ANALYSIS OF 2-AMINOVERATROLE AND ITS WATER COMPLEXES USING ROTATIONALLY RESOLVED ELECTRONIC SPECTRA[a]

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Symmetry plays a role in a wide variety of natural phenomena, and the properties of water complexes are revealing of that role. For instance, the rotationally resolved electronic spectra of the veratrole-water complex displays torsional subands, arising from a tumbling motion of the water molecule.[b] These subands display a 3:1 intensity ratio due to the exchange of equivalent hydrogens. Here, rotationally resolved electronic spectra of 4-aminoveratrole and its water complexes were used to determine the gas phase structure of the bare molecule as well as its complexes. Of interest are the properties of the water complex, and if it exhibits a tumbling motion analogous to that observed in the unsubstituted molecule.

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[b]J. T. Yi, J. W. Ribblett, and D. W. Pratt. *J. Phys. Chem. A.* **109**, 9456 (2005).