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Abstract

Dynamics of Atom - Surface
Interactions

Steven J. Sibener

University of Chicago, Il

The intent of this presentation will be to provide an overview of the many scattering techniques that are currently being used to examine the dynamics and energetics of gas-surface energy exchange processes and gas-surface reaction mechanisms. The talk will in particular highlight recent inelastic scattering measurements which are revealing the microscopic basis for collision-induced gas-surface energy exchange, e.g., which surface vibrational modes actively participate in translational energy accommodation. Reactive scattering and laser desorption experiments which examine energy disposal in volatile products will also be discussed. Finally, if time permits, an efficient atomic oxygen beam source will be described which is suitable for terrestrial studies of gas-surface interactions.

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