

## Al/W bimetal 함유 티타노 실리케이트 나노 포러스 물질의 제조 및 친수성능 평가

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The TiO<sub>2</sub> nano-sized powder has been widely used not only for their high photo-catalytic activity but also for their photo-induced super-hydrophilic properties. In particular, the attraction on its hydrophilic property has more increased in most recent, because of the self-cleaning which gives solution for basic environmental problems. However, the application of pure TiO<sub>2</sub> anatase in this division has yet difficulty to use the solar light. In many literatures, the photo-catalytic activity of metal/Ti binary oxides were enhanced compared to pure Ti oxide. But metal incorporated TiO<sub>2</sub> anatase crystals have also some structural limitation. Recently, to overcome the anatase structural limitation, Ti-incorporated porous materials have been researched. In this study, nanoporous titanates including Al and W, were prepared by hydrothermal method, expecting that the nanoporous frameworks generated negative or positive charges, which could strongly withdraw the water molecules. In addition, we have tried to find out the relationship between their physical properties and super-hydrophilic activity.

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