

CO₂ adsorption of Hydrogen Titanate Nanotube and Nanorod

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Nowadays, the reduction of CO₂ emission became the key issue to slow down the global warming. Recently, various adsorption techniques and materials for CO₂ capture have been developed. This time, We have studied a material including titanium as a CO₂ adsorbent. We are going to present the preparation of hydrogen titanate nanotube and nanorod and their CO₂ adsorption property. CO₂ adsorption was measured using TGA microbalance under 60 ml/min of CO₂ and 40 ml/min of N₂ gas. Hydrogen titanate nanotube and nanorod were modified using several amine-containing functional materials. CO₂ adsorption for various samples with functionalized materials were compared and discussed for the differences of adsorption capacity and kinetics.