



UNIVERSITÀ DI PARMA

Dipartimento di Scienze Matematiche, Fisiche ed Informatiche - DSMFI

SEMINARIO DI DIPARTIMENTO

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Synchrotron X-ray Photoelectron Spectroscopy Study of the Electronic Nature of Metal Oxide Semiconductor Surfaces

Abstract: The surfaces of metal oxide semiconductors such as ZnO, SnO₂, and Ga₂O₃ are particularly interesting as they show fundamental differences in band bending, surface electron density, and surface chemistry that have important consequences for the fabrication of electronic devices on these materials. This seminar will explore the use of synchrotron x-ray photoelectron spectroscopy to measure the chemistry and band bending of ZnO, SnO₂, and Ga₂O₃ surfaces following different physical and chemical treatments. The answers provide useful insights into the fundamental nature of the surfaces of these technologically important materials while also suggesting useful strategies for the fabrication of high quality metal-semiconductor junctions to ZnO, SnO₂, and Ga₂O₃.

Martedì 4 settembre – ore 16:30
Aula Newton – Plesso Fisico