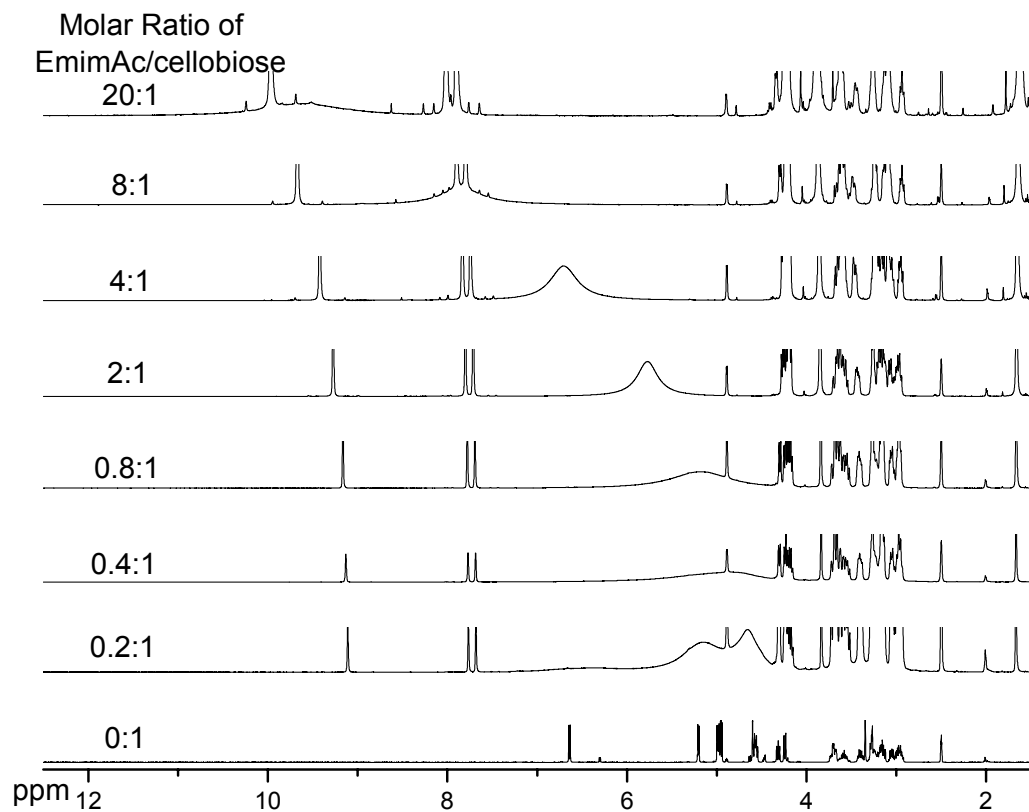
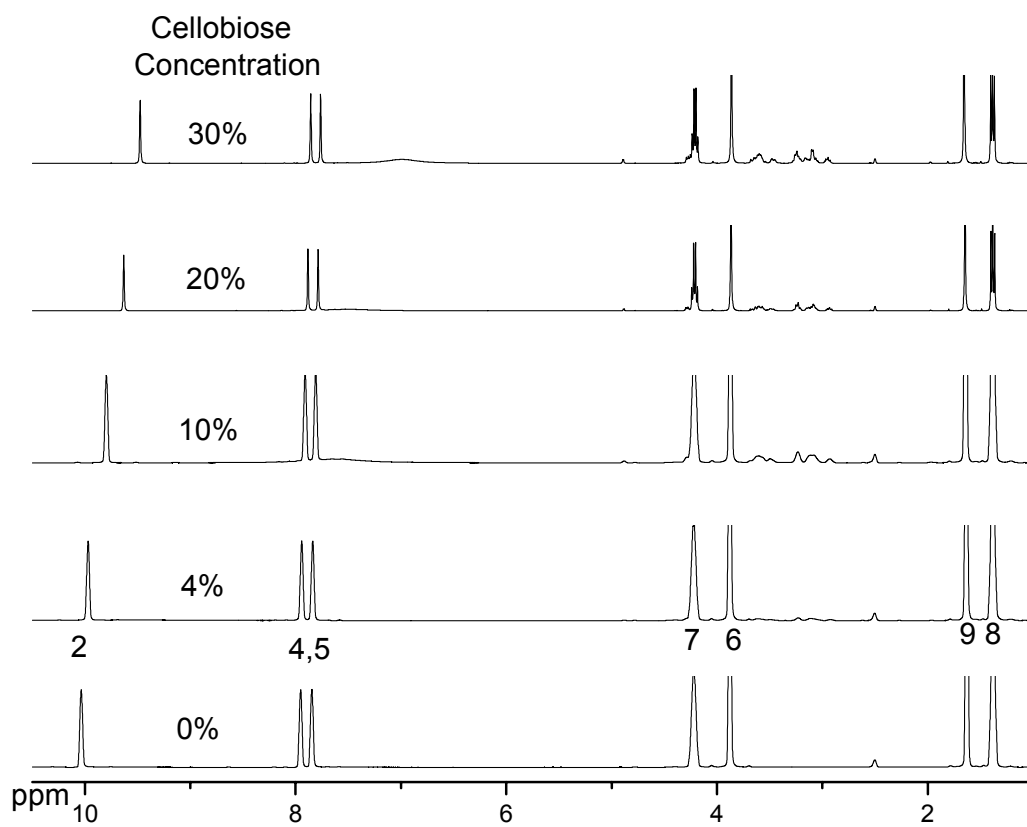


## Supporting Information



**Fig. S1** Effect of molar ratios of EmimAc/cellobiose on the  $^1\text{H}$ -NMR spectra for cellobiose in  $\text{DMSO-d}_6$ . (The bottom spectrum is the neat cellobiose.)



**Fig. S2** The effect of increasing [cellulose] on the  $^1\text{H}$ -NMR spectra for EmimAc in  $\text{DMSO-d}_6$ . (The bottom spectrum is neat EmimAc.)

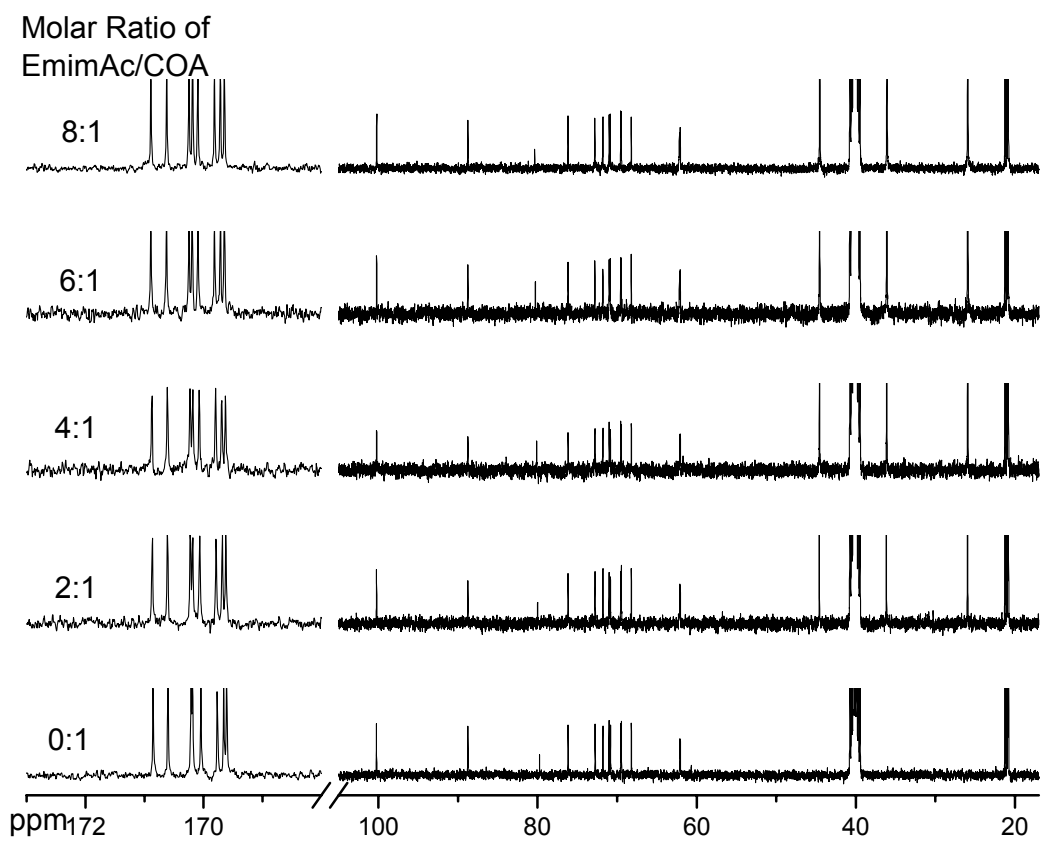
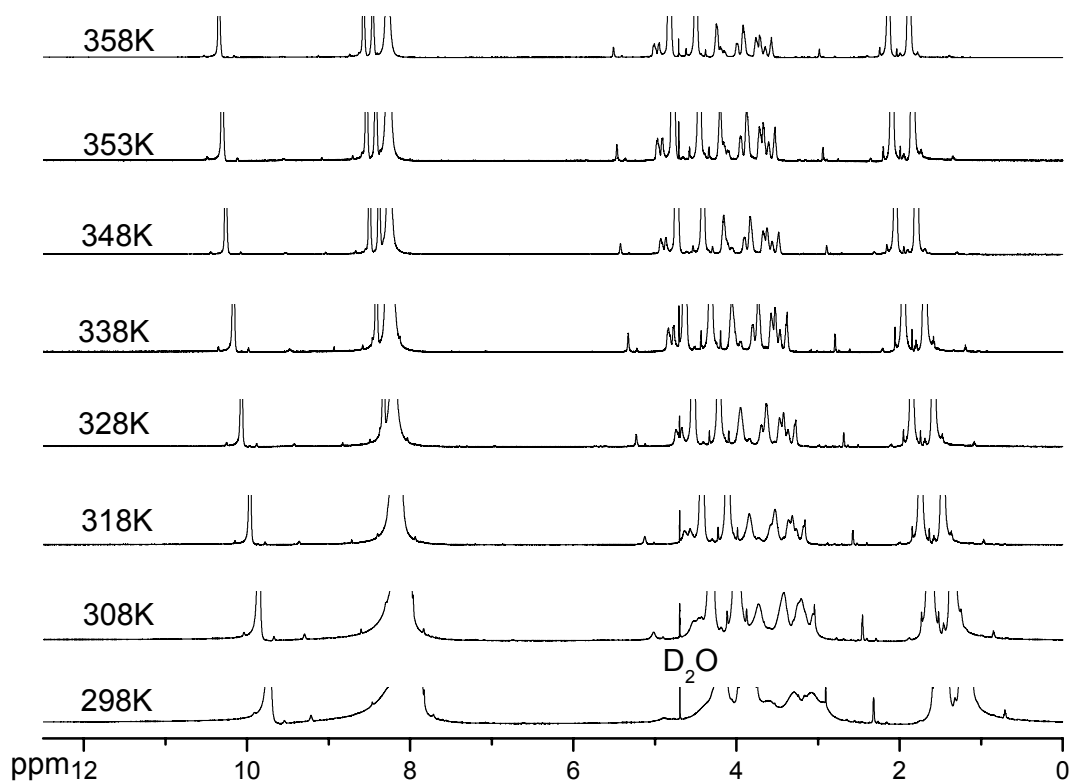
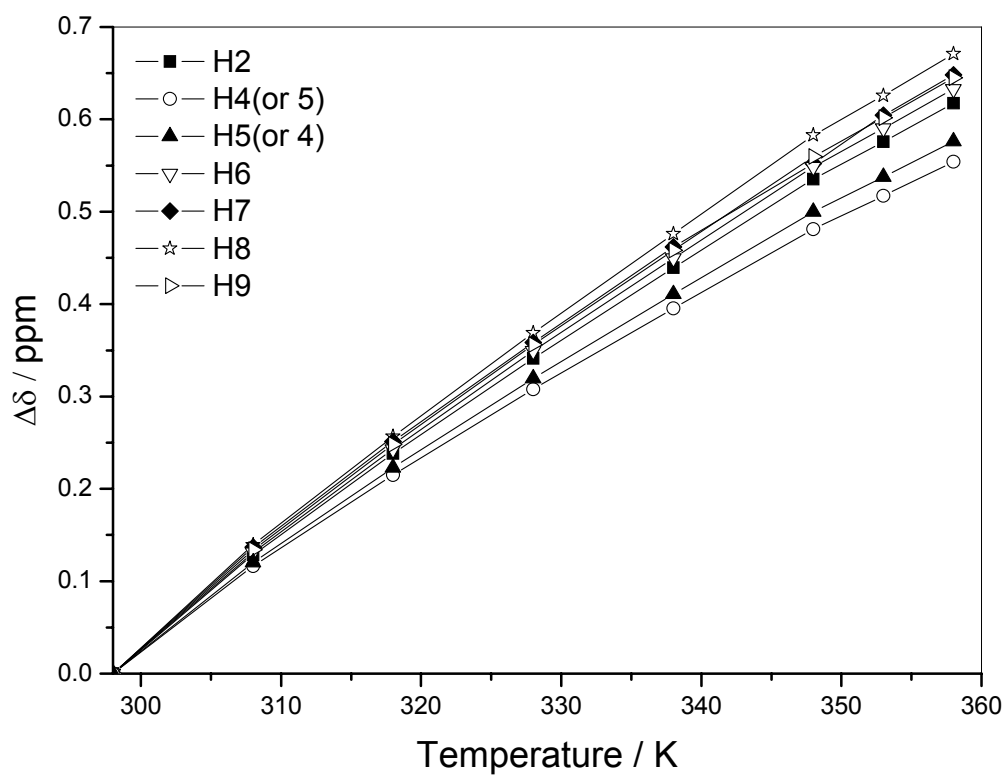


Fig. S3 Effect of molar ratios of EmimAc/COA on the  $^{13}\text{C}$ -NMR spectra of COA in  $\text{DMSO-d}_6$ . (The bottom spectrum is the neat COA.)



**Fig. S4** Effect of temperature on the <sup>1</sup>H-NMR spectra for the cellobiose/EmimAc solution containing 15% cellobiose, using D<sub>2</sub>O as external standard.



**Fig. S5** Temperature-dependent chemical shift difference of protons of EmimAc in *in situ*  $^1\text{H-NMR}$  for the cellobiose/EmimAc solution containing 15% cellobiose ( $\Delta\delta = \delta - \delta_{\text{neat}}$ ).