

Advanced aerogel technology from environmental plastic waste for oil/water separation

김아영, 아틀, 김현^{1,†}

Myongji University; ¹myongji university

(hernkim@mju.ac.kr[†])

The environmental waste reduction/utilization to form useful products (Aerogel) technology is currently a hot topic. Aerogel is used for oil/water separation, heavy metal removal and many other applications. There are distinct types of modified method used for aerogel synthesis. However, the main issues for aerogel technology are brittleness, gel formation and drying are the critical steps, causes health problems and hard to control porosity. These key issues are not solved. In current century environmental waste were used to address the issues such as aerogel technology. The same idea was adopted to produce porous aerogel from environmental (plastic) waste using polyvinyl alcohol as a crosslinker. The synthesized aerogel technology worked efficiently towards the oil/water separation at normal conditions with its high reusability without changing sorption capacity.