

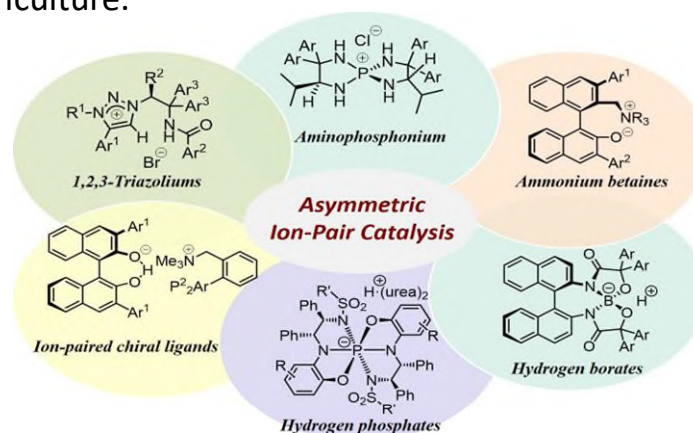
# CBC Virtual Seminar Series



**Professor Takashi Ooi**  
Nagoya University, Japan

## Behavior of Molecules: From Catalysis to Biological Functions

Molecules are the smallest units responsible for functions and are inherently multidisciplinary as fields that deal with structurally well-defined molecular entities are diverse. Synthetic chemistry is essential for the assembly of molecules by connecting or breaking bonds in a predictable manner. Such endeavor always involves the transformations of certain carbon feedstock to desired products. In developing ideal systems for executing this fundamental process, catalysts play a pivotal role. In this context, we have designed and synthesized a series of structurally novel organic molecules, particularly chiral organic ion pairs as shown below, and succeeded in eliciting their unique functions as molecular catalysts and ligands through rational structural modifications, thereby leading to achieve highly selective bond-forming reactions based on the precise control of ionic species. In this lecture, I will present the details of this research stream with focus on the recent advance. I will also discuss about our collaborative research with biologists at ITbM, such as molecular-level approach to combat Striga, a parasitic plant causing huge damage in Africa agriculture.



### Biography

Takashi Ooi was born in 1965 in Nagoya, Japan. He received his Ph.D. (1994) from Nagoya University under the direction of Professor Hisashi Yamamoto. After his postdoctoral study in the group of Professor Julius Rebek, Jr. at MIT as a JSPS fellow (1994-1995), he was appointed as an assistant professor at Hokkaido University in 1995 and promoted to a lecturer (1998). He moved to Kyoto University as an associate professor (2001), and became a full professor of Nagoya University in 2006. Since 2013, he has been a professor of Institute of Transformative Bio-Molecules (ITbM), Nagoya University.

Date: 12<sup>th</sup> June 2020, Friday  
Time: 5.00 pm to 6.30 pm  
Venue: Zoom Platform  
Host: Professor Chiba Shunsuke

For Zoom registration:

