Electrosplay / cold ion trap laser spectroscopy on biomolecules
Bottom-up approach to molecular recognition in biological systems

Receptor-neurotransmitter molecular recognition is key of neurotransmission. Here, we measured ultraviolet and infrared spectra of complexes between a partial peptide SIVSF (Ser-Ile-Val-Ser-Phe), the binding motif of a catechol ring in the adrenergic receptor, and various ligands such as adrenaline, noradrenaline and dopamine. The secondary structures of SIVSF in the complexes are assigned and the relation to the molecular recognition mechanism will be discussed.