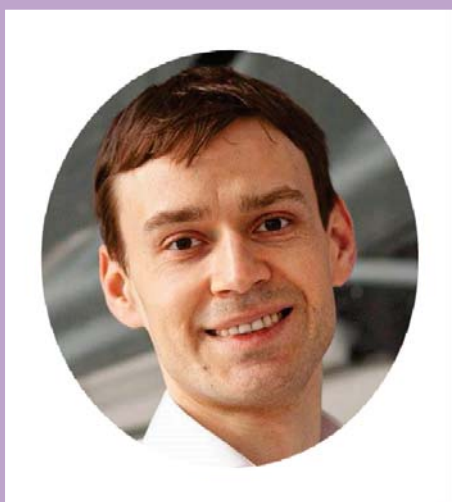




香港中文大學化學系
Department of Chemistry
THE CHINESE UNIVERSITY OF HONG KONG

The Chinese University of Hong Kong

Department of Chemistry Research Seminar Series



Photochemical Reactions Enabled by Graphitic Carbon Nitrides

Dr. Oleksandr Savatieiev
Planck Institute of Colloids
and Interfaces

12 April 2023 (Wednesday)
2:30 PM
SC L2

Contact Person:
Prof. Fuk Yee Kwong



The Chinese University of Hong Kong
Department of Chemistry
Research Seminar

Date:	12 April 2023 (Wednesday)
Time:	2:30pm
Venue:	Science Centre L2
Speaker:	Dr. Oleksandr Savatieiev Planck Institute of Colloids and Interfaces
Title:	Photochemical Reactions Enabled by Graphitic Carbon Nitrides

Abstract:

Being free of Pt-group elements, recyclable and available on larger scale, in the past several years, graphitic carbon nitrides were actively studied as photocatalysts in synthesis of organic compounds. These studies resulted in multiple chemical transformations ranging from C–H oxygenation of hydrocarbons to dual transition metal photocatalysis and chromoselective photocatalysis. Although in literature the mechanism of photoredox transformations is typically explained in terms of single electron transfer (SET), proton-coupled electron transfer (PCET) and energy transfer (EnT) are feasible pathways of substrates activation. The exact structure of carbon nitride as well as the innate reactivity of a substrate define the photocatalytic mechanism. The lecture provides a concise summary of action modes, namely SET, PCET and EnT, operative in carbon nitride organic photocatalysis, which allows designing new synthetic methodologies in preparative organic chemistry.