

In-situ formation of a dinuclear Al(III) complex in Friedel-Crafts sulfoxidation of 2-naphthol with thionyl chloride.

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Streszczenie

A new dinuclear Al(III) complex has been prepared by *in situ* Friedel-Crafts sulfoxidation of 2-naphthol with thionyl chloride (SOCl₂) and AlCl₃ as catalyst. The product was characterized by elemental analysis, spectroscopic methods and single crystal X-ray analysis. X-ray diffraction indicated that the product is a centrosymmetric dinuclear Al(III) complex, [Al(bn)(μ-OCH₃)(CH₃OH)]₂ (**1**), where bn²⁻ is a O₃-donor 1,1'-sulfonylbis(naphtholate) ligand obtained by *in situ* reaction of materials. The coordination environment around the Al(III) ions is distorted octahedral (AlO₆) and the Al(III) ions are connected together by methoxy bridging ligands. Complex **1** crystallizes in triclinic system and Al(III)···Al(III) separation is 2.886(2) Å. The dimeric structure is stabilized by two intramolecular O-H···O hydrogen bonds, while the intermolecular interactions are provided by C-H···π and π-π contacts.

Słowa kluczowe

In situ reaction, Friedel-Crafts sulfoxidation, Al(III) complex, X-ray structure, Thionyl chloride

Adres publiczny

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