

N₂ ACTIVATION ON SIZE SELECTED TRANSITION METAL CLUSTER IONS UNDER CRYO CONDITIONS

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The tandem cryo ion trap FRITZ allows the investigation of organometallic complexes as well as transition metal cluster ions in the gas phase with adsorbed reaction gases. The setup enables studies on uptake kinetics as well as IR-PD action spectroscopy under cryo conditions. In this talk we present studies of dinitrogen adsorbed to transition metal cluster anions and cations with regard to the elementary steps of N₂ activation. Supported by DFT modeling we aim to explain the influence of geometric and electronic features of the transition metal cluster ions to the N₂ activation process.