

Imidazolium ionic liquids as compatibilizer agents for microcrystalline cellulose/epoxy composites

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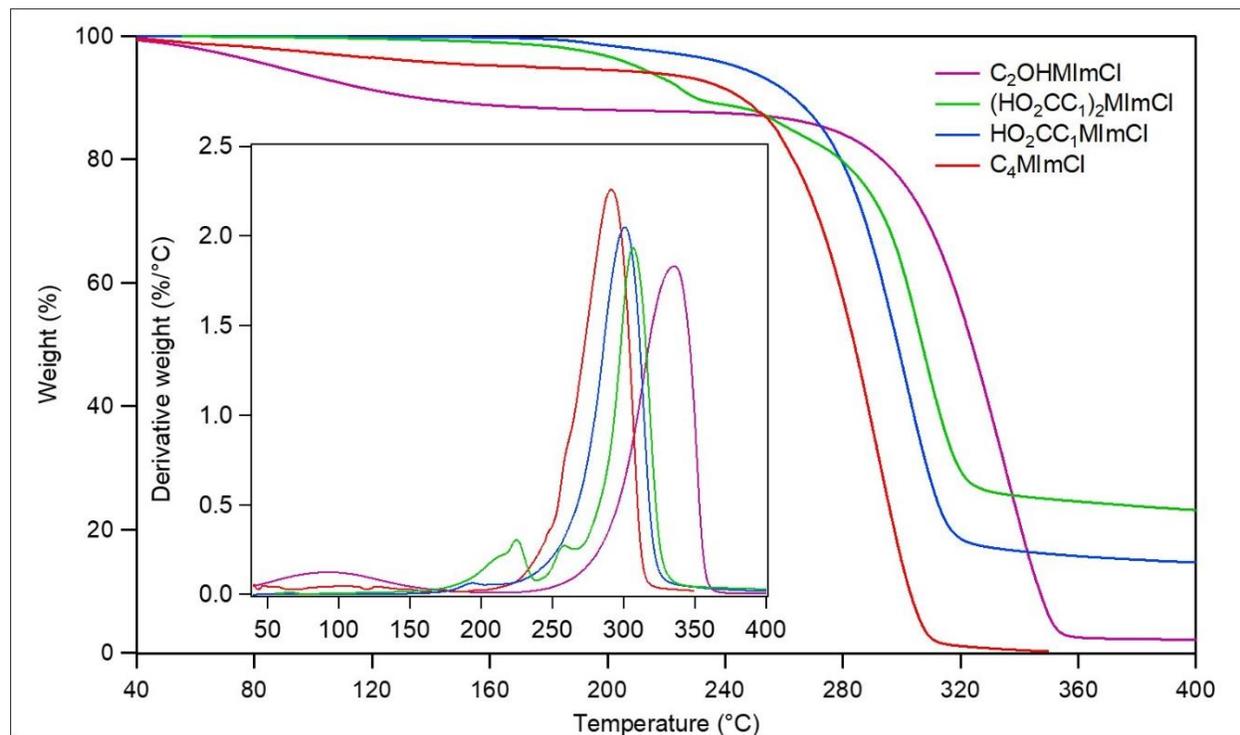


Figure S1: TG and DTG curves of **C₄MImCl** (red), **HO₂CC₁MImCl** (blue), **(HO₂CC₁)MImCl** (green) and **C₂OHMImCl** (purple), used as compatibilizers for the MCC/epoxy composites.

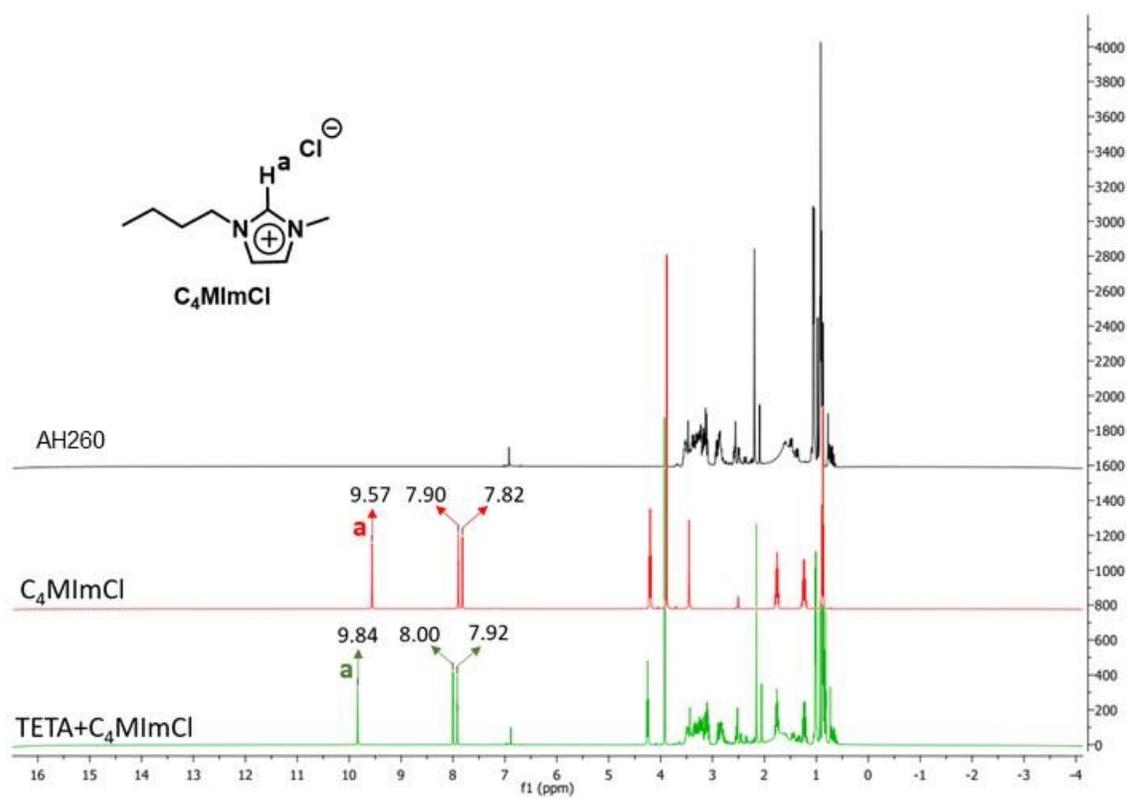


Figure S2: 1H NMR spectra (400 MHz, $DMSO-d_6$) of AH260 hardener (based on triethylenetetramine (TETA)) in black, C_4MImCl in red, and C_4MImCl + AH260 in green, where "a" represents the most acidic hydrogen of the imidazolium ring (C_2-H).

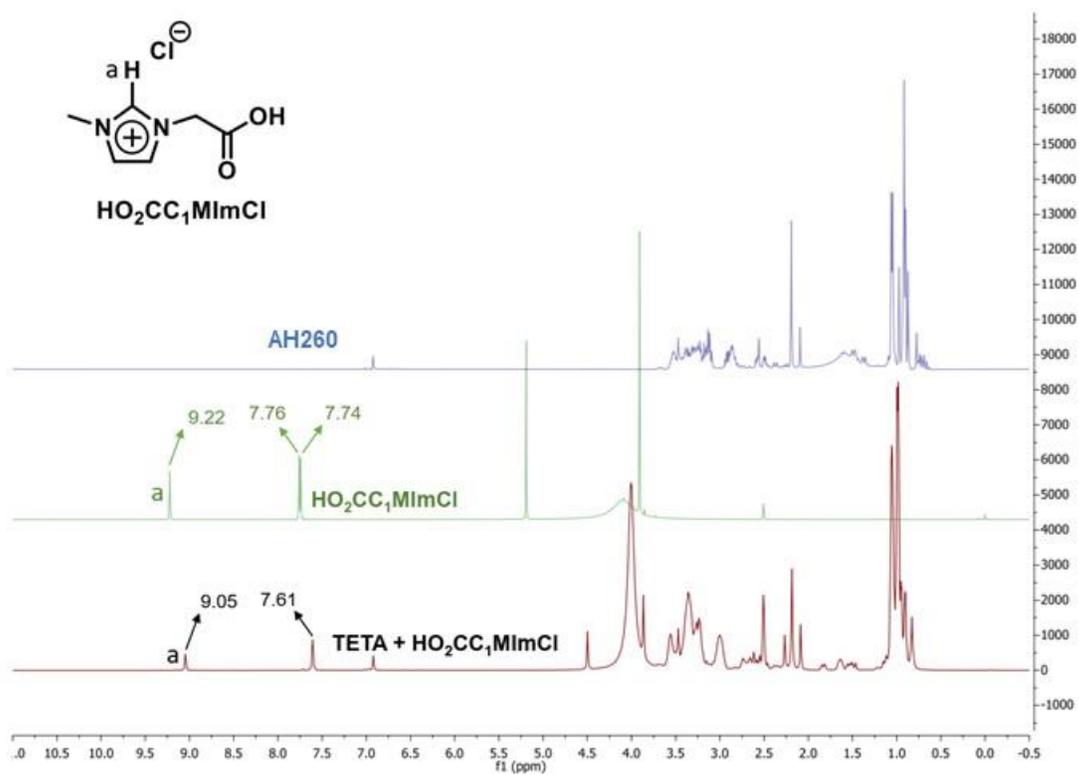


Figure S3: ^1H NMR spectra (400 MHz, $\text{DMSO-}d_6$) of AH260 hardener (based on triethylenetetramine (TETA)) in blue, $\text{HO}_2\text{CC}_1\text{MImCl}$ in green and $\text{HO}_2\text{CC}_1\text{MImCl}$ + TETA in red, where “a” represents the most acidic hydrogen of the imidazolium ring ($\text{C}_2\text{-H}$).

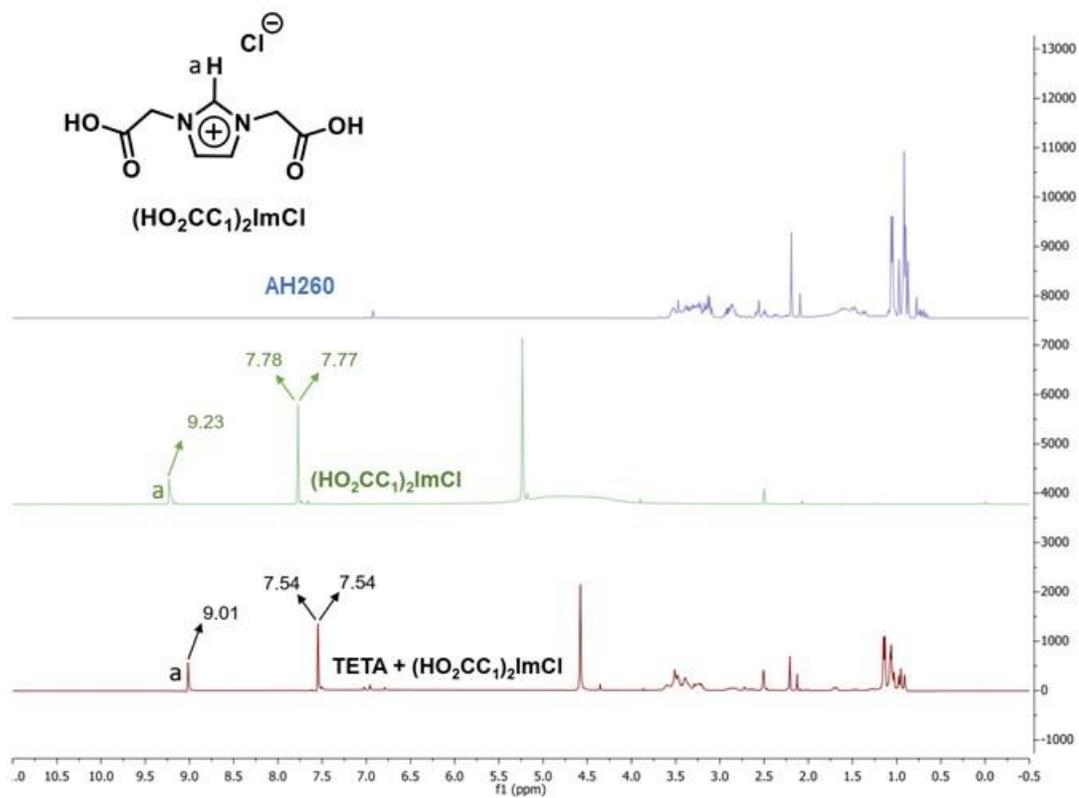


Figure S4: ^1H NMR spectra (400 MHz, $\text{DMSO-}d_6$) of AH260 hardener (based on triethylenetetramine (TETA)) in blue, $(\text{HO}_2\text{CC}_1)_2\text{MImCl}$ in green and $(\text{HO}_2\text{CC}_1)_2\text{MImCl}$ + TETA in red, where "a" represents the most acidic hydrogen of the imidazolium ring ($\text{C}_2\text{-H}$).

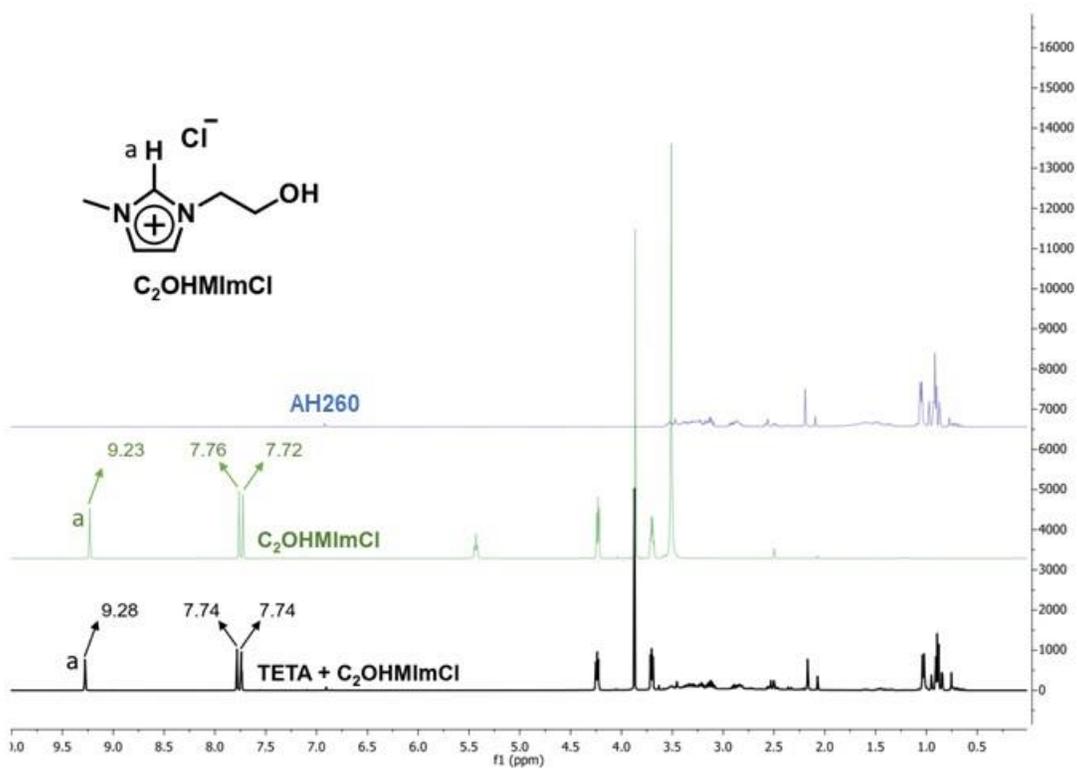


Figure S5: ^1H NMR spectra (400 MHz, $\text{DMSO-}d_6$) of AH260 hardener (based on triethylenetetramine (TETA)) in blue, $\text{C}_2\text{OHMImCl}$ in green and $\text{C}_2\text{OHMImCl}$ + TETA in black, where “a” represents the most acidic hydrogen of the imidazolium ring ($\text{C}_2\text{-H}$).

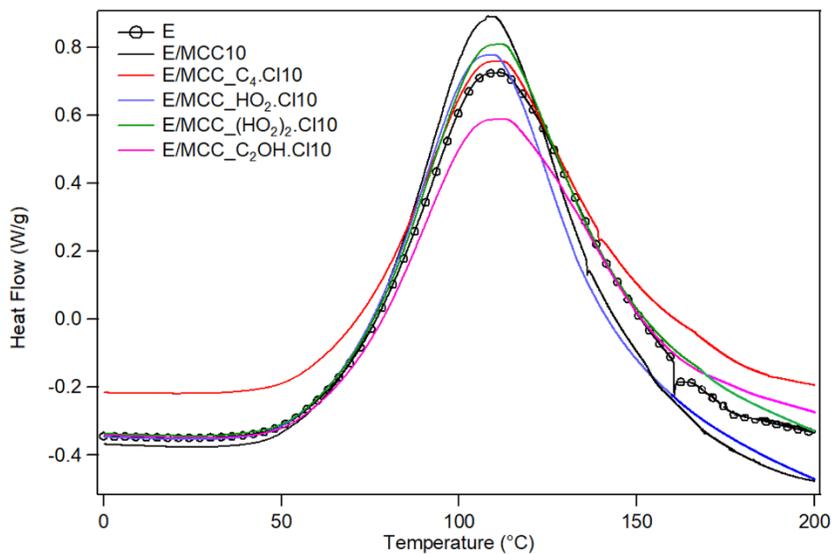


Figure S6: DSC curves for epoxy and the 10 phr MCC/epoxy composites.

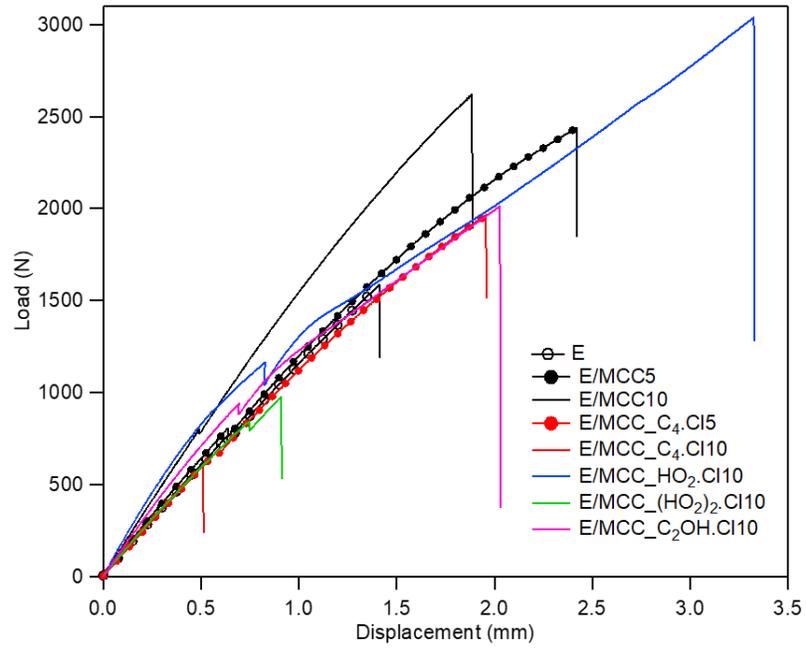


Figure S7: Median curves from tensile tests for epoxy and the MCC/epoxy composites.

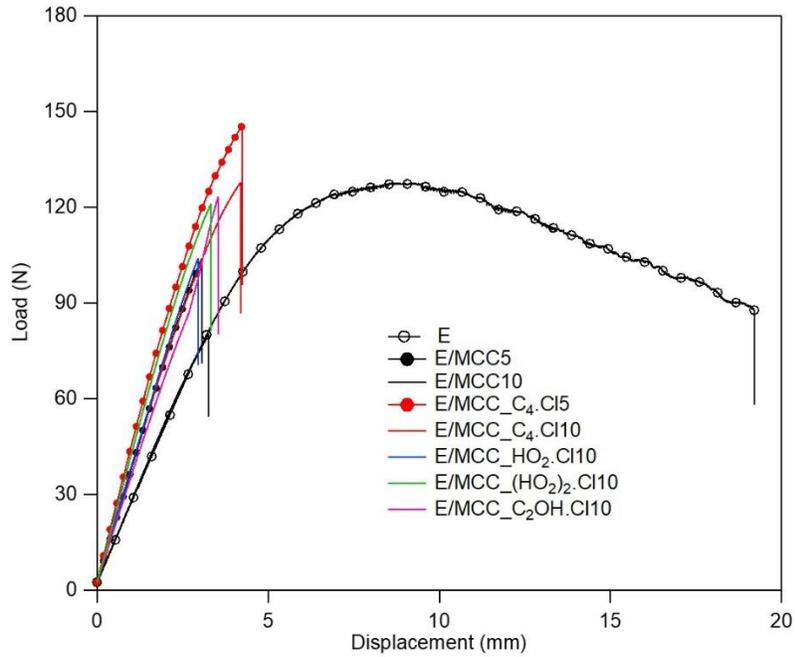


Figure S8: Median curves from 3-point bending tests for epoxy and the MCC/epoxy composites.