

SUPPORTING INFORMATION

Study on a green synthesis of 1-phenyl-1-xylene ethane in ILs and reaction mechanism

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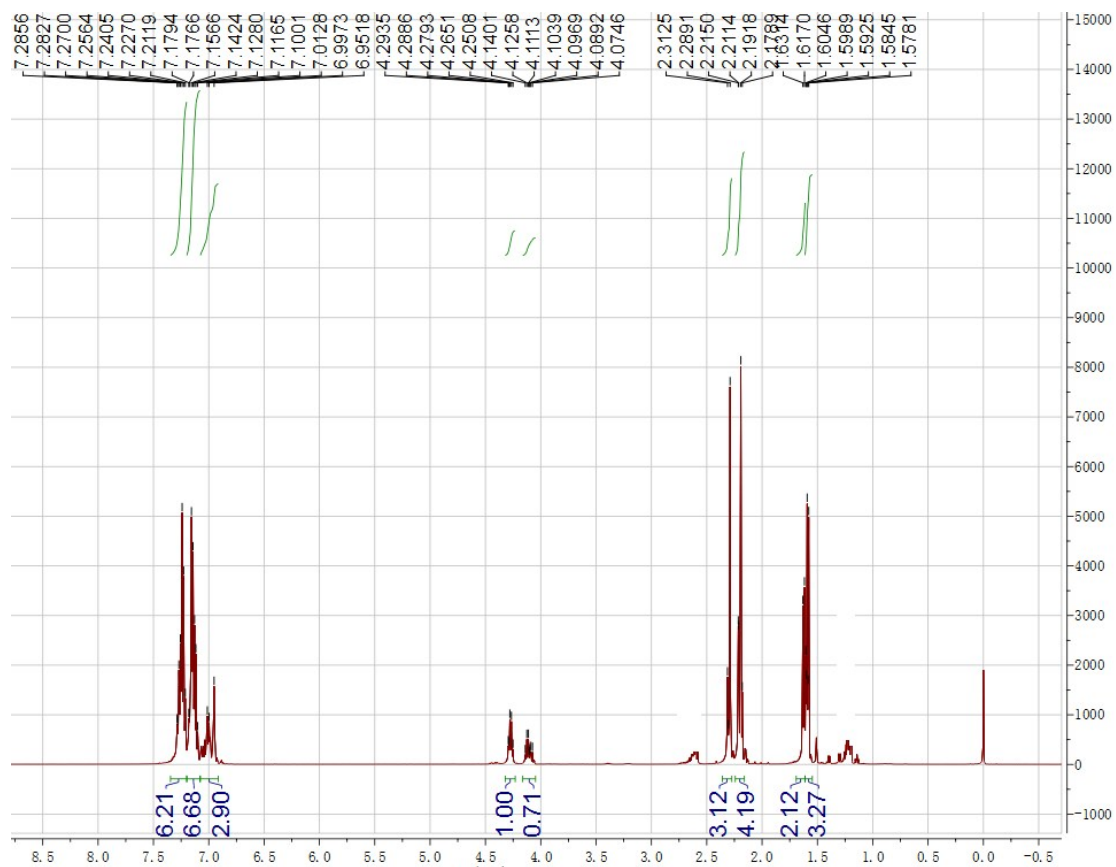
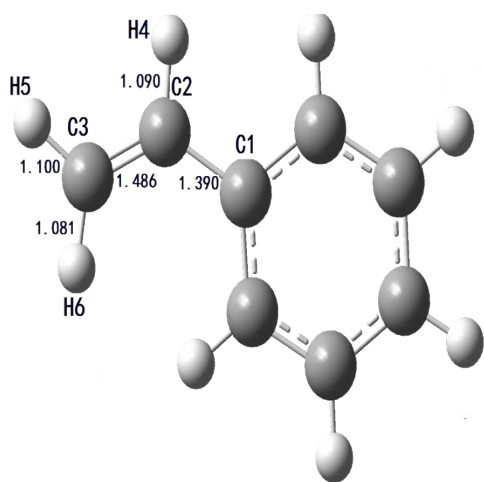
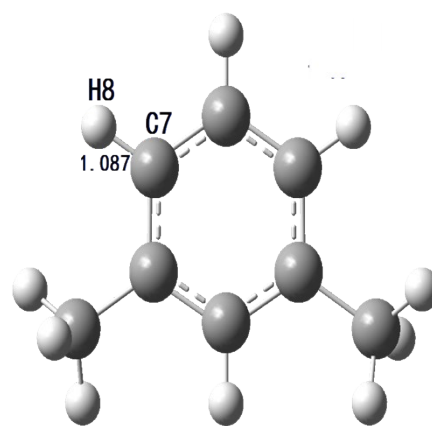


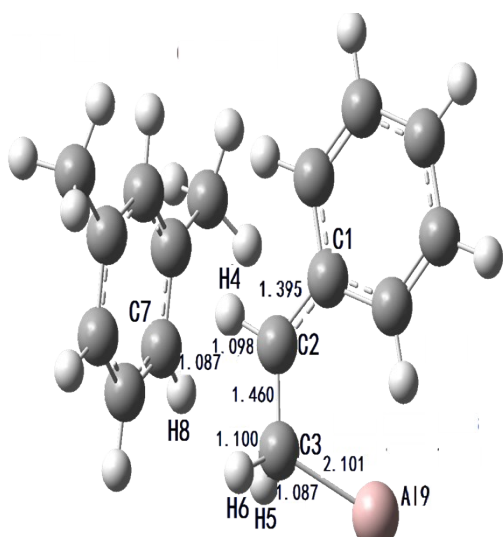
Fig. S1. Experimental ^1H NMR spectrum of and BPEX with the 1:0.36 ratio.



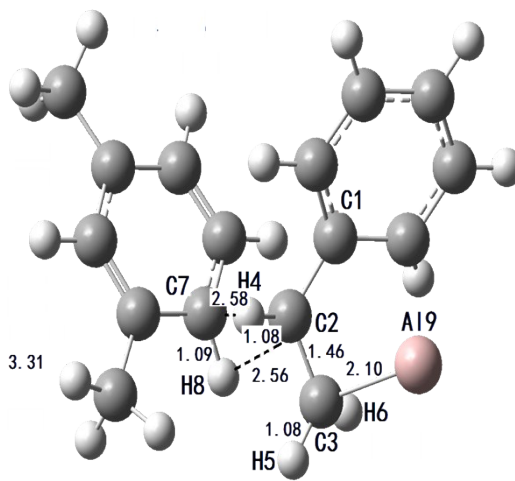
Styrene



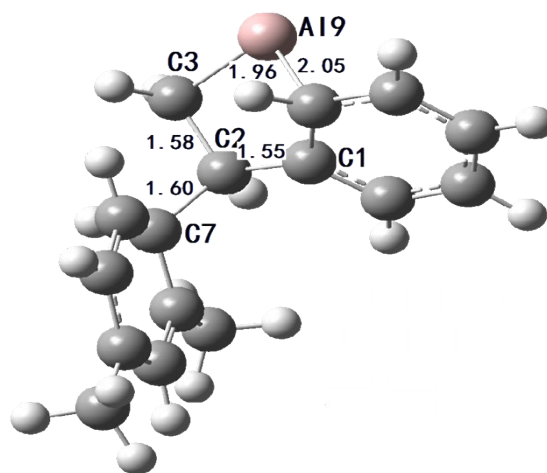
ortho-Xylene



Intermediate



Transition state



Product

Fig. S2. geometrical parameters involving various species of R, IM, TS and P

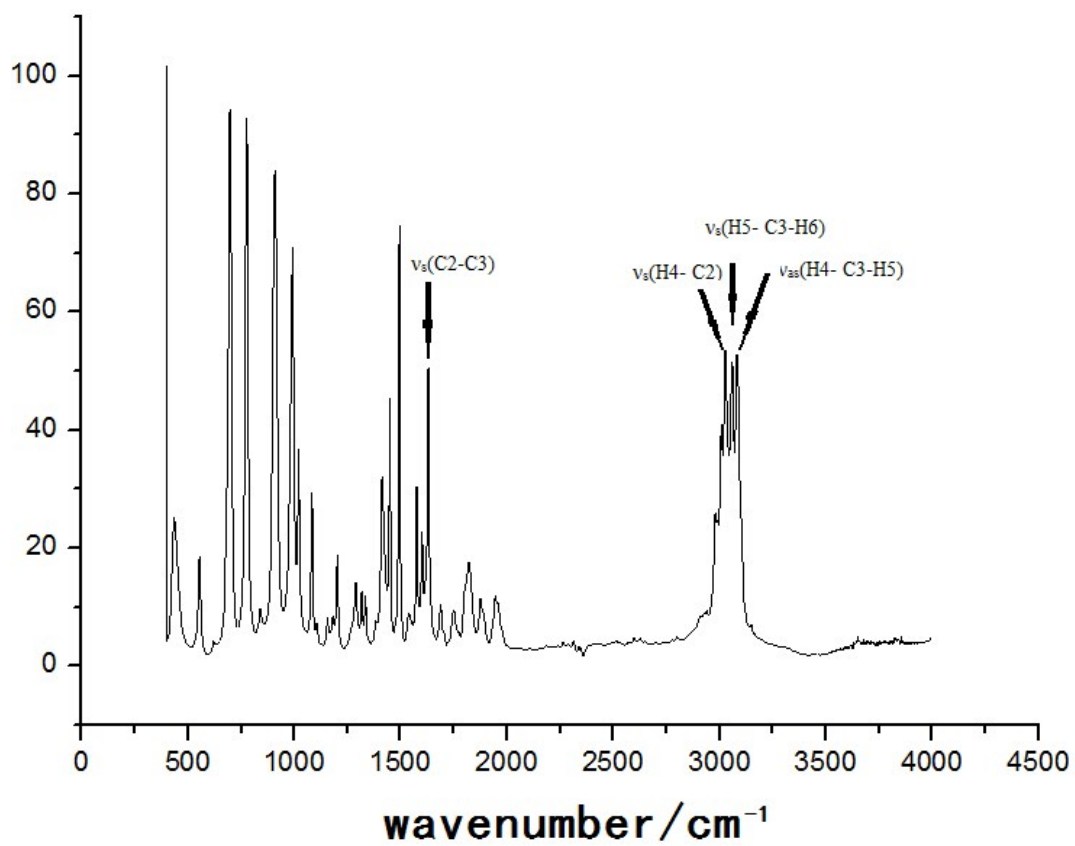


Fig. S3. Experimental IR spectrum of styrene

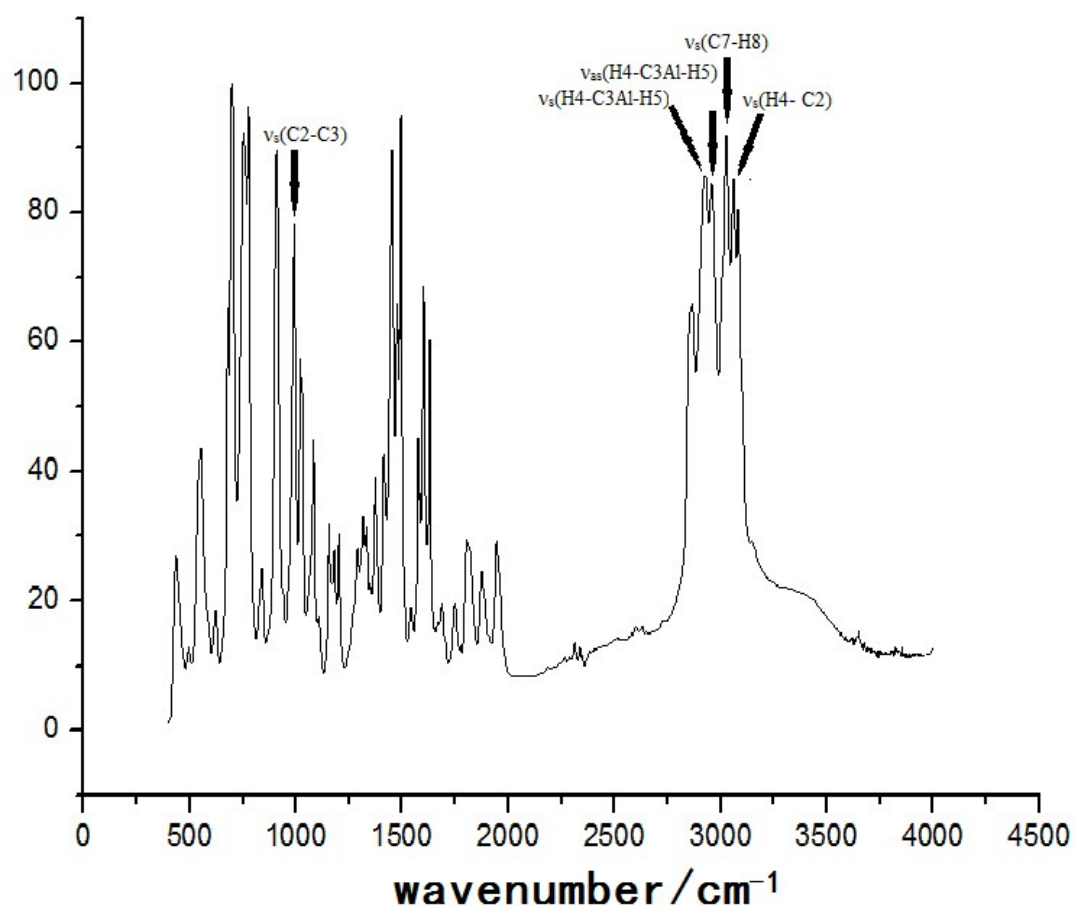


Fig. S4. Experimental IR spectrum of styrene+xylene + AlCl_3 + $[\text{BMIM}][\text{Br}]$.

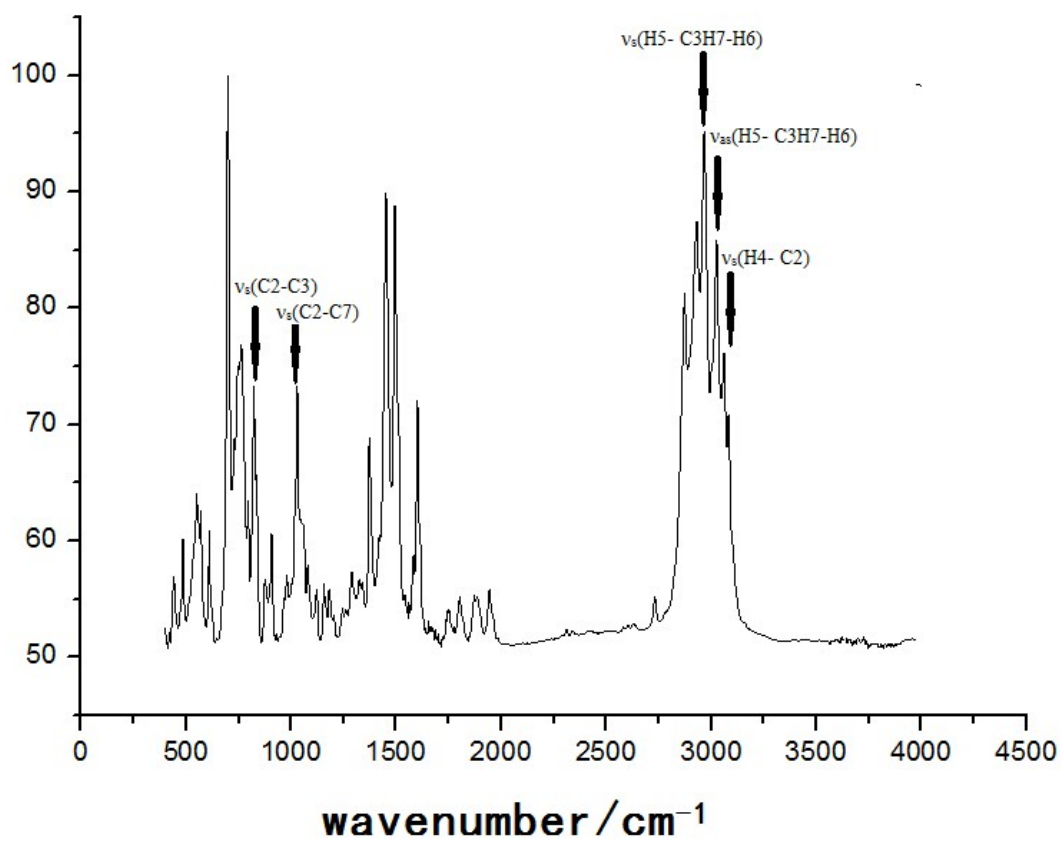


Fig. S5. Experimental IR spectrum of PXE.