

INTERACTION OF MULTICHARGED IONS WITH INSULATOR SURFACES¹

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Presented is a summary of recent theoretical progress on the neutralization of multiply charged ions near insulators, in particular LiF. Capture and loss processes are investigated using a classical trajectory Monte Carlo approach. Estimates from this simulation of the onset of charge transfer are compared with predictions from the classical over-the-barrier model. It is found that capture effectively begins a few atomic units closer to the surface than predicted by the latter model. Calculations of the energy the ion gains on the way to the surface are compared with recent measurements.

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