FLUORESCENCE AND BEAM DEPLETION SPECTRA OF K ATOMS ATTACHED TO LARGE ARGON CLUSTERS

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We have recently completed a molecular beam apparatus for production of large rare-gas clusters in a supersonic expansion. Clusters are doped with a pick-up technique, and visible spectra of the dopant species (by either beam-depletion or laser-induced-fluorescence) are acquired. We have recently obtained the first electronic spectra of potassium atoms attached to large argon clusters. We will present the results of this ongoing investigation and discuss a comparison with alkali atoms attached to other van der Waals clusters.