

# Catalysis and Sensing 2024 at NIMS (CASE24@NIMS)

**11<sup>th</sup> April 2024**

## **Morning**

**08:30** Registration opens.

**Session 1:** Supramolecular Chemistry (Chair: Jonathan P. Hill)

**08:50** Opening Remarks (Takashi Taniguchi, MANA Director)

**09:00** Eric Anslyn, University of Texas at Austin, USA.  
Controlling Computers with Chemistry. (30 min)

**09:30** Atsuro Takai, NIMS, Tsukuba, Japan  
Spatiotemporal Dynamics of Supramolecular Polymers Incorporating Click Reactivity. (30)

**10:00** Xiaolong Sun, Xi'an Jiaotong University, China  
Indanonalkene Photoluminescent Platform and Applications. (10 min flash)

**10:10** Philip Gale, University of Technology Sydney, Australia.  
New Aspects of Anion Transport Chemistry. (10)

**10:20** Jan Labuta NIMS, Tsukuba, Japan  
Thermo-/Mechano-Chromic Coordination Dimer of Chiral Benzo[h]quinoline Iridium(III)  
Complex. (10)

**10:30 – 10:50 Coffee Break** (Group Photograph)

**Session 2:** Photoactive Molecules (Chair: Atsuro Takai)

**10:50** Xuhong Qian, East China Normal University, China.  
Near-infrared Silicon- Dyes for In Vivo Bioimaging. (30)

**11:20** Robert Elmes, Maynooth University, Ireland.  
Fluorescent Probes for Enzymes. (30)

**11:50** Daniel Payne, Open University, UK.  
Functional Materials using Photoactive Macrocycles. (10)

**12:00** Gary J. Richards, Shibaura Institute of Technology, Omiya, Japan.  
Extended Pyrazinacenes: Highly Fluorescent NIR Chromophores for Bioimaging  
Applications. (10)

**12:10** Donal O'Shea University College Dublin, Ireland.

Real-Time Near Infrared Fluorescence Imaging: Research Tools with the Potential for Clinical Use. (10)

**12:20** Tony James, University of Bath, UK.

Fluorescent Chemosensors: The Past, Present and Future. (10)

**12:30 – 13:30 Lunch**

**Afternoon**

**Session 3:** Biomolecules (Chair: Shinsuke Ishihara)

**13:30** Katsuhiko Ariga, NIMS, Tsukuba & University of Tokyo, Japan.

Liquid Interfacial Manipulation of Molecular Machine, Stem Cell, and Semiconductor Device. (30)

**14:00** Yufang Xu, East China University of Science and Technology, China.

Active Fluorescence Plant Activator N FBT: A New Tool for the Study of Defense Signaling Pathway in Plants. (30)

**14:30** Zichao Pei, Northwest A&F University, China.

Supramolecular Glycosyl-Nanoproteins Based on Host-Guest Chemistry for Targeted Delivery. (30)

**15:00** Andrew Wilson, University of Leeds, UK

Modulation of Protein-Protein Interactions Employing Intrinsically Disordered Motifs: A Supramolecular Chemical Biology Approach. (10)

**15:10** Steve Bull, University of Leicester, UK.

Different Sensing Strategies for the Fluorescent Detection of Biomolecules in Cellular Systems. (10)

**15:20 – 15:40 Coffee Break**

**Session 4:** Sensing, synthesis (Chair: Daniel T. Payne)

**15:40** Genki Yoshikawa, NIMS, Tsukuba, Japan

Pattern Recognition Using Chemical Sensor for Identification of Solid Materials by Responses to Multiple Probe Gases. (30)

**16:10** Yuxin Pei, Northwest A&F University, China.

Advanced Nanomaterials based on Supramolecular Chemistry for Targeted Cancer Therapy.  
(30)

**16:40** Benjamin Buckley, Loughborough University, UK.

Selective  $sp^2$  to  $sp^3$  Functionalisation: From Simple to Complex Molecules.  
(10)

**16:50** Shinsuke Ishihara, NIMS, Tsukuba, Japan

Catalytic sensing of ethylene and methanol using SWCNT resistor. (10)

**17:00** Yun Bao Jiang, Xiamen University.

Large Peptidomimetic Macrocycles: Synthesis, Assembly and Functions.  
(10)

**17:10** Lok Kumar Shrestha, NIMS, Tsukuba, Japan

Supramolecular Assembly of Fullerenes: From VOC sensing to Microscopic Recognition.  
(10)

**17:20** William Brittain, University of Durham, UK.

Applications of Perfluoroheteroaromatics in Chemical Synthesis. (10)

**17:30 Closing Remarks:** Jonathan P. Hill