



Showcasing a *Perspective* from Dr. Sayaka Uchida, School of Arts and Sciences, The University of Tokyo, Japan

Frontiers and progress in cation-uptake and exchange chemistry of polyoxometalate-based compounds

Cation-uptake and exchange in polyoxometalates (POMs) and POM-based compounds are categorized and reviewed in three groups: POMs as inorganic crown ethers and cryptands, POM-based ionic solids as cation-exchangers, and reduction-induced cation-uptake in POM-based ionic solids, which is based on a feature of POMs that they are redox-active and multi-electron transfer occurs reversibly in multiple-steps. This method can be utilized to synthesize mixed-valence metal clusters in metal ion-exchanged POM-based ionic solids.

As featured in:



See Sayaka Uchida, *Chem. Sci.*, 2019, 10, 7670.