

九州大□ 先導□ 外□人特別□究員 講演□

講 師 : 李忠均 先生 (韓□忠南□立大□□□授)

日 時 : 2014年2月13日(火)午後16:00 ~ 17:00

□ 場 : 筑紫キャンパス 先導□南棟112□室

講演題目 : 「Organic Network of Trimesic acid on Au(111): Host-Guest Chemistry and Insertion of Metal Ion」

要旨 :

Two dimensional organic network of trimesic acid (TMA) on Au (111) and its host-guest chemistry including formation of metal-organic coordination network (MOCN) is introduced. One of the carboxylates in TMA on Au (111) became de-protonated to carboxylate anion due to catalytic action of Au to form a crown-like primary hexamer, and the primary hexamers interconnect to each other to form a contoured network. There are two kinds of pores: one has six carboxylate anions (richer in negative charge) and the other has three anions (poorer in negative charge). Guest species (e.g. thiols and metal cations) were selectively hosted into the pores, depending on their charges. On the other hand, Zn²⁺ ions are inserted into the hydrogen bonds in the TMA network, not into the pores, to transform the organic network to a metal-organic coordination network. Based on the scanning tunneling microscopy observations, the chemistry of the TMA network on Au (111) will be explained.