

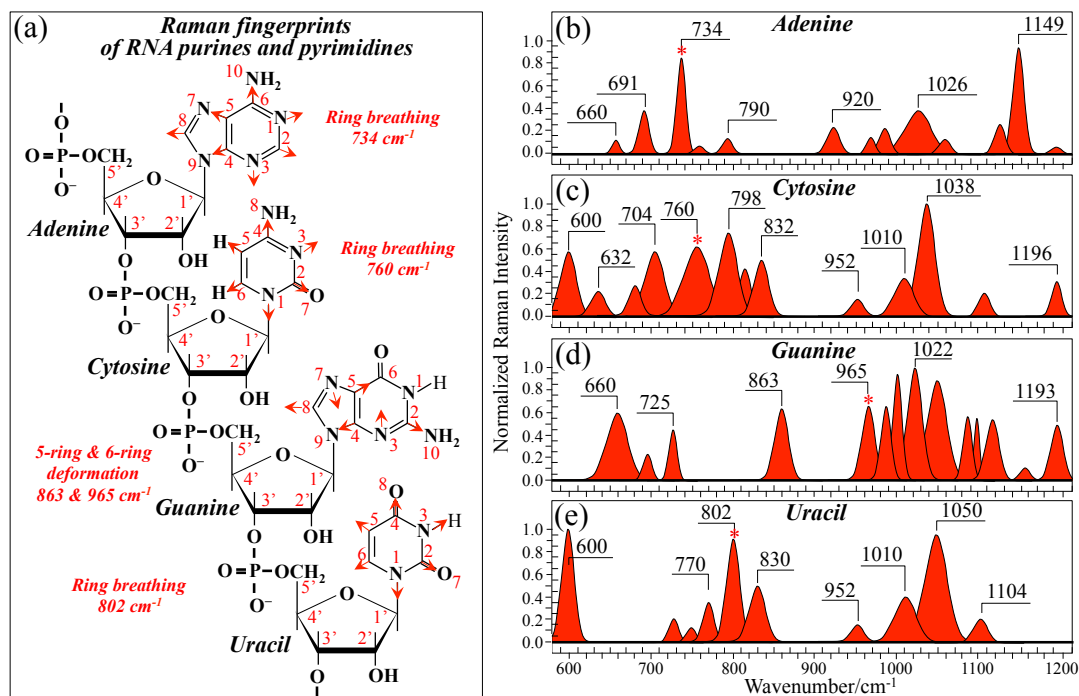


Figure S1: (a) Schematic draft of the RNA structure and Raman vibrational fingerprints of RNA purine and pyrimidines (arrows indicate vibrational modes for each nitrogenous base); and, (b)~(e) Raman peak components of the four nitrogenous bases (cf. labels in inset) as deconvoluted from spectra published in: F. Madzharova, Z. Heiner, M. Guehlke, and J. Kneipp, Surface enhanced hyper-Raman spectra of adenine, guanine, thymine, and uracil, *J. Phys. Chem. C*, 2016, **120**, 15415–15423. The labels in inset to (b)~(e) are in units of cm⁻¹.