

콜로이달 템플레이팅 기술을 통한 준정렬된 다공성 반구구조의 SnO₂ 제작과
가스 센서로의 응용

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Preparation of Quasi-ordered Hollow SnO₂ Hemispheres Using Colloidal Templating Route and Its
Application to Gas Sensors

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Abstract : Quasi-ordered arrays of hollow SnO₂ hemispheres were prepared by utilizing the colloidal templating route and RF-sputtering methods. Hollow SnO₂ hemispheres with shell thickness of 20nm exhibited an uniform continuity and open porosity, resulting in high gas sensitivity due to enhanced surface area as well as reduced interfacial effects. Multilayered hollow SnO₂ hemispheres and hollow SnO₂ hemispheres with controlled wall thickness were fabricated by controlling processing steps.

Key Words : PMMA microsphere, RF-sputtering, Hollow Hemisphere, SnO₂ film, Gas sensors