ELECTRONIC SPECTROSCOPY OF THE NO-X (X = RARE GAS, ALKANE) COMPLEXES

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The Rydberg states of the complexes of nitric oxide with rare gases and small alkane molecules have been investigated using (1 + 1) and (2 + 1) Resonance Enhanced Multiphoton Ionization, REMPI, spectroscopy. Trends in dissociation energies within the ligand groups, along with trends in increasing principal quantum number of the Rydberg states will be discussed. Rationalization is aided through the implementation of high level *ab initio* calculations.