



ICReDD International Seminar Series

Prof. Dr. Hendrik F. T. Klare (Technische Universität Berlin)

Juggling Cations: Catalysis with Superelectrophiles



Place: ICReDD Hall A, ICReDD Building, Hokkaido University

Time: Thursday, 3 September 2026
16:30-18:00

Abstract: We were interested in harnessing the reactivities of these superelectrophiles for designing new catalytic reactions. Since the highly electrophilic cation is usually irreversibly consumed within the first catalytic turnover, there is a need for its regeneration to close the catalytic cycle. Our concept to shuffle between silylium ions (R_3Si^+), carbenium ions (R_3C^+), and Brønsted acidic arenium ions as proton (H^+) equivalents allows for deliberately selecting one of these electrophiles for the desired transformation and to regenerate that cation in a later step of the catalytic cycle from a neutral precursor.