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Suggested Title of Sessio in which paper should be placed:
Thin Films
Localization

Electron Localization in Very Thin Ag Films Epitaxially Grown on Ge (001)* - M. J. Burns, Dept. of Physics, Univ. of Cal., Los Angeles, 90024, P. M. Chaikin U. of Pa. and Exxon Research, J. R. Lince, J. G. Nelson and R. S. Williams, Dept. of Chemistry, UCLA -- Ag films in the monolayer range can be epitaxially grown on clean Ge (001) substrates by deposition from a Knudsen effusion cell in an ultra high vacuum system. We have measured the electrical properties of nominal 1-5 monolayer films from the temperature at which the Ag dominates the substrate conductivity (~ 100K) down to 1K. Although highly ordered, these films display the characteristic properties of weak localization including a resistance which increases logarithmically with decreasing temperature over the entire range studied, a nonohmic electric field dependent conductivity and a positive magnetoresistance indicative of the presence of strong spin-orbit scattering.
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( ) Prefer Poster Session
(X) Prefer Standard Session
( ) No Preference

Signature of APS Member

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