

Press release

## HKU Chemist Professor Xuechen LI Honoured with Chinese Chemical Society's Contribution Award in Carbohydrate Chemistry



Professor Xuechen LI of the Department of Chemistry at The University of Hong Kong (HKU), has been honoured with the Contribution Award in Carbohydrate Chemistry by the Chinese Chemical Society (CCS). The prestigious award recognises his pioneering contribution in precision chemical synthesis, chemical biology, and the development of therapeutic glycoconjugates of glycoproteins and bacterial complex carbohydrates. This recognition is a testament to Professor Li's enduring dedication, exceptional commitment, and unparalleled passion for advancing the science of carbohydrate chemistry.

Professor Li expresses his deep appreciation to the CCS for this prestigious award. 'I am both humbled and honored to receive the Contribution Award,' says Professor Li. 'The field of carbohydrate chemistry is incredibly fascinating, with numerous challenges and opportunities. I am grateful for the chance to contribute to its advancement and will continue to work tirelessly to make significant breakthroughs in this area.'

Professor Li's research group has made significant contributions to the precision chemical synthesis of biomolecules, such as proteins, glycoproteins, and carbohydrates. Their innovative methodologies have allowed for exquisite control of biomolecule synthesis, advancing our understanding of fundamental biological processes regulated by carbohydrates and glycoconjugates. Additionally, this work has enabled the efficient generation of carbohydrate- and glycoconjugate-based biologic drugs as therapeutical agents for treating life-threatening human diseases, such as bacterial infections and cancer.

Professor Li pioneered the development of Serine/Threonine ligation, which has been widely used for generating homogeneous glycopeptides and glycoproteins. They have also broken the bottleneck of the synthesis and glycosylation of bacterial pseudaminic acid, which was previously unsolved for 20 years. Furthermore, they developed a synthetic pseudaminic acid-based vaccine against Acinetobacter baumannii infection in 2021, demonstrating their commitment to advancing the field of carbohydrate chemistry.

## About the Contribution Award in Carbohydrate Chemistry



## DEAN Professor Qiang ZHOU

The Contribution Award in Carbohydrate Chemistry is a prestigious honour that rewards outstanding achievements in the field and promotes its development. It aims to recognise scholars who have made systematic and innovative research contributions in carbohydrate chemistry and have made outstanding contributions to the development of the discipline. The award is presented every two years, with one to two recipients each time, and candidates are recommended and nominated by professional committee members.

## Biography of Professor Xuechen Li

Professor Xuechen Li is an esteemed academic currently serving as a Professor of Chemistry at HKU. He holds a Bachelor of Science degree in Chemistry from Nankai University, an MSc from the University of Alberta, and a PhD from Harvard University, which he attained in 2006. Following his doctorate, he conducted joint postdoctoral research at Columbia University and Memorial Sloan Kettering Cancer Center from 2007 to 2009. In 2009, Professor Li joined the HKU Department of Chemistry as an Assistant Professor, and was later promoted to Associate Professor in 2014. He was appointed Professor in 2018.

The research of Prof Li Xuechen lies in the interface of synthetic chemistry, medicinal chemistry and biology, spanning from innovative synthetic method development to biological studies and drug discovery, with the ultimate aim to develop novel therapeutics. At HKU, he has pioneered in the development of several innovative methods to synthesise and modify biomolecules, including peptides, proteins and glycans. These methods open up new avenues for studying the biology and medicinal chemistry of biomolecules and provide new possibilities to generate biologics with new functional activities.

His Serine/Threonine ligation was selected as the Cutting Edge of Chemistry by Thompson Reuters in 2013, and he was awarded the Senior Research Fellowship by Croucher Foundation in 2018. He received the Rao Makineni Award by the American Peptide Society in 2010 and the Cathay Award from Chinese Peptide Society in 2020.

More information about the research group of Professor Xuechen Li: <a href="https://chemistry.hku.hk/staff/xcli/XCLiGroup/index.html">https://chemistry.hku.hk/staff/xcli/XCLiGroup/index.html</a>

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