Synthesis of bimodal mesoporous silica (BMS)

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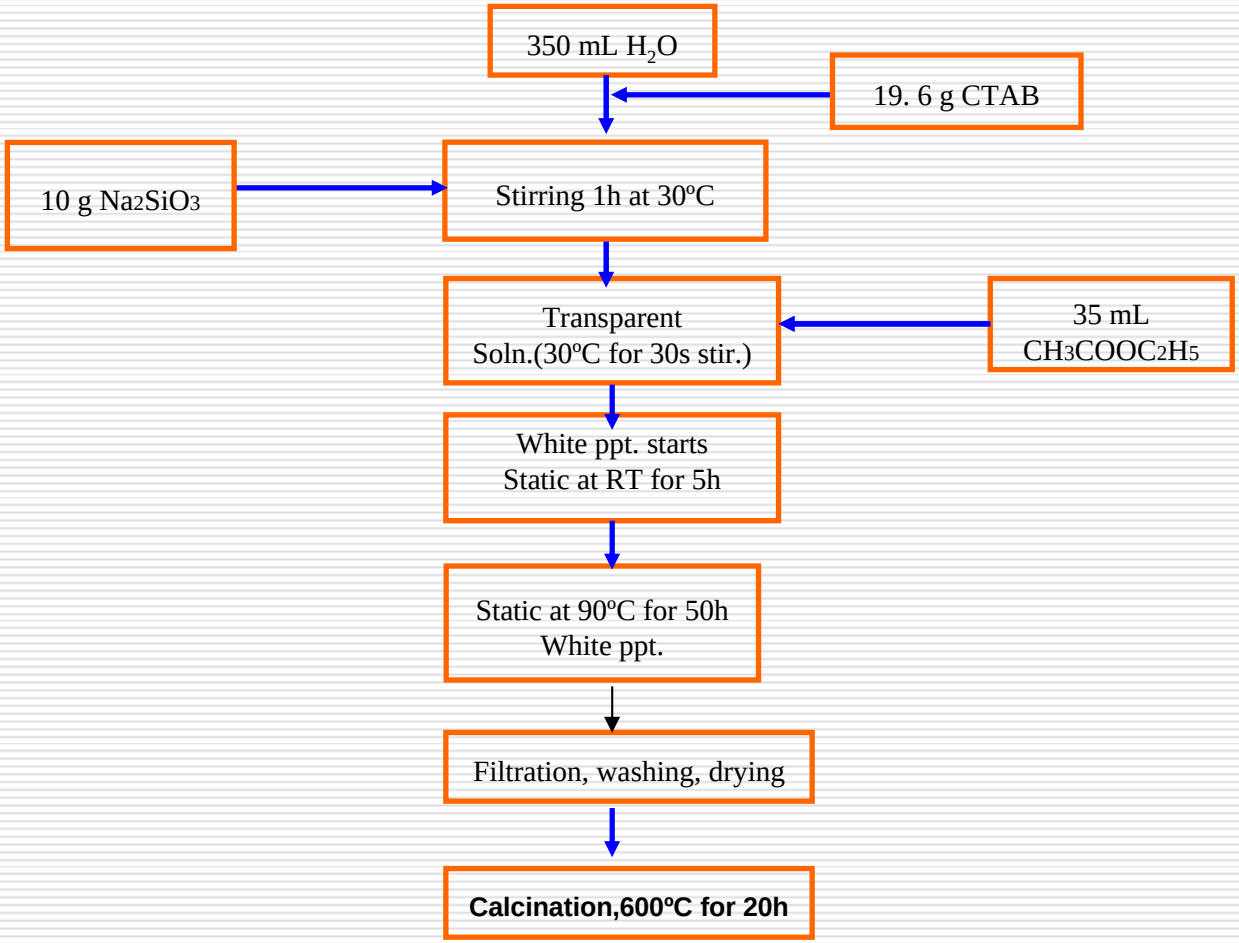
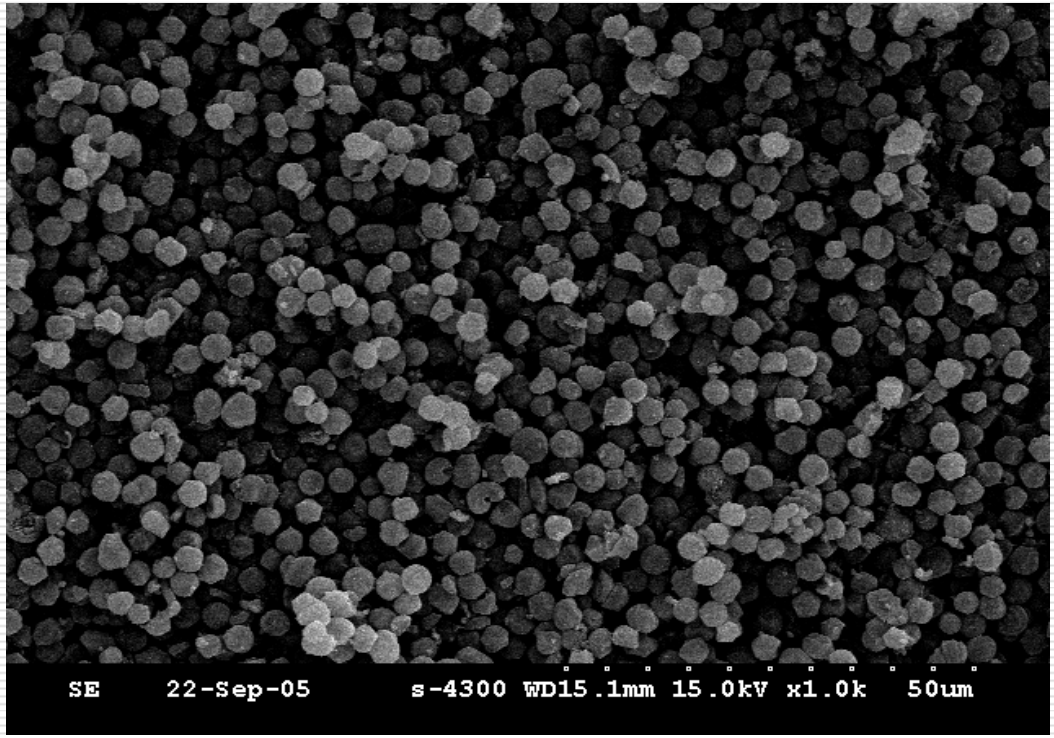
Experimental



SEM



XRD and N2 adsorption isotherm (from ref. 1)

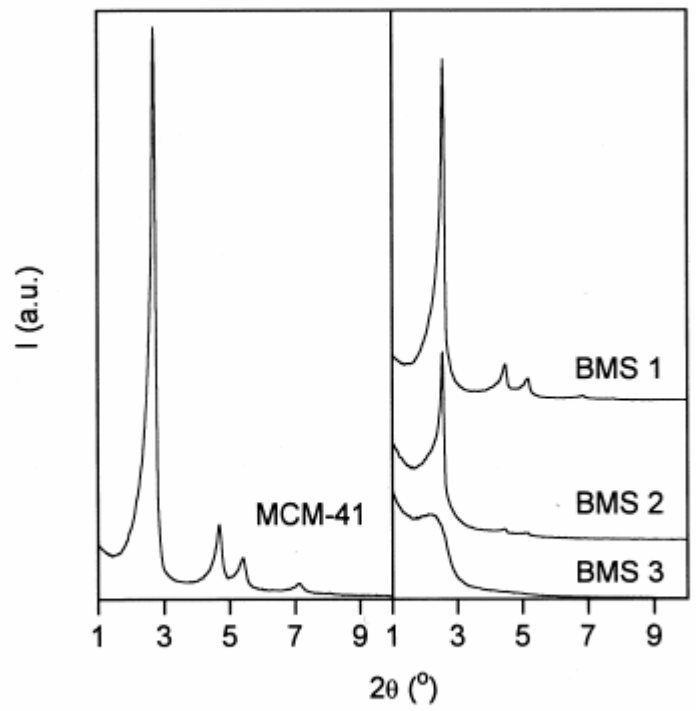


Fig. 1. Powder X-ray diffraction patterns of MCM-41, BMS-1, BMS-2 and BMS-3.

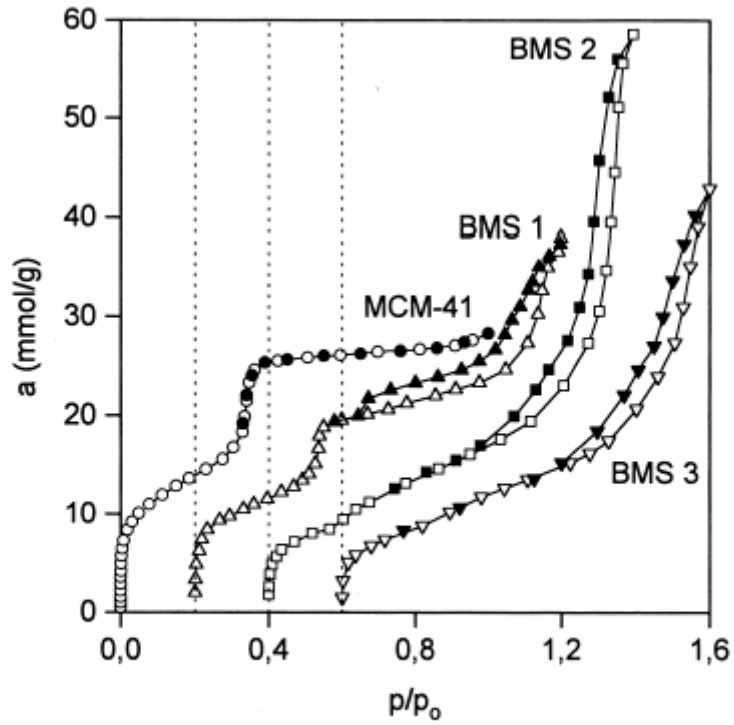


Fig. 2. Adsorption isotherms of nitrogen at 77 K on MCM-41, BMS-1, BMS-2 and BMS-3. The solid points denote desorption.

Ref. 1 : J. Rathousky et al., Int. J. Inorg. Mater., 1 (1999) 97.

Comments

- BMS의 합성에서는 $CH_3COOC_2H_5$ 의 농도가 중요한 합성 변수이며, 함량에 따라 rod모양이나 구형의 입자가 얻어진다.
- 본 실험에서는 구형의 입자를 얻었으나, 문헌과 일치하는 XRD 및 질소흡착등온선 결과는 아직 얻지 못하였으며, 보다 세밀한 $CH_3COOC_2H_5$ 농도영역에서 합성실험을 추가로 계획하고 있다.