次世代ナノサイエンステクノロジー研究会
理研セミナーのお知らせ

“Atomic-Scale Growth of Metal Films on a Binary Alloy Surface"

Professor Patricia A. Thiel

Ames Laboratory & Department of Chemistry,
Iowa State University
Ames, Iowa 50011 USA

日時：2010年6月23日（水） 16-17時

場所：ナノサイエンス実験棟 2階 セミナー室

Homoepitaxial and heteroepitaxial growth of single- (or even multi-) element films on single-element crystalline substrates (A on A, A on B, A+B on C, etc.) has been studied extensively. The growth of single- (or multi-) element metal films on alloy surfaces (A on BC, B on BC, A+B on AB, etc.) is a relatively unexplored area. However, use of alloy substrates provides new possibilities to guide the formation of described surface nanostructures during thin film deposition. In this talk, I will show examples that manifest the effects of strain, adhesion energy, quantum size effects, and adsorption site heterogeneity—all at the nanometer scale. We have deposited four different metals–Ag, Au, Ni, and Al–on the NiAl(110) binary alloy surface. The ability of atomic-scale simulations to correctly predict complex far-from-equilibrium film structure and morphology is illustrated for these systems.

問い合わせ：湊丈俊(Kim表面界面科学研究室）内線 8713 tminato@riken. jp

RIKEN Seminar

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Professor Patricia A. Thiel

Ames Laboratory & Department of Chemistry,
Iowa State University
Ames, Iowa 50011 USA

Time & Date : Wednesday, June 23th, 2010, PM 4:00-5:00

Place : Seminar room, 2nd floor, The Nanoscience Joint Laboratory, RIKEN

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Contact : Taketoshi Minato (Kim Surface & Interface Science Lab.) Ext. 8713 tminato@riken. jp