

# Lecture Series "*Frontiers in Science*"

## Dr. Didier Bourissou

Université Toulouse III - Paul Sabatier, France

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Title :

1. Ligand Design to Emulate Gold Reactivity
2. Gold Carbene Chemistry under Ligand Control

Date & Time : July 28 & 29, 2025, 13:15~14:45

Venue : G310 Meeting Room



**Lecture Contents:** Over the past decades, ligands have been shown to broadly expand the chemical space of gold complexes in terms of reactivity. Elementary steps such as oxidative addition, migratory insertion and  $\beta$ -hydride elimination were shown to be in fact accessible when gold is equipped with appropriate ligands.

Contact : Kameo Hajime

Department of Chemistry  
E-mail: h.kameo[at]omu.ac.jp



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*“Frontiers in Science” “IOCF Zen-ichi Yoshida Lectureship”*

**Dr. Didier Bourissou**

**Université Toulouse III - Paul Sabatier, France**



Title: Phosphine-Boranes: Versatile Ambiphilic Ligands and Impactful Functionalization Moieties for Polycyclic Aromatic Hydrocarbons

Date & Time : July 28, 2025, 16:00~17:00

Venue : G101 Science Hall



**Abstract:** Our group has introduced phosphine-borane and related ambiphilic ligands. The combination of donor and acceptor sites result in versatile coordination properties. In particular, the Lewis acid moiety has been shown to readily behave as a  $\sigma$ -acceptor ligand through unusual TM $\rightarrow$ LA interaction. The presence of a Lewis acid in the coordination sphere of the metal drastically modifies its electronic environment and offers a unique opportunity to modulate its reactivity. Our recent contributions in this field will be presented).



School of Science /  
Graduate School of Science

Contact : Hajime Kameo

Department of Chemistry

E-mail: h.kameo[at]omu.ac.jp