

Supplementary Information

Catalyst free synthesis of poly(furfuryl alcohol) using deep eutectic solvent

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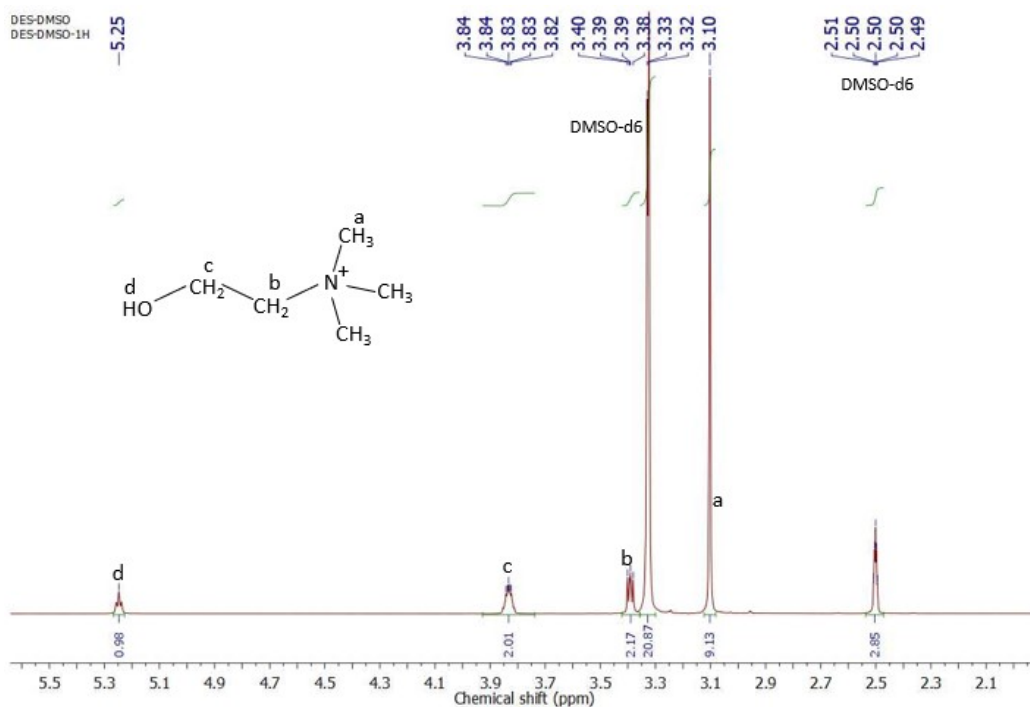


Figure S1. ¹H-NMR spectrum of DES1 [ChCl: ZnCl₂ (1: 2)]

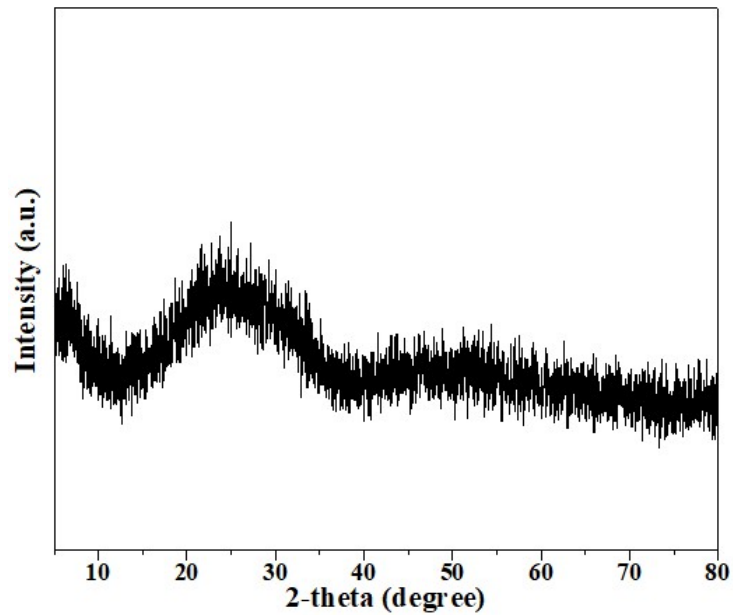


Figure S2. XRD pattern of DES1 [ChCl: ZnCl₂ (1: 2)]

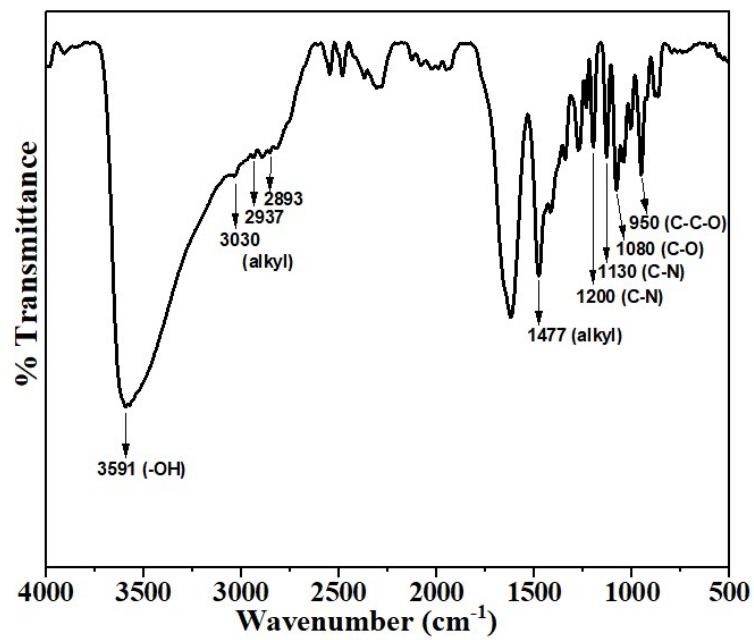


Figure S3. FTIR spectrum of DES1 [ChCl: ZnCl₂ (1: 2)]

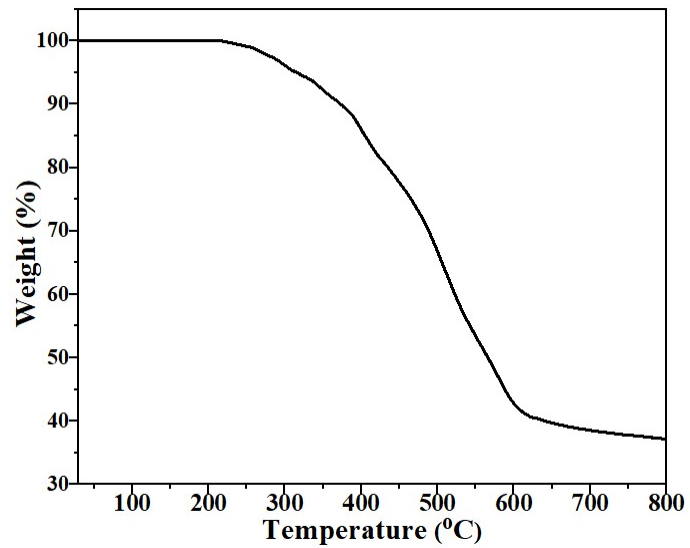


Figure S4. TGA curve of DES1 [ChCl: ZnCl₂ (1: 2)]

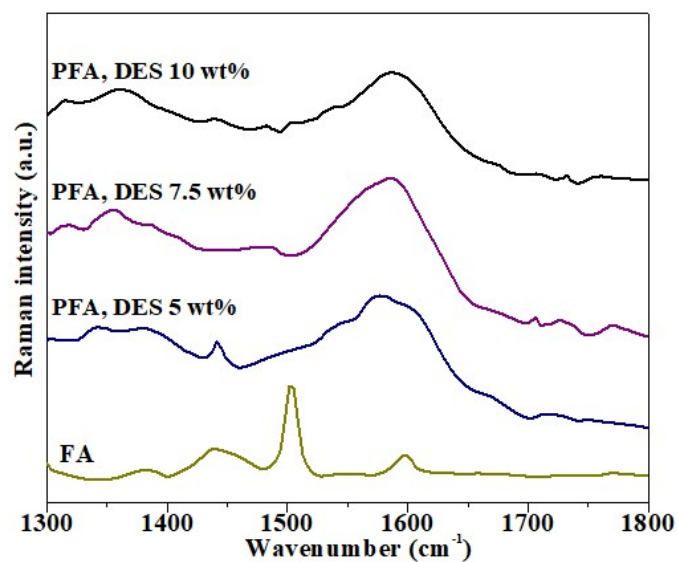


Figure S5. Raman spectra (UV laser excitation at 535 nm) of FA and PFA polymerized by different weight ratios of DES1/FA at 60 °C for 4 h.

Table S1. Literature FA polymerization using different catalysts

Entry	Catalyst	Weight ratio %	Solvent	Ref.
1.	maleic anhydride	10	Ethanol	[1]
2.	oxalic acid	~0.5	-	[2]
3.	iodine	~0.5	-	[2]
4.	<i>p</i> -toluenesulfonic acid	-	-	[3]
5.	<i>p</i> -toluenesulfonic acid	~3.0	CH ₂ Cl ₂	[4]
6.	magnite-H ⁺	15	CH ₂ Cl ₂	[5]
7.	sulfuric acid	-	-	[6],[7]
8.	HCl	-	-	[8],[9]
9.	Lewis-acid (SnCl ₄ , TiCl ₄)	-	CH ₂ Cl ₂	[10]
10.	titanium(IV) butoxide	6-80	-	[11]
11.	ChCl:ZnCl ₂ deep eutectic solvent	10	-	This work

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