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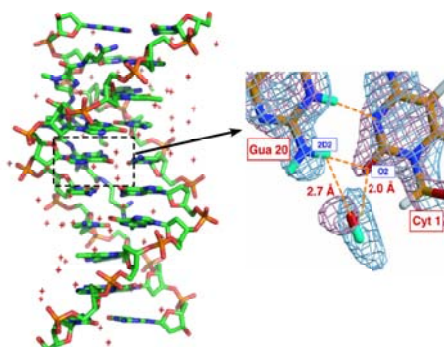
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【Speciality】 Laser spectroscopy,
Physical chemistry of nucleic acid structure

【Keywords】 Laser desorption, Biological molecules,
Clusters, Infrared spectroscopy

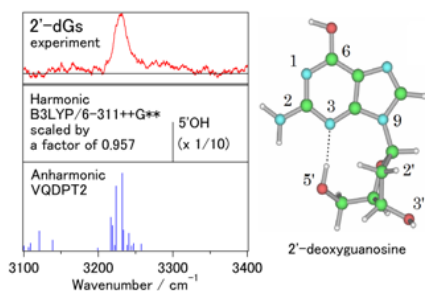
【 Research Subject 】 Production of supramolecular structures of
biological molecules by laser desorption and their structural
characterization by IR spectroscopy

Research Group Activity



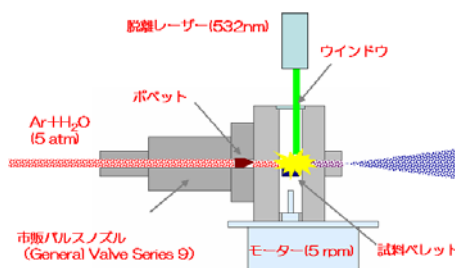
Supramolecular nucleic acid structures obtained at the molecular level

Elucidation of nucleic acid structures consisting
of bases, sugars, and phosphates which cannot be
obtained by crystallographic studies.



Structural characterization of hydration structure by IR spectroscopy and quantum chemical calculation

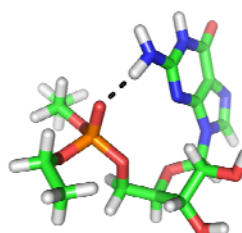
(Collaborator : Prof. K. Yagi at Yamanashi Univ.)



Intact vaporization of biological molecules and formation of their hydrated clusters by laser-desorption and supersonic-jet cooling

Exploration of highly effective matrices for laser
desorption.

(Collaborator : Prof. T. Yonezawa at Hokkaido Univ.)



Gas-phase isolation of nucleotides and their hydrated clusters

Characterization of supramolecular structures of
nucleic acid bases, sugar, and phosphate groups.

(Collaborators : Prof. Y. Hayakawa of Aichi
Institute of Technology and Dr. M. Tsukamoto of
Nagoya Univ.)