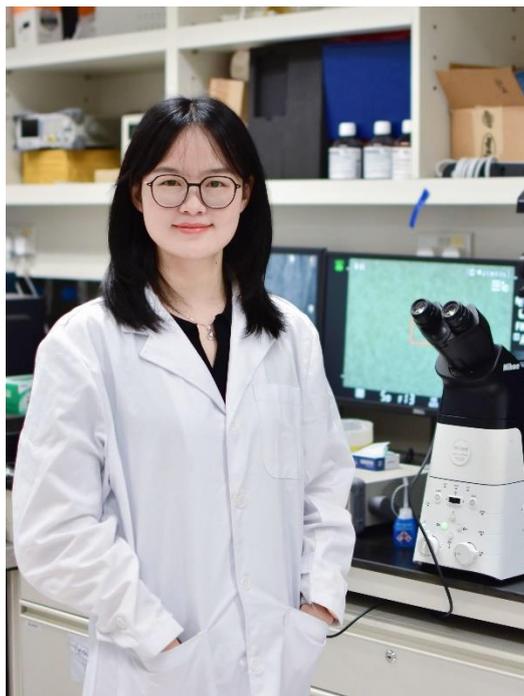


Press release

For immediate release

## Outstanding HKU PhD Student Dengping LYU selected as Schmidt Science Fellow 2024 Pioneering Intelligent Materials Engineering

April 25, 2024



A PhD student, Dengping LYU, in the Department of Chemistry at The University of Hong Kong (HKU), has been selected as a Schmidt Science Fellow, one of the most prestigious postdoctoral fellowships highly regarded in the global scientific community. Among the elite group of 32 exceptional early-career scientists worldwide, she is recognised for her outstanding academic achievements, leadership, collaborative spirit and scientific curiosity. Dengping is the first scholar nominated by a university in Hong Kong to receive the fellowship.

Schmidt Science Fellows are expected to be future leaders driving interdisciplinary research to accelerate discovery and achieve global impact. The fellows will receive support for a duration of one or two years to work as postdoctoral researchers in a top institution, focusing on a field of study that pivots from their PhD specialisation. Along with an annual stipend of USD \$110,000, they benefit from individualised mentoring and participation in the program's Global Meeting Series, which offers training, exposure to new concepts, visits to leading interdisciplinary scientific centres, and opportunities to engage with thought leaders from science, business, policy, and society.

Dengping's PhD research has focused on colloidal synthesis and self-assembly. She has leveraged the power of physical, synthetic, and supramolecular chemistry to build hierarchical superstructures and functional materials from colloidal-sized particles. A noteworthy and significant contribution of her work is the

integration of metal-organic frameworks (MOFs) and colloids, resulting in the development of strategies to produce anisotropic particles with low-symmetry shapes.

These carefully programmed shapes carry chemical information, facilitating specific and directional interactions between particles and spontaneously yielding intricate, precisely defined superstructures via self-assembly. These structures have the capability to encapsulate small molecules or colloidal cargos, exhibiting anisotropic fluorescence and reconfigurable properties. The findings open up potential applications in diverse fields such as sensing, catalysis, and optics, and may inspire the design of novel mechanical nanodevices.

Dengping's exceptional research has garnered recognition through her publication of multiple research papers as the first author in high-impact journals, such as *Nature Communications*, *Science Advances*, and *Angewandte Chemie*.

'I feel deeply honoured to have been chosen for this fellowship,' Dengping expressed. 'I'm extremely grateful for the opportunity to immerse myself into a new field and expand my scientific horizons. I'm also excited about applying my knowledge and expertise to push the boundaries of materials science.'

With the Schmidt Science Fellowship, Dengping will pivot from physical chemistry to materials engineering. Her goal is to engineer intelligent materials by translating features of living systems, especially their ability to consume energy and communicate, to materials design. These materials hold the potential to revolutionise diverse fields such as biomedicine, soft robotics, and electronics.

About the Schmidt Science Fellows:

Schmidt Science Fellows is an initiative of Schmidt Sciences, delivered in partnership with the Rhodes Trust, which aims to help researchers solve bigger problems faster by identifying, developing, and amplifying the next generation of science leaders, building a community of scientists and supporters of interdisciplinary science, and leveraging this network to drive sector-wide change. The programme also seeks out the world's best emerging scientists who have completed a PhD in natural sciences, computing, engineering, or mathematics and places them in fellowships in a field different from their existing expertise. The programme funds training for the scientists and the research they undertake, and creates a community of interdisciplinary leaders.

For more information, please visit the Schmidt Science Fellows website: <https://schmidtsciencefellows.org>

For media enquiries, please contact Ms Casey To, External Relations Officer (tel: 3917 4948; email: [caseyto@hku.hk](mailto:caseyto@hku.hk)/ Ms Cindy Chan, Assistant Director of Communications of HKU, Faculty of Science (tel: 39175286; email: [cindycst@hku.hk](mailto:cindycst@hku.hk)).

**Images download and captions:** <https://www.scifac.hku.hk/press>