

Special Symposium in 58th JSCC Annual Meetings

Coordination Chemistry Utilizing Functional Macromolecules

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Needless to say, organic polymers are now in daily use as various materials and products, because of their versatility, availability, stability, and processability. In addition, the organic polymers play important roles in bio-systems, thus the study on the polymers and macromolecules has become a major interdisciplinary area of research for understanding life process and science.

From the viewpoint of coordination chemistry, metal complexes with polymeric ligands (polymer metal complexes) show unique properties because of the specific formations of the metal ions embedded in macromolecular matrices. In order to understand their characteristics, not only the neighborhood effects of the metal ions but also the chemical, physical, and structural properties of the large macromolecular ligands are of significant importance. Recently, development of precision synthesis of well-defined polymeric ligands has enabled us to explore new catalytic systems and to attain specific arrangements of metal complexes in the unique macromolecular matrices. Moreover, study on supramolecular polymer materials based on the coordination bonding and environment is rapidly expanding, which would contribute to generate a new type of functional and intelligent materials.

This symposium entitled “Coordination Chemistry Utilizing Functional Macromolecules” is comprised of five invited lectures. The recent advances in the boundary area between coordination chemistry and polymer chemistry will be presented.