



Department of Chemistry

香港城市大學
City University of Hong Kong

Special Departmental Seminar

By

Prof. Kazuyuki ISHII

Professor

Institute of Industrial Science
The University of Tokyo, Japan

***Functional Molecular Chemistry
-Discovery, Development, and Societal Implementation-***



Date: 4 November 2026 (Wednesday)

Time: 4:00 pm – 5:30 pm

**Venue: LI-2301, 2/F
Li Dak Sum Yip Yio Chin Academic Building
City University of Hong Kong**



For abstract, please refer to the attached sheet.

Contact: Prof. WONG Ka Leung Gary (3442-6127, klwong@cityu.edu.hk)

***~ Limited seating ~
~ First come, first served ~***

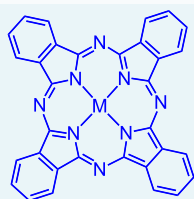
Abstract

Our research focuses on two main directions: (1) pioneering new academic fields through the integration of photochemistry, spin chemistry, and coordination chemistry and (2) developing functional materials based on both fundamental chemistry and its applications. In this lecture, I will introduce our scientific research related to the origin of homochirality of life, as well as our research and development of fluorescent probes for vitamin C bioimaging based on the spin manipulation in photoexcited states. I will also discuss our efforts to create and promote the new scientific field of “Soft Crystals,” together with the development and societal implementation of Prussian Blue-based cloths for the decontamination of radioactive cesium.

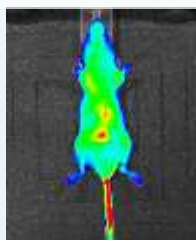
Functional Metal Complexes (Photochemistry · Spin Chemistry)

Target 1: Development of Molecular Functions

🔬 for Health and Medicine

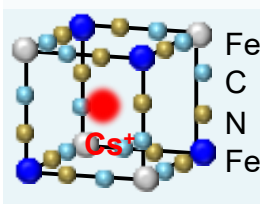


Phthalocyanine



Fluorescence Bioimaging
Novel Photosensitizers for PDT

🔬 for Environmental



Prussian Blue



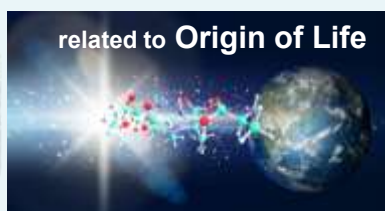
Application of Molecules
Radioactive Cs Decontamination Cloth

Target 2: Attractive Fundamental Molecular Chemistry

🔬 leading to Advanced Science



MChD

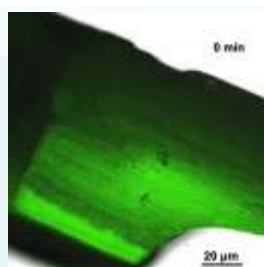


related to Origin of Life

Homochirality of Life



Super resolution
Microscope



Soft Crystals
different from Common Crystals and LCs

References [1] *J. Am. Chem. Soc.*, **1996**, *118*, 13079. [2] *J. Am. Chem. Soc.*, **2001**, *123*, 702. [3] T. Yokoi, T. Otani, K. Ishii, *Sci. Rep.*, **2018**, *8*, 1560. [4] *Angew. Chem. Int. Ed.*, **2011**, *50*, 9133. [5] *Angew. Chem. Int. Ed.*, **2019**, *58*, 18454. [6] M. Kato, H. Ito, M. Hasegawa, K. Ishii, *Chem. Eur. J.*, **2019**, *25*, 5105. [7] “Soft Crystals Flexible Response Systems with High Structural Order”, Eds. M. Kato, K. Ishii, Springer, **2023**. [8] X. Ma, et al., *Small*, (2026) doi.org/10.1002/smll.75743

Biography

Professor Kazuyuki Ishii is a Professor at the Institute of Industrial Science, The University of Tokyo. He received his B.S., M.S., and Doctor of Science degrees in Chemistry from Tohoku University and has been a faculty member at the University of Tokyo since 2006. His research interests include photochemistry, metal complexes, spin chemistry, chiroptical spectroscopy, fluorescence bioimaging, photodynamic therapy, and the environmental remediation of radioactive species. Professor Ishii serves as Secretary-Treasurer of the Japanese Photochemistry Association and Associate Editor of the Journal of Photochemistry and Photobiology C, and is actively involved in organizing major international conferences in photochemistry and coordination chemistry.