

## Supplementary materials

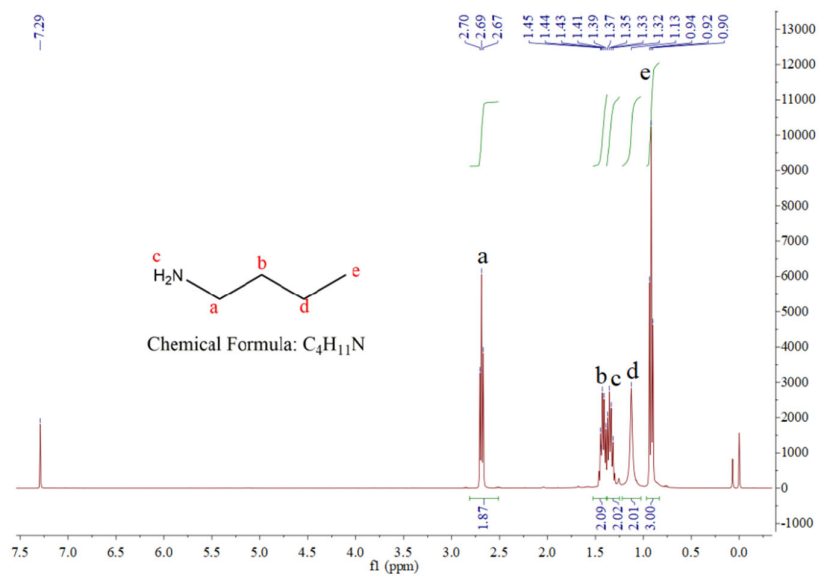


Figure S1.  $^1H$  NMR of  $C_4H_9NH_2$ .

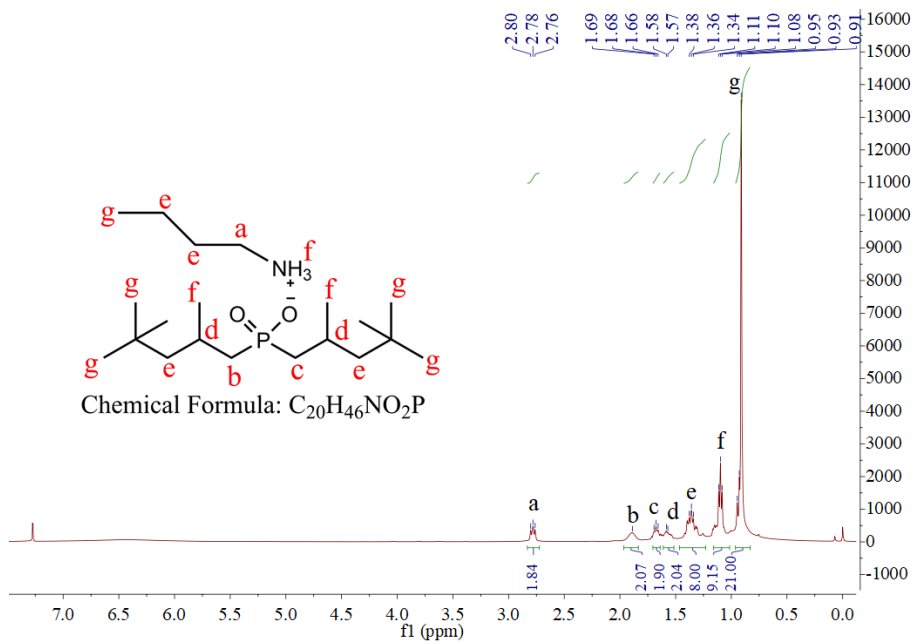


Figure S2.  $^1H$  NMR of  $[C_4H_9NH_3][Cyanex\ 272]$ .

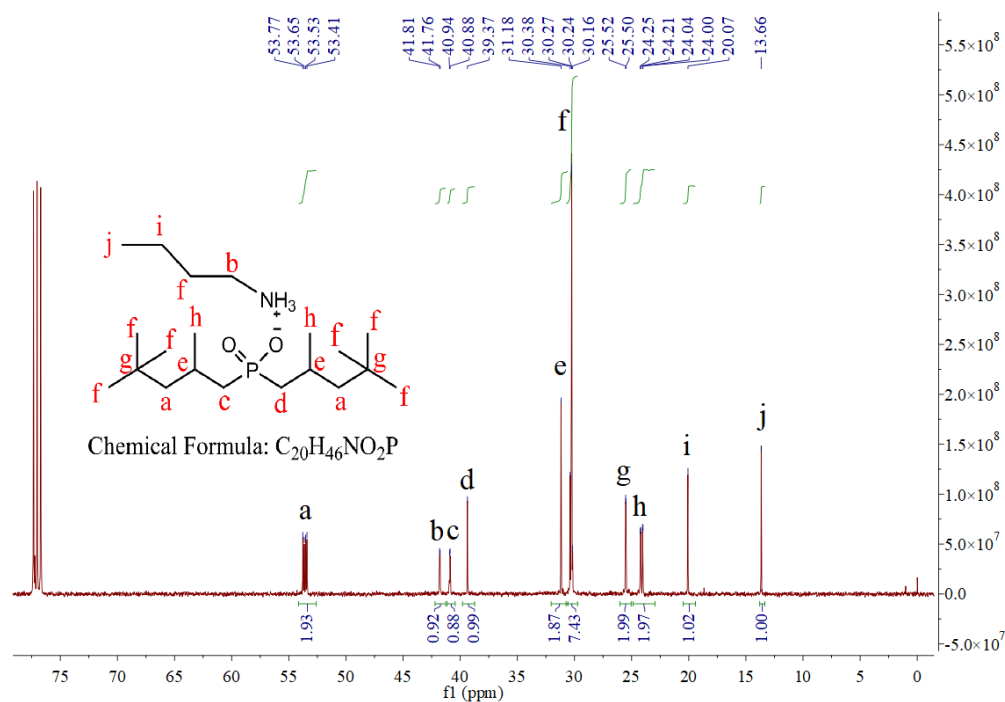


Figure S3.  $^{13}C$  NMR of  $[C_4H_9NH_3][Cyanex\ 272]$ .

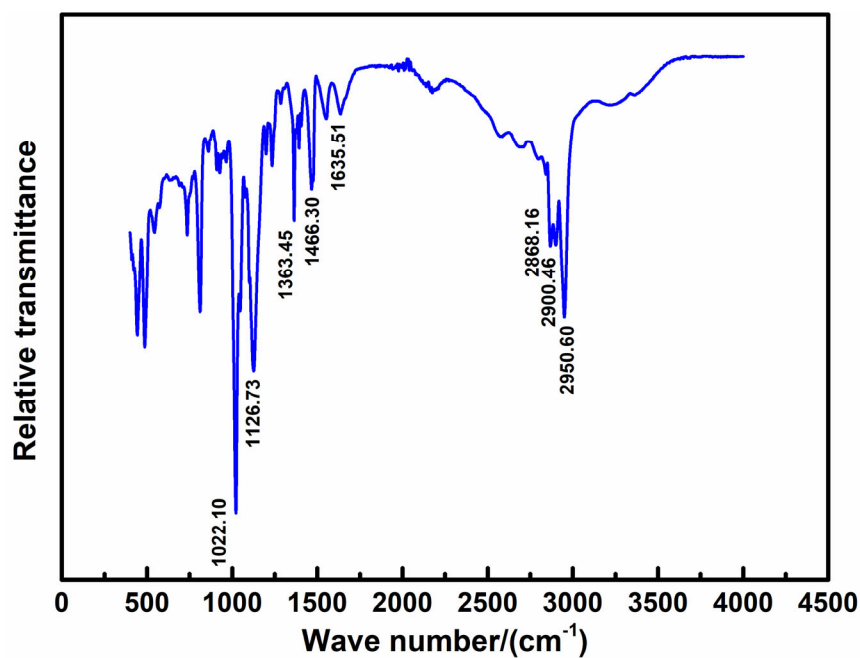


Figure S4. FT-IR of  $[C_4H_9NH_3][Cyanex\ 272]$ .

N-butylamine ( $C_4H_9NH_2$ )

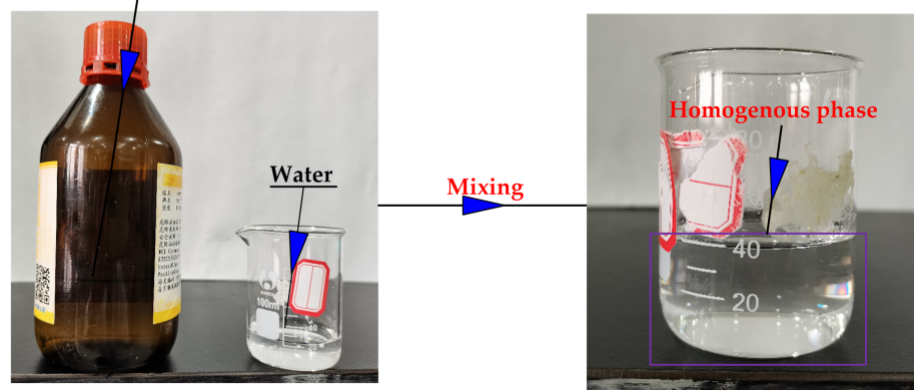


Figure S5. Homogenous phase of mixing of  $C_4H_9NH_2$  and Water.

$[C_4H_9NH_3][Cyanex\ 272]$

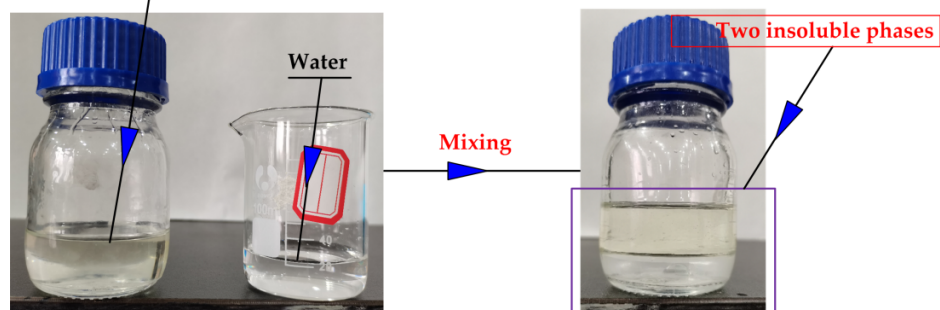


Figure S6. Two insoluble phases of mixing of  $[C_4H_9NH_3][Cyanex\ 272]$  and Water.