



Contribution ID: 169

Type: Poster

[239] Multi-parameter Analysis of Genesis and Evolution of Secondary Electrons in the Low-Energy Regime

Wednesday 28 August 2019 19:11 (1 minute)

The tangled processes involved in **electron-induced Secondary Electron Emission (SEE)**, responsible for the generation of the ubiquitous Secondary Electrons in a solid surface, are discussed. The interaction of Low-Energy (LE) Electrons with diverse surfaces, of varying long-range order, was investigated by combining measurements of the Total Electron Yield, single-electron as well as (e,2e)-coincidence spectroscopies. The elementary processes relevant for the understanding of SE-generation probability are identified and fully take into account both conservation laws in the collision and the band structure of the solid. Single ionising scattering events, assisted by collective excitations, i.e. **plasmons**, constitute one of the fundamental ingredients leading to SEE. In the LE-regime the electron yield of a material is strongly dictated by the target band structure.

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Session Classification: Poster Session

Track Classification: Surfaces, Interfaces and Thin Films