

SEMINAR ANNOUNCEMENT

FRIDAY, 29.01.2016

14:00 h c.t. NC 6/99

Prof. Dr. Markus Gerhards

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"Combined IR/UV spectroscopy to analyze structure and reactivity: From isolated peptides to proton wires and metal/ligand aggregates"

The investigation of isolated, mass selected molecules and molecular aggregates in the gas phase (molecular beam) with combined IR and UV methods allows the analysis of structures, structural changes and reactivity on a molecular level. It will be reported on the folding of isolated peptides as well as the aggregation of these peptides and their successive solvation with water. These investigations give insight in intrinsic driving forces of the peptides to form different secondary structures. Furthermore photochemical or photophysical relevant reactions including UV induced proton wires or rearrangement processes in the electronic ground or electronically excited states can be described to unravel important details on reaction coordinates. Here flavonoids and coumarins as well as their hydrates are investigated. The aggregation of selected ligands as e.g. alcohols to transition metals allows for an analysis of activation processes relevant for catalytic activities. The talk will give an overview on the applicability of the IR/UV methods to understand the above mentioned fundamental processes in biological relevant or catalytic active systems.

Guests are very welcome!