

## The title

### Amine Enables the Switching between Iminolactonization and Olefination

Takashi Nishikata, Kohei Itonaga, Norihiro Yamaguchi, Yuki Inoue, Michinori Sumimoto

*Yamaguchi University, 2-16-1 tokiwadai, Ube, Yamaguchi, 755-8611, Japan*

The development of divergent reactions is one of the most challenging issues in metal-catalyzed reaction chemistry. Changing existing reaction patterns to other patterns by tuning the catalyst system suggests a new elemental step in the catalytic cycle. In this regard, we investigated a catalyst system that enables a perfect switch between iminolactonization and olefination. The reaction of alpha-bromoamides and styrenes underwent iminolactonization (carbo-oxygenation), in which simultaneous C–C and C–O bond formation occurred in the presence of a copper catalyst and triethylamine as a base, whereas olefination occurred in the presence of a copper catalyst and piperidine as a base.

