LASER SPECTROSCOPIC STUDY ON STRUCTURES OF 3*n*-CROWN-*n* (*n* = 4, 5, 6) COMPLEXES WITH PHENOL

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Structures of 3*n*-crown-*n* (*n* = 4, 5, 6) complexes with phenol in supersonic jets have been studied by laser induced fluorescence (LIF), UV-UV hole-burning (UV-UV HB), and IR-UV double resonance (IR-UV DR) spectroscopy. The size-dependence of the structures and the interaction working between the crowns and phenol will be discussed based on the analysis of the electronic transitions and IR spectra in the region of the OH and CH stretching vibrations with the aid of DFT (M05-2X/6-31+G*) calculation.