演　題：The application of o-chloranil in C-C bond formation
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　　　　　16:00—18:00

会　場：北海道大学創成科学研究棟 5階 大会議室

要　旨：C-C bond formation is an important research topic in organic synthesis. o-Chloranil (tetrachloro-o-benzoquinone) is usually used as an oxidant in oxidation reactions. During our studies on C-H bond oxidation, o-chloranil was applied efficiently in C-C bond formation. Two types of C-C bond formation using o-chloranil will be discussed: (1) a novel Pummerer-type reaction is developed via o-chloranil-mediated C-H bond oxidation. The reaction presents a simple and efficient method to construct sulfide derivatives. Interestingly, the Knoevenagel-type reaction is selectively achieved by controlled reaction conditions (Eq.1); (2) efficient iron-catalyzed cross-aldol reactions of o-chloranil and methyl ketones are developed. Importantly, the formed aldol products are efficiently transformed into cyclohepta-2,4,6-trienone derivatives (tropones) under thermal condition via ring-expansion reactions (Eq.2).

![Chemical structures]

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