Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Molecular rotational Motion of Liquid Ethanol Studied by Ultrafast Time Resolved Infrared Spectroscopy

Gang-hua Deng[1#], Yuneng Shen[1,2#],Zhigang He[1#],Qiang Zhang[3], Bo Jiang[1], Kaijun Yuan[1]*,
Guorong Wu[1], Xueming Yang[1]

[1]*State key Laboratory of Molecular Reaction Dynamics, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, 457 Zhongshan Road, Dalian 116023, China*

[2]*Tongji Zhejiang College, Jiaxing 314000, Zhejiang, China*

[2]*Institute of Chemistry & Chemical Engineering, Bohai University, Jinzhou 121000, China*

[#]*The authors have equal contribution.*

*to whom correspondence should be addressed. Email: kjyuan@dicp.ac.cn

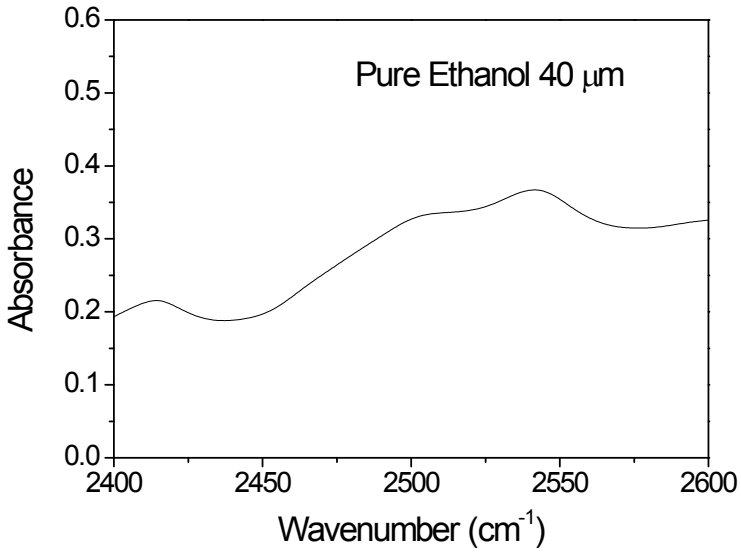

Figure S1. FTIR spectrum of pure ethanol in O-D stretching region.

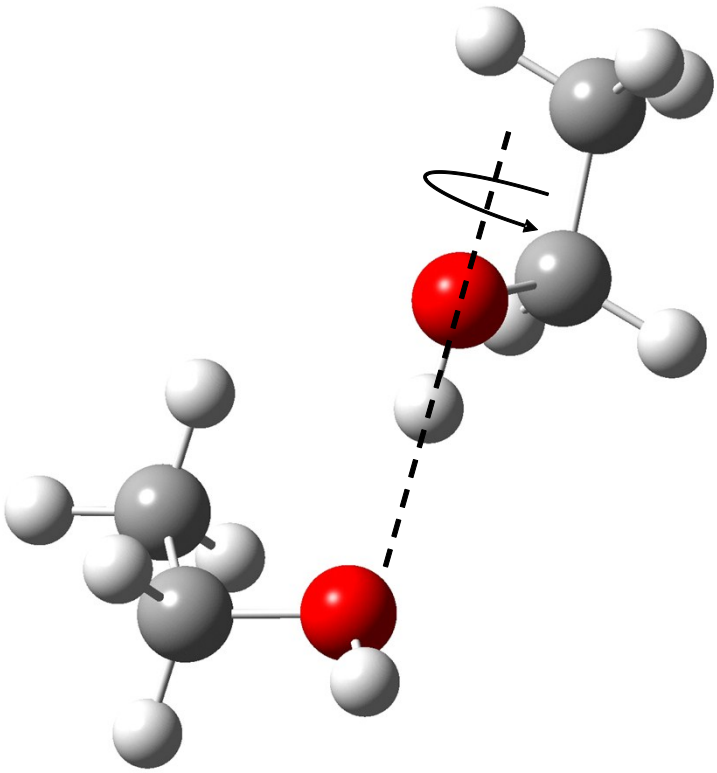

Figure S2 Sketch for the rotation of ethanol molecule around the OH···OH hydrogen bond.

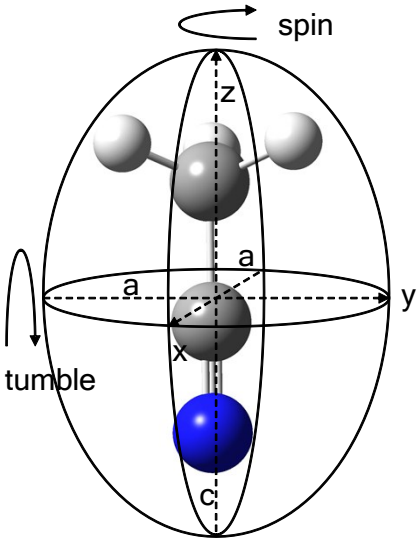

Figure S3 The acetonitrile molecule considered as a prolate symmetric top.