

Plenary talks (PV)

Plenary Talk PV I Mon 8:30 HSZ 01
Molecules at surfaces: From atoms to complexity — ●GERHARD
ERTL — Fritz Haber Institut der Max Planck-Gesellschaft, Faradayweg
4-6, 14195 Berlin

Free and condensed matter meet each other at surfaces. The interaction of molecules with solid surfaces forms, among others, the basis

for important technological applications such as heterogeneous catalysis. The mechanisms underlying these interactions may be investigated with well-defined single crystal surfaces in microscopic detail. Open systems of this kind may under continuous flow conditions exhibit a rich variety of phenomena of spatio-temporal self-organization as described theoretically in the framework of nonlinear dynamics. The discussed principles will be illustrated by experimental examples.