

Future Chemistry Inspired by Redox-Active Metal Complexes

Redox activity is one of important and interesting aspects of transition-metal complexes. Redox processes at metal centers or redox-active ligands trigger significant change in structural/chemical characteristics of redox-active metal complexes including chromic behavior, ligand-substitution, structural isomerization, and molecular dynamics. These fundamental characteristics are indeed applied to construction of artificial photosynthetic systems and electrocatalytic systems as well as self-assembled structures on electrode surfaces. The recent progress in the redox chemistry of metal complexes is largely based on not only the development of synthetic chemistry but also technical development of molecular assembly and in situ molecular observation under electrochemical conditions.

This symposium invites six active researchers in Japan and will highlight recent progress in redox chemistry of novel transition-metal complexes including mononuclear, multinuclear, and metal-assembled complexes. Future directions of the research field will be also discussed.