



第145回触媒化学研究センター談話会

演題: NO ADSORPTION AND REDUCTION
ON Pt(100) and Au(100)- HIGH
RESOLUTION XPS AND STM

講演者: Prof. Bernard E. Nieuwenhuys
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日時: 2003年4月1日(火)
13:30 - 15:00

会場: 北海道大学理学部本館S - 302号室

要旨: Using synchrotron XPS, we have studied the interaction of NO with Pt(100) and its reduction by CO and hydrogen. The main motivation was to understand the oscillatory behavior of the reduction reactions in detail. During the experiments N, O and C 1s photoelectron spectra were recorded. NO dissociation occurs more readily than previously assumed. The atomic O left by dissociation has a profound effect on the adsorption of NO. In addition, the dissociation yields different O species with different reactivities towards CO and H. NO adsorption is favorable over CO adsorption above 375K. In the presence of hydrogen, different adsorbed N-species can be distinguished, i.e., NO, N, NH and NH₂.

For comparison, the interaction of NO with Au(100) will be discussed. STM shows that NO has a large effect on the surface structure of this surface.

《連絡先》北大触媒化学研究センター 表面反応ダイナミクス分野
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