

Supporting Information for

Comparative study of the hydrogen bonding interactions between ester-functionalized/non-functionalized imidazolium-based ionic liquids and DMSO

Yuxin Jiang, Xianzhen Xu, Mingzhu Wang, Yu Zhou*, Zonghua Wang*

**Shandong Sino-Japanese Center for Collaborative Research of Carbon Nanomaterials, College of Chemistry and Chemical Engineering, Instrumental Analysis Center of Qingdao University, Qingdao University, Qingdao 266071, China.*

A submission to: *Physical Chemistry Chemical Physics*

***To whom correspondence should be addressed.**

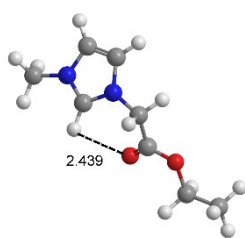


Fig. S1. Optimized geometries of [AOEMIM]⁺, Hydrogen bonds were denoted by dashed lines, the corresponding distances of H···O was labelled.

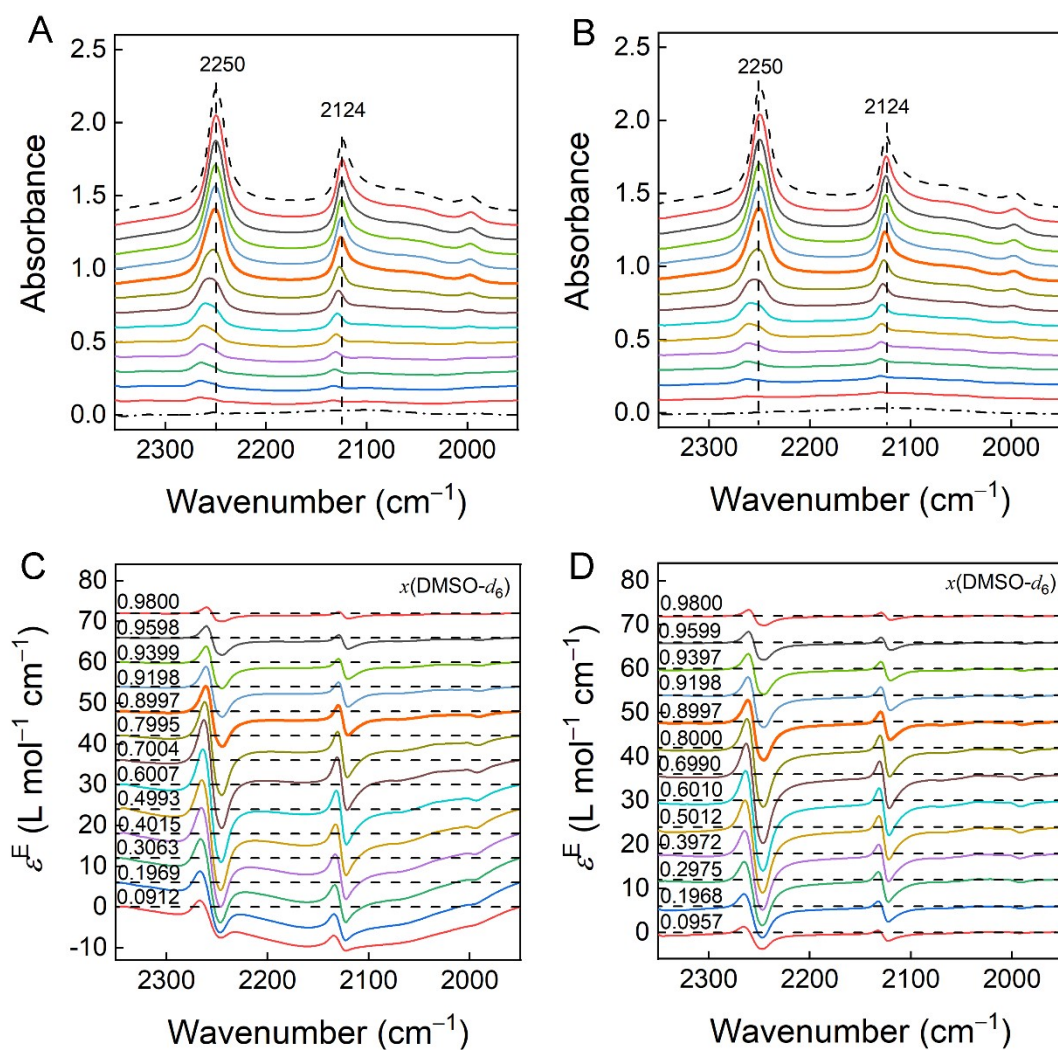


Fig. S2. ATR-FTIR and excess spectra of AOEMIMBF₄-DMSO-*d*₆ (A, C) and BMIMBF₄-DMSO-*d*₆ (B, D) systems in the range of the C-D stretching vibrations.

The dashed-dotted lines and dashed line in (A, B) depict the spectra of AOEMIMBF₄/BMIMBF₄ and DMSO-*d*₆, respectively.