

Supporting information

Modification of Chemical Performance of Dopants in Sol-Gel Films with Entrapped Ionic Liquid

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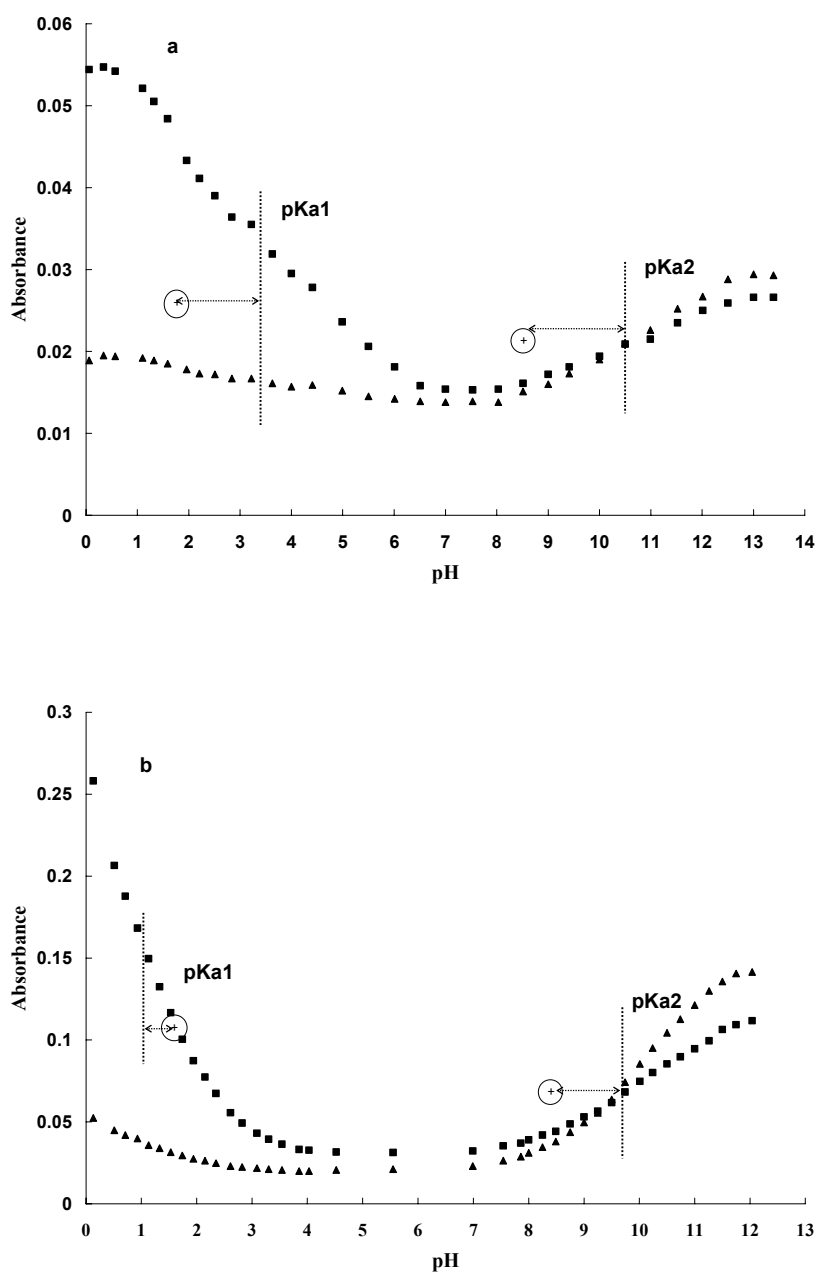


Fig. S.1. Titration curves of entrapped TB in (a) in unmodified sol-gel at 600 nm [▲], 550 nm [■] and in (b) modified sol-gel at 601 nm [▲], at 551 nm [■] and value in solution [⊕]

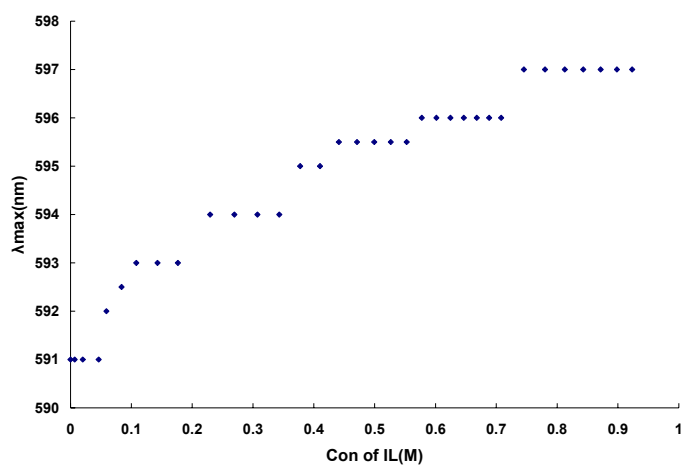


Fig. S.2. Effect of concentration of IL on shift of maximum wavelength of BPB in solution

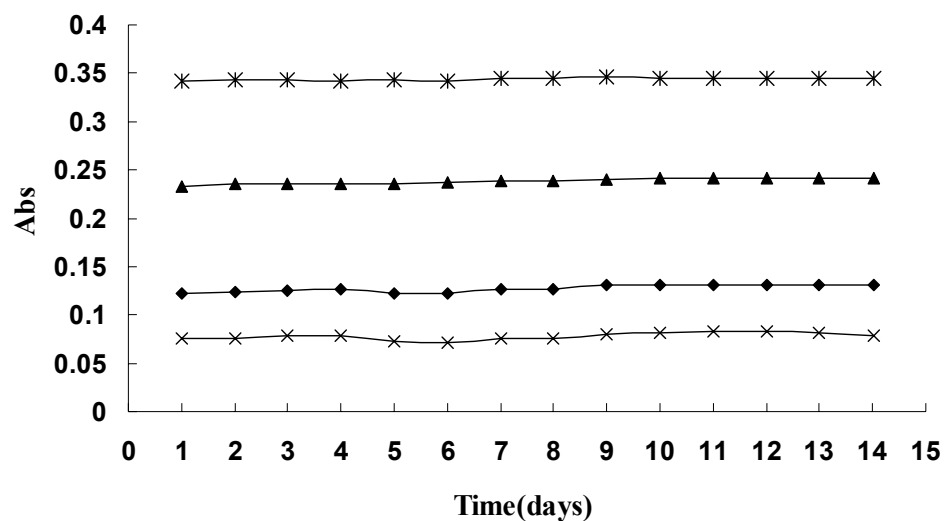


Fig. S.3. Leaching behaviors of BPR and TB in sol-gel matrix:

TB (x) at pH 1.6 and BPR (▲) at pH 9 in unmodified sol-gel and BPR-IL (ж) at pH 7 and TB-IL (◆) at pH 6 in IL-modified sol-gel

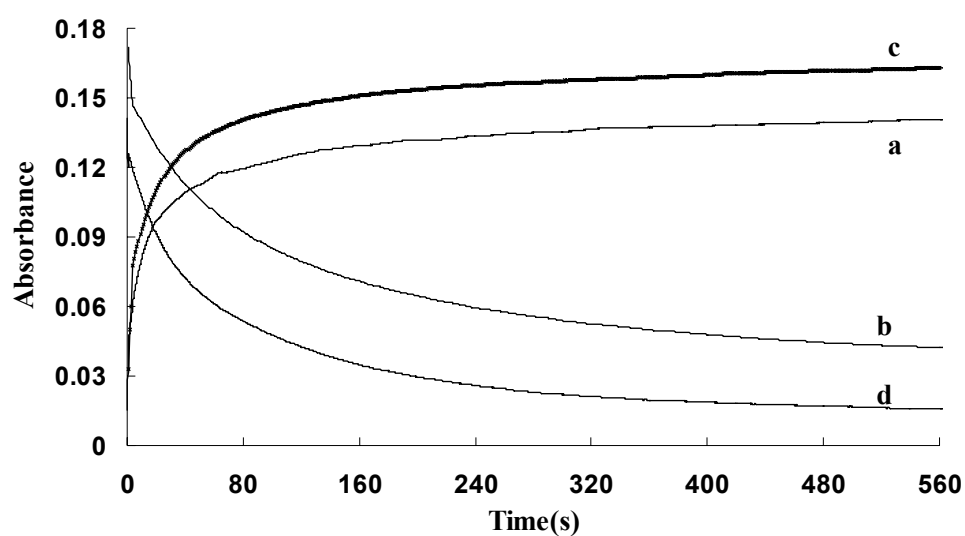


Fig. S.4. Typical response curve of BXB in unmodified sol-gel film as a function of time (a) at transition intervals 7 to 10 (b) 10 to 7; and in modified sol-gel by IL (c) at transition intervals 7 to 10 (d) 10 to

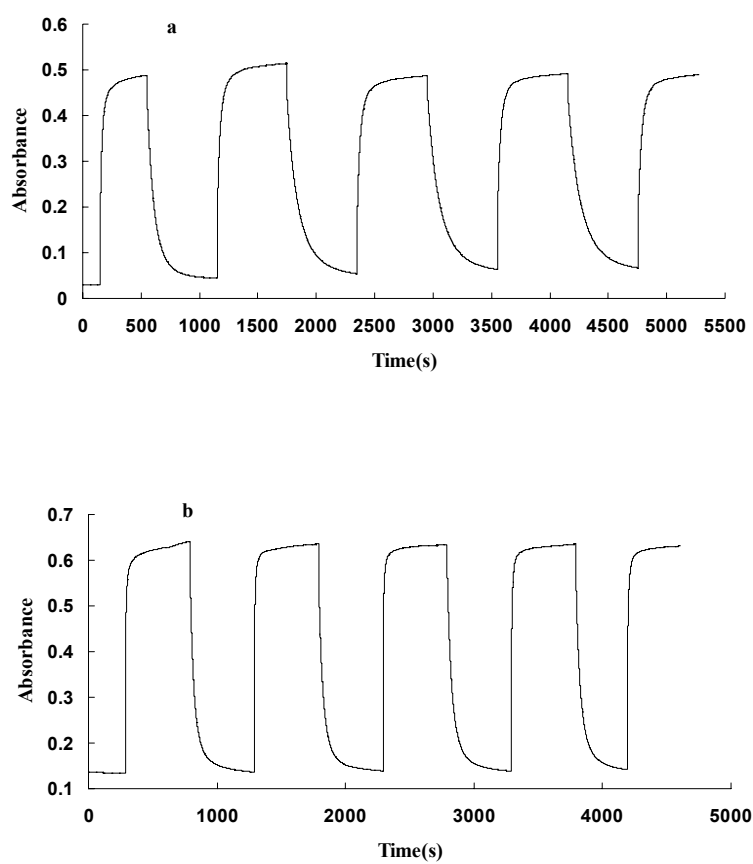


Fig. S.5. Variation of the absorbance of BCP (a) in unmodified and (b) in modified sol-gel film for five alternative change of pH from 6.5 to 9.5



Fig. S.6. wettability of BCG entrapped in unmodified (a) and IL-modified sol-gel film (b)

Table S. 1. Typical storage stability of sol-gel films after 15 months storage in dry air

Indicator	Freshly prepared		After 15 months storage	
	Response time(s)	pK _a	Response time(s)	pK _a
BCG	359	8.2	882	7.3
BCG-IL	54	5.6	515	7.1
CPR	125	8.0	480	7.3
CPR-IL	39	6.5	340	6.7
BXB	140	9.5	175	9.8
BXB-IL	96	9.2	140	10.4