CityUHK College of Science Summer Exchange Programme 2026
Project list

Department	Project Title	Please provide a short description of the project and outline the research objectives	No. of Vacancy	Supervisor information
				Name
Chemistry	Photoredox and Metallaphotoredox Catalysis	Students will be exposed to organic synthesis and homogeneous catalysis based on photoredox and/or metallaphotoredox methods. Students will also learn continuous flow synthesis.	1	Prof. FU Wai Chung Stephen
	Ecological Risks of Organic UV Absorbers to Marine Cetaceans: Bioaccumulation and Trophic Transfer	Organic ultraviolet absorbers (OUVAs), commonly used in consumer and industrial products, are emerging contaminants of global concern. However, their occurrence, fate and ecological impacts in subtropical marine ecosystems like Hong Kong waters remain poorly understood, leading to potentially underestimated risks. This project will systematically examine the pollution levels, trophic transfer dynamics, and ecotoxicological risks of OUVAs in key marine species within the Hong Kong waters. The scientific findings will contribute to proposing regulatory measures for pollution control to conserve the cetacean habitats and fishery in local waters.	1	Prof. RUAN Yuefei Phoebe
	Application of Machine Learning in Computational Chemistry	This project applies machine learning (ML) to accelerate and enhance computational studies of chemical reactions and molecular structures. By integrating data-driven models with established quantum chemistry methods, we aim to obtain faster, more accurate insights into reaction mechanisms, energetics, and molecular geometries, thereby deepening our understanding of chemical behavior and properties.	2	Prof. LAU Kai Chung
	Development of the test kits for the detection of counterfeit drugs	Depending on the counterfeit drug, students will be exposed to organic synthesis and analytical chemistry or development of aptamers and investigation of their binding to the target molecules.	1	Prof. Maria BABAK
	Development of novel anticancer drugs for the treatment of "undruggable" cancers	This project involves either the synthesis of anticancer drug candidates or their testing in cancer cell culture and investigation of their mechanism of action.	2	Prof. Maria BABAK
	Development of the novel database for the AI prediction of anticancer drugs	This project is the most flexible and can be done both from the lab or from home and requires the preparation of the scientific database and subsequent AI prediction of the properties of anticancer drugs. Coding skills are preferred but not necessary.	1	Prof. Maria BABAK