

**Electronic Supplementary Information for**

**Experimental confirmation of the Badger-Bauer rule in the protonated methanol clusters**

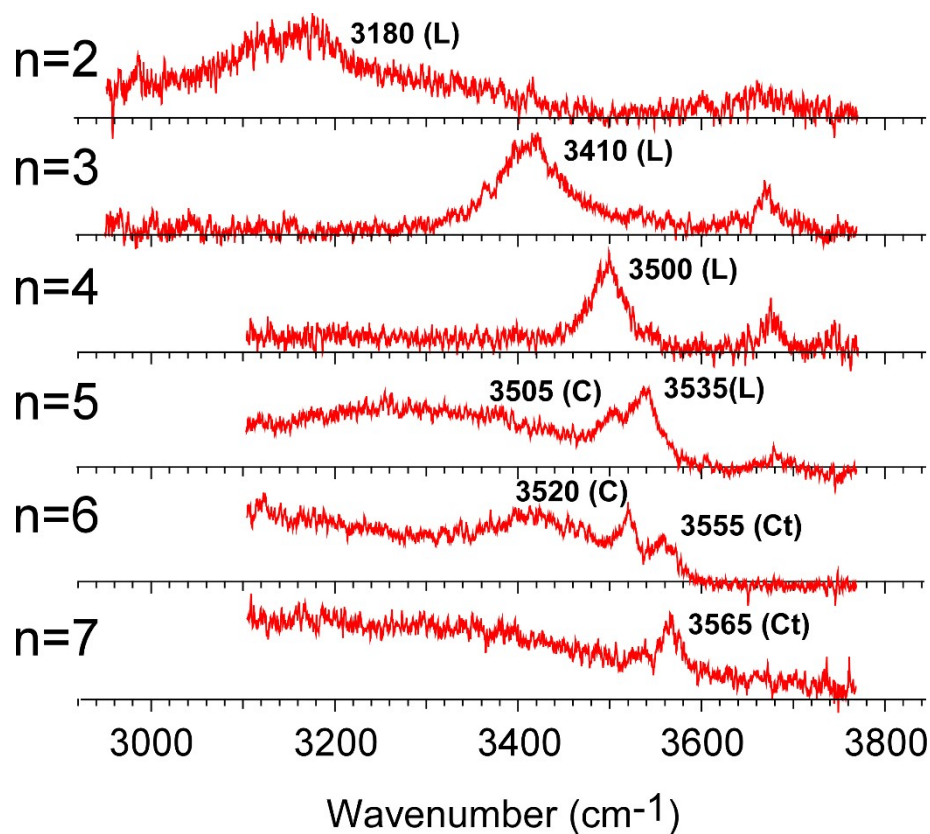
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**Figure S1** Infrared spectra of  $\text{H}^+(\text{MeOH})_n$ -benzene ( $n = 2 - 7$ ).



**Figure S1** Infrared spectra of  $\text{H}^+(\text{MeOH})_n$ -benzene ( $n = 2 - 7$ ) in the gas phase. Numbers in the figure are frequencies of the  $\pi$ -hydrogen bonded OH stretch bands. Isomer types of the spectral carriers are shown in parentheses. All data are taken from Ref. S1.

#### Reference

S1. T. Kato and A. Fujii, How Many Methanol Molecules Effectively Solvate an Excess Proton in the Gas Phase? Infrared Spectroscopy of  $\text{H}^+(\text{Methanol})_n$ -Benzene Clusters, *Phys. Chem. Chem. Phys.*, 2022, **24**, 163-171.