INFRARED CAVITY RINGDOWN LASER ABSORPTION SPECTROSCOPY


We are vigorously pursuing extension of cavity ringdown laser absorption spectroscopy into the infrared region.\textsuperscript{a, b} With medium resolution (\textasciitilde1000 MHz), we have measured spectra of H$_2$O, D$_2$O, CH$_3$OH, CH$_3$CH$_2$OH, and CH$_3$(CH$_2$)$_3$OH clusters in the spectral region between 2.8 and 6 microns. By employing a laser vaporization/supersonic molecular beam source, we have also studied carbon clusters in this spectral region. High resolution (<100 MHz) cavity ringdown experiments are also being pursued using a novel Alexandrite based laser system.