in THE World University Rankings by Subject

City University of Hong Kong (CityUHK) excelled in the Times Higher Education (THE) World University Rankings by Subject 2026, with seven subjects placed among the global top 100.

Notably, Engineering, Computer Science, and Physical Sciences—three key engineering-related disciplines—all secured top-100 positions worldwide. These remarkable rankings underscore the College's research excellence, academic impact, and growing global leadership in cutting-edge technological innovation.



NEW FACULTY



Prof LI Jingshan, Head and Chair Professor, SYE

Prof LI Jingshan joined the Department of Systems Engineering (SYE) as Head and Chair Professor of Industrial Engineering in the Department of Systems Engineering, in December 2025. Prof LI holds a PhD from the University of Michigan and is a Fellow of the Institute of Industrial and Systems Engineers, and a Fellow and Distinguished Lecturer in Robotics and Automation of the Institute of Electrical and Electronics Engineers. Prior to joining CityUHK, he was Head and Gavriel Salvendy Chair Professor in the Department of Industrial Engineering at Tsinghua University. His research spans modelling, analysis, control, and optimisation of smart manufacturing and healthcare systems.

RESEARCH

CENG's faculty members secure RGC's Research Impact Fund projects

City University of Hong Kong tops among the eight UGC-funded universities, securing four out of 13 projects under the Research Grants Council (RGC) Research Impact Fund 2025/26, with a total funding of HKD22.6M.

Notably, the College of Engineering (CENG) leads two projects:

- Prof HUANG Gongsheng of the Department of Architecture and Civil Engineering heads the project "Development of Decoupled Radiant Cooling Technique for Advancing Building Energy Efficiency under Hot and Humid Climates".

- Prof LI Hanxiong of the Department of Systems Engineering and the late Prof HU Jinlian, spearhead the project "Integrative Study on Needleless (Wire) Electrospinning for Massive Production".

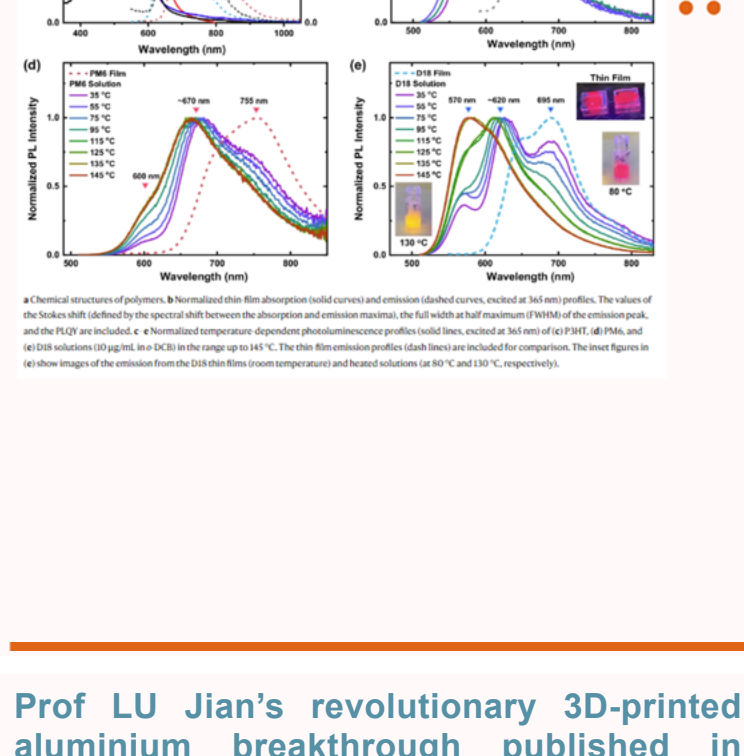


Prof Alex JEN's organic solar cells innovation published in Nature Communications

Prof Alex JEN from the Department of Materials Science and Engineering and his collaborators published "Alleviating non-radiative losses in organic solar cells through side-chain regulation of low-bandgap non-fullerene acceptors" in *Nature Communications*. Organic-wasting heat losses have long held back flexible organic solar panels from reaching their full potential. While adding selenium helps panels capture more near-infrared light, it creates unwanted energy traps that worsen those losses. To counter this, the team tweaked the chemical side chains on their materials, resulting in tighter molecular packing and reduced energy waste. This simple chemical fix marks a significant step toward affordable, scalable solar energy.

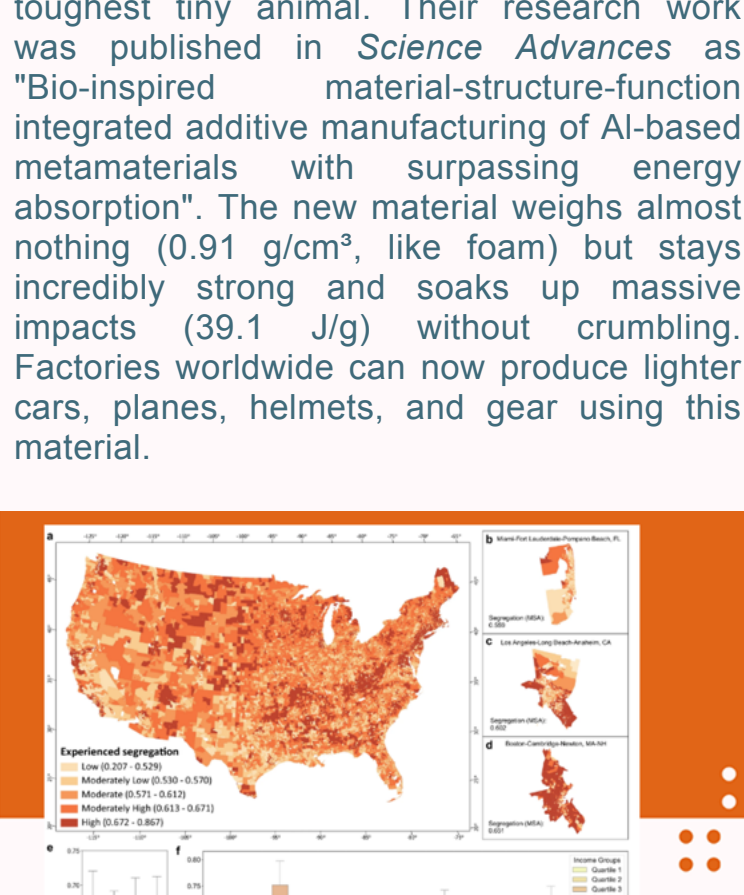
Solar energy advances by Prof Alex JEN's team featured in Nature Communications

Prof Alex JEN from the Department of Materials Science and Engineering and collaborators published a paper titled "Photoluminescent delocalized excitons in donor polymers facilitate efficient charge generation for high-performance organic photovoltaics" in *Nature Communications*. Their work focuses on a plastic material called D18 that spreads light energy more effectively across its structure, converting sunlight to electricity with less waste. Laboratory tests showed D18 forms tight molecular arrangements and emits bright light (26% efficiency), generating over 30% usable energy in prototype cells. When mixed with partner materials, it avoids energy-losing steps for smoother power production. This material refinement makes lightweight solar technology much more viable for real-world use.



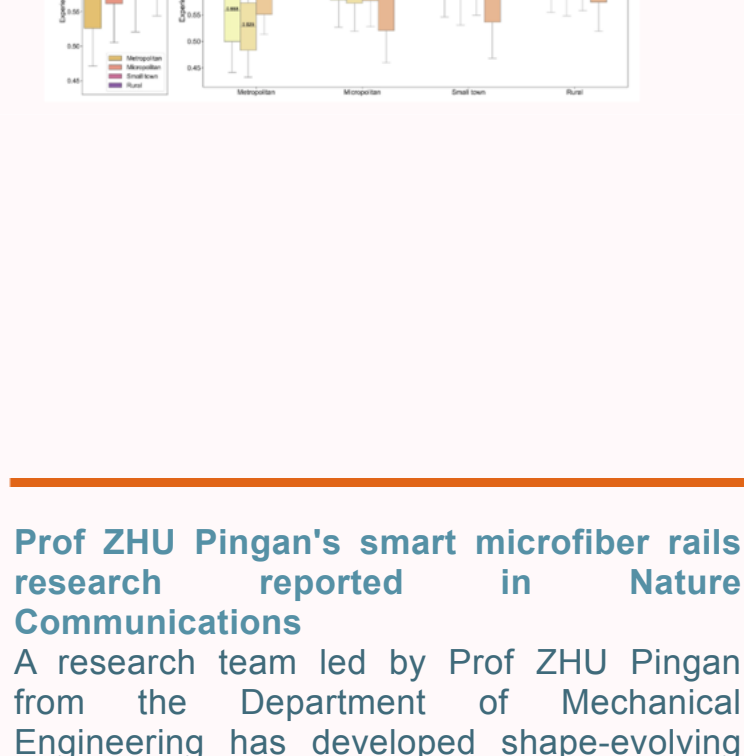
Prof LU Jian's revolutionary 3D-printed aluminium breakthrough published in Science Advances

Prof LU Jian from the Department of Mechanical Engineering, has developed a revolutionary 3D-printed aluminium material inspired by the hero shrimp—the world's toughest tiny animal. Their research work was published in *Science Advances* as "Bio-inspired material-structure-function integrated additive manufacturing of Al-based metamaterials" with surpassing energy absorption". The new material weighs almost nothing (0.91 g/cm³, like foam) but stays incredibly strong and soaks up massive impacts (39.1 J/g) without crumbling. Factories worldwide can now produce lighter cars, planes, helmets, and gear using this material.



Prof LU Yi's team reveals travel's power against income segregation in Nature Communications

Prof LU Yi and his PhD student Mr ZHOU Yuxuan from the Department of Architecture and Civil Engineering published a paper in *Nature Communications* titled "Varying relationships between experienced income segregation and travel behaviour across neighbourhood social and urban contexts". Studying 1.2 billion travel records across the United States, they discovered that people in poorer neighbourhoods feel much less cut off from others when they travel farther to mixed areas. Trendy "stay local" city designs—keeping shopping, work, and school nearby—might actually trap the poorest residents and worsen separation. This work challenges popular urban ideas and shows that daily travel helps build fairer communities for everyone.



Prof ZHU Pingan's smart microfiber rails research reported in Nature Communications

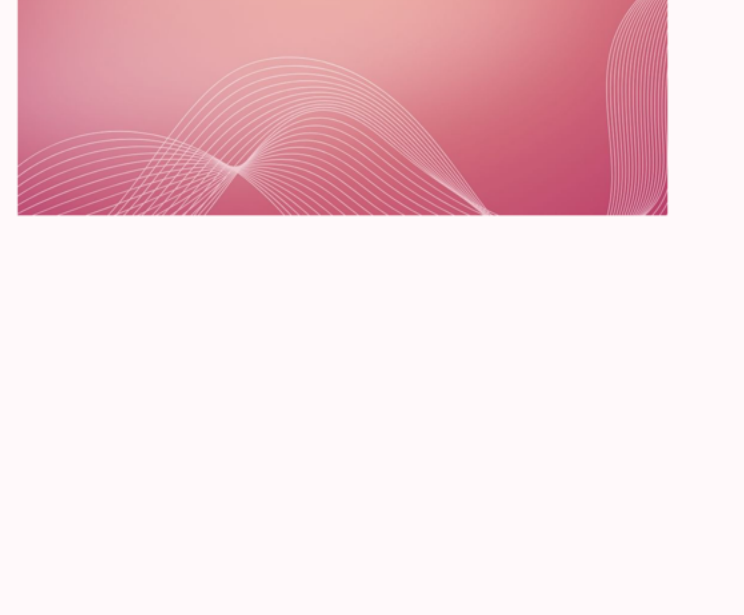
A research team led by Prof ZHU Pingan from the Department of Mechanical Engineering has developed shape-evolving microfiber rails that enable tiny liquid droplets to move on their own across flat surfaces. Their study, titled "Shape-evolving microfiber rails for spontaneous and directional droplet transport on non-gradient surfaces", appears in *Nature Communications*. Unlike traditional designs that rely on fixed surface patterns, these smart rails change shape when droplets touch them, creating a domino-like reaction that guides their movement. This breakthrough allows precise control of droplet motion and opens new possibilities in chemical analysis, micro-delivery, electronics cooling, and medical diagnostics.



FACULTY ACHIEVEMENT

CityUHK President and two CENG scholars elected HKAE Fellows

City University of Hong Kong (CityUHK) President and University Distinguished Prof Freddy Boey, Associate Vice-President (Innovation) and Chair Professor of Electrical Engineering Prof Michael TSE, and Chair Professor of Department of Architecture and Civil Engineering Prof Richard YUEN have been elected Fellows of the Hong Kong Academy of Engineering (HKAE) for their exceptional engineering contributions.



Since assuming the role of CityUHK President in May 2023, President Boey has been dedicated to leading the University towards internationalisation, through the strategic development framework "Innovating into the Future". Under his leadership, CityUHK were named the "Most International University in the World" by Times Higher Education for two consecutive years in 2024 and 2025.

Prof TSE leads in power electronics and smart grids, clinching Hong Kong's first IEEE CASS Charles A. Desoer Award (2022). Prof YUEN's computational fluid dynamics and machine learning innovations revolutionise fire safety engineering.

CENG's faculty members win six awards at 5th AEII Hong Kong
City University of Hong Kong (CityUHK) triumphed at the 5th Asia Exhibition of Innovations and Inventions Hong Kong (AEII), clinching 17 awards, with the College of Engineering (CENG) scholars securing three Gold Medals and three Silver Medals. Highlights include the following Gold Medal-winning projects:

Project Title	Led by	Department
Self-Powered Magnesium-Nitrate Cell for Simultaneous Nitrogen/Phosphorus Removal and Recovery from Wastewater	Prof Johnny HO	Department of Materials Science and Engineering
CityAir+ UltraPurification: UVC Optical Cavity-based Enhancer, Self-Cleaning Photocatalysis, and Silver-Ion Antimicrobial Filtration for Synergistic Air Purification	Prof Juan Antonio ZAPIEN	Department of Materials Science and Engineering
Towards a Smarter, Connected World: Automatic, Intelligent and Reliable Submarine Optical Cable Path and System Design	Prof Moshe ZUKERMAN	Department of Electrical Engineering

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STUDENT ACHIEVEMENT

EE PhD student wins two awards for innovative start-up GABES Limited

PhD student Mr WONG Ming Chi from the Department of Electrical Engineering (EE), supervised by Prof Ray CHEUNG, has won two major 2025 awards for his start-up, GABES Limited. Supported by CityUHK's HK Tech 300 Angel Fund, his "GABES AlphaNexus System", can dynamically adjust building evacuation routes in real time. The innovation earned him the Silver Award at the Hong Kong ICT Awards 2025 and the Start-up Division Award at the NEXX AI Awards 2025.



EE postdoctoral fellow receives IET YPEC 2025 Champion Award

Dr ZHANG Ben, a postdoctoral fellow from the Department of Electrical Engineering (EE) supervised by Prof Derrick JIANG, receives the Champion award in the Postgraduate Section of the Institution of Engineering and Technology's (IET) Young Professionals Exhibition & Competition (YPEC) 2025. His project, "Efficient and Lightweight Wireless Energy Harvesting System for Unmanned Aerial Vehicle", demonstrates significant advancements in wireless power transfer for unmanned aerial vehicle applications.



SYE PhD student secures NSFC funding

Miss ZHU Rong, PhD student from the Department of Systems Engineering (SYE), has secured RMB300,000 through 2025 National Natural Science Foundation of China (NSFC) Youth Student Basic Research Project for PhD candidates. Her project "Research on Multi-State Collaborative Estimation Methods for Humanoid Robot Power Batteries under High Dynamic Conditions" focuses on tackling essential challenges in battery management systems for next-generation robotics.

