

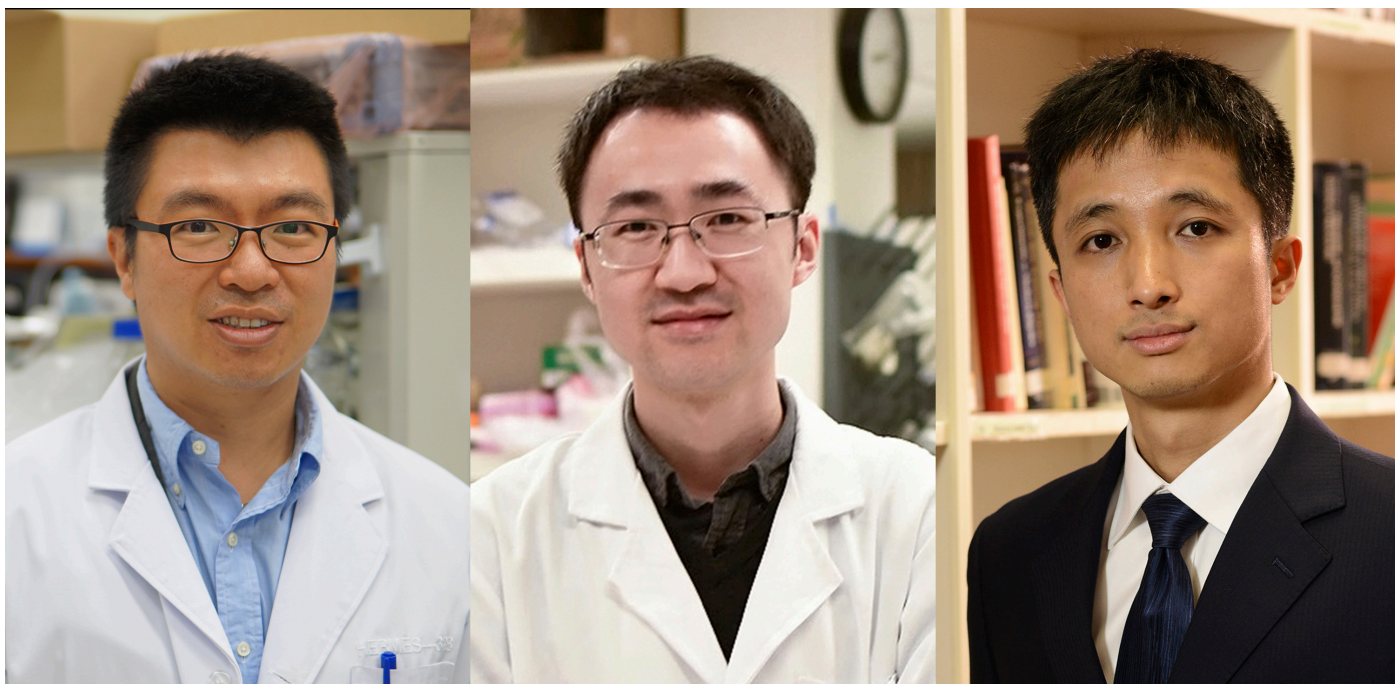


香港大學
THE UNIVERSITY OF HONG KONG

Press Release

Three distinguished HKU academics receive Croucher Innovation and Senior Research Fellowship Awards

December 16, 2019



*Three distinguished HKU academics receive Croucher Innovation and Senior Research Fellowship Awards.
(From left) Professor Anderson Shum, Dr Wang Yufeng and Professor Yao Wang.*

This year, three academics from the University of Hong Kong have been presented with Innovation and Senior Research Fellowship Awards by the Croucher Foundation. They are:

Croucher Innovation Award 2019

Dr. Yufeng Wang

Assistant Professor, Department of Chemistry, Faculty of Science, The University of Hong Kong

Croucher Senior Research Fellowships 2020

Professor Anderson Shum

Professor, Department of Mechanical Engineering, Faculty of Engineering, The University of Hong Kong

Professor Wang Yao

Chair Professor, Department of Physics, Faculty of Science, The University of Hong Kong

Croucher Innovation Award 2019

Dr. Yufeng Wang, Assistant Professor, Department of Chemistry, Faculty of Science, HKU

Dr. Wang's main area of research is colloidal assembly, the aim of which is to put together colloidal nanoparticles — the essential ingredient in food, paints, cosmetics and even electronics — to form 1D to 3D superstructures for emerging applications such as photonics, printing, nano-delivery and micro-machinery, etc. Currently, one of the team's key strategies is to chemically synthesize anisotropic particles with low-symmetry shapes, which introduces specific and directional interactions between particles and yields complex yet well-defined structures via assembly. The reduced symmetry also encodes necessary information that programs the particle's dynamics, making them significantly more useful toward active materials, that is, smart materials that move, adapt, reconfigure and evolve emulating those in the biological and living systems. (Please click [here](#) for Dr. Yufeng Wang's biography)

Croucher Senior Research Fellowships 2020

Professor Anderson Shum, Professor, Department of Mechanical Engineering, Faculty of Engineering, HKU

Professor Anderson Shum is internationally recognized for his works in microfluidics and soft matters, particularly on his pioneering contributions in combining all-aqueous formulations and droplet microfluidics. His research focuses on the engineering of aqueous droplet interfaces for designing new bio- and cyto-compatible materials. His team has pioneered the generation and control of all-aqueous emulsion drops using microfluidic techniques, and demonstrated their ability to encapsulate delicate active biomolecules and to mimic complex biological droplets. When combined with microfluidic droplet manipulation techniques, designer biomaterials with excellent compatibility can be assembled for precision delivery of tunable quantities of active ingredients. With the Croucher Senior Research Fellowship, he will engineer a new type of biomaterials, which are formed by assembling compatible droplets, each encapsulating and compartmentalizing a different active ingredient that can be cells or biomolecules. (Please click [here](#) for Professor Anderson Shum's biography)

Professor Wang Yao, Chair Professor, Department of Physics, Faculty of Science, HKU

Professor Yao's research interest lies in the physics of spin and valley in solids, with a current focus on two-dimensional materials and their heterostructures. He has played a decisive role in creating an important new research direction – valley optoelectronics in 2D materials, which aims to exploit valley, a quantum degree of freedom of electron, in future optoelectronic devices. With the Croucher Senior Research Fellowship he will explore new functional mechanisms for versatile electronics and optoelectronics based on van der Waals layered structure, combining its unique aspects including the rich physics associated with electron's valley pseudospin and the ubiquitous moiré pattern that naturally provides a nanoscale landscape for manipulations of electrons and optical excitations. (Please click [here](#) for Professor Wang Yao's biography)

Croucher Innovation Awards

First presented in 2012, the Croucher Innovation Awards aim to identify a small number of exceptionally talented scientists working at an internationally competitive level and to offer substantial support to these

“rising stars” at a formative stage in their careers. The Awards are designed to enable recipients to pursue their own scientific, intellectual and professional inclinations, to advance their expertise, to engage in bold new work, and to contribute to the development of education and research in Hong Kong. Each award carries a value of up to HK\$5 million over 5 years for research expenses of the award winner.

The Croucher Senior Research Fellowships

The Croucher Senior Research Fellowships scheme was first introduced in 1997. The Fellowships are awarded to local academics who have excelled in scientific research work. The awards are judged by a group of leading international scientists invited to provide confidential reviews of candidates nominated in a competitive exercise. The value of each award includes a HK\$2 million research grant to the award winner. Separate funds are awarded to the universities of the fellowship recipients, enabling the university to recruit replacement teacher to take over the award winner’s duties for a twelve-month period. These currently stand at a maximum of HK\$1,042,140 for the Senior Research Fellowships. The arrangement enables the awardees to devote more time and effort to research work.

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