INFRARED SPECTRA OF HYDRATED CLUSTERS OF GUANINE NUCLEOSIDES OBSERVED BY IR-UV DOUBLE RESONANCE SPECTROSCOPY

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Mono- and dihydrated clusters of guanosine and 2'-deoxyguanosine are produced by laser-desorption supersonic-jet cooling and their structures are identified by IR-UV double resonance spectroscopy combined with theoretical calculation. The results show that specific hydration structures around the sugar group exist in both nucleosides.[a b] It is also demonstrated that the dihydrated structures are strongly influenced by the presence or absence of the 2'-hydroxy group on the sugar.

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[a] H. Saigusa, S. Urashima, and H. Asami, *J. Phys. Chem. A*, 2009, **113**, 3455.
[b] H. Asami, S. Urashima, and H. Saigusa, *Phys. Chem. Chem. Phys.*, 2009, **11**, 10466.