

---

---

# Scanning Tunneling Microscopy Study of Alcohol Adsorption on NiAl(110) Deposited by Pulsed Injection

Eunyeoung Choi, Younjoo Lee, and In-Whan Lyo

Institute of Physics and Applied Physics, Yonsei University, Seoul 120-749, Korea

Alcohol is a vesatile polar solvent for molecules. As a preparation to deposit large molecules, we studied interaction of solvent molecules on metallic surface. in this work, we report on methanol adsorption on NiAl(110) with scanning tunneling microscopy (STM). These alcohol solvent molecules were deposited by a pulse injection method suitable for deposition of thermally unstable molecules. The injection of liquid alcohol onto the substrate in UHV was performed by using a high-speed solenoid valve with the back-pressure reduced down to 100 Torr. This technique allowed precise control over the amount of dosing of molecules to less than 1 L. Alcohol-induced features, attributed to methoxy, were found on bare NiAl(110) surface.