

Complex Adsorbates and Surface Phenomena: how far can IR Spectroscopy take us?

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Reflection Absorption Infrared Spectroscopy has now established itself as a powerful and versatile technique for monitoring molecular adsorption at defined single crystal metal surfaces. This talk will discuss the nature of the information that can be obtained with this spectroscopy. In particular, the strengths and limitations of Surface Mid-IR and Far-IR spectroscopy in providing information on complex adsorbates, on molecule-molecule interactions, on molecule-metal bonding and in monitoring molecular adsorbate-induced surface reconstructions will be discussed. Systems discussed will include the adsorption of amino-acids, nucleic acids, chiral and prochiral molecules, and simple diatomics at metal surfaces.

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