

Supporting information

Imidazolium-based Fe-containing Ionic Liquids: effective and recoverable oxidants for the dissolution of UO_2

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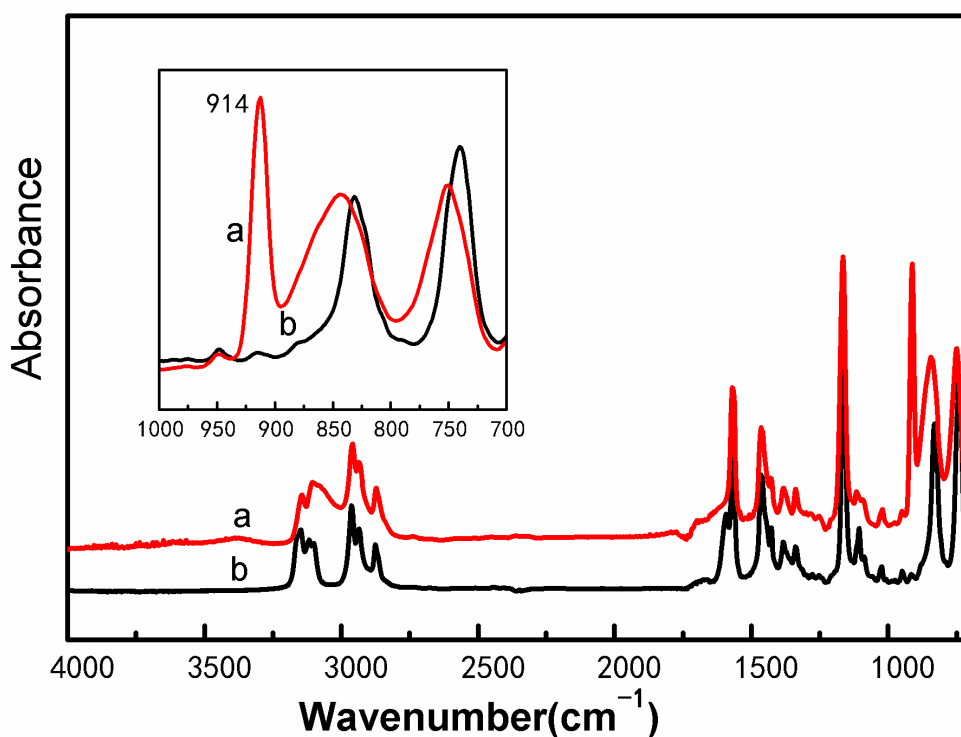


Figure S1 IR spectra of (a) [Bmim]FeCl₄ only, (b) 200 mg UO₂ dissolved in the mixture of [Bmim]FeCl₄ and [Bmim]Cl (molar ratio: 1/2)

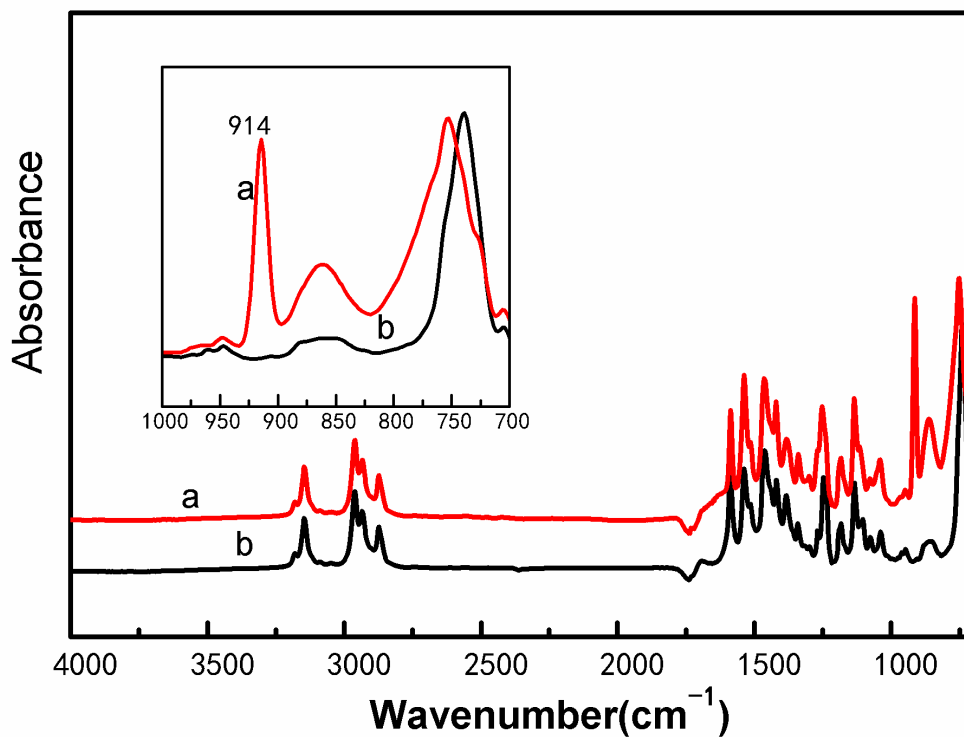


Figure S2 IR spectra of (a) [Bdmim]FeCl₄ only, (b) 125 mg UO₂ dissolved in the mixture of [Bdmim]FeCl₄ and [Bdmim]Cl (molar ratio: 1/2)

Table S1 The maximum dissolution amount of UO_2 in Fe-containing ILs

0.5ml [Bmim]FeCl ₄ (2.02mmol)		0.5ml [Emim]FeCl ₄ (2.31mmol)		0.5ml [Bdmim]FeCl ₄ (1.88mmol)	
BmimCl/mmol	dissolved UO ₂ /mg	EmimCl/mmol	dissolved UO ₂ /mg	BdmimCl/mmol	dissolved UO ₂ /mg
0	3.6	0	3.5	0	2.1
1.1	83.2	1.3	84.2	1.1	30.4
2.4	145.2	2.7	180.2	2.4	89.7
4.3	248.6	5.4	314.9	4.3	124.1
6.4	248.3	6.6	314.7	6.3	123.7
7.9	247.9	7.1	314.3	7.6	123.6