STRUCTURE OF NAPHTHALENE DIMER INFERRED FROM SPECTRA OF NAPHTHALENE DIMER - ARGON VAN DER WAALS COMPLEXES

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We have obtained resonant 2-colour 2-photon ionization spectra of $Np_n Ar_m$ (Np = naphthalene). While most spectra are broad and unresolved, those of $Np_2 Ar_m$ arouse particular attention as they appear to consist of two independent and shifted electronic spectra. We consider our experimental data in the light of proposed structures for the naphthalene dimer and offer an alternative explanation for the observed broadening of the spectrum of Np_2 in terms of fragmentation of higher clusters.