

## **476b Introduction of Novel Functionalities to Mesoporous Silica through Nitridation**

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Surface characters of mesoporous silica are derived from the density and the condition of the surface silanol groups. In order to introduce novel functionalities to the mesoporous materials, the reactivity of the silanol group has been utilized.

Here we show an alternative approach through the nitridation of mesoporous silica. The nitridation was performed under ammonium flow at high temperature. Thus obtained mesoporous oxynitride showed surface characters that are quite different from the original silica.

By utilizing the unique reactivities of the surface, several novel functionalities have successfully been introduced to the mesoporous materials and the films.