

Supplementary Information Figure Caption

Fig. S1 Relations between D_{Cs} and the concentration of BPC6 in $[C_n\text{mim}][\text{NTf}_2]$.

Fig. S2 Dependence of D_{Cs} on the initial HNO_3 concentration in aqueous phase of BPC6/ $[C_n\text{mim}][\text{NTf}_2]$ systems. $[\text{BPC6}]_{\text{initial}} = 15 \text{ mmol L}^{-1}$, $[\text{Cs}^+]_{\text{initial}} = 10 \text{ mmol L}^{-1}$.

Fig. S3 Dependence of the absorbance of $[\text{C}_4\text{mim}]^+$ at 211 nm in the aqueous phase on the concentration of extracted Cs^+ .

Fig. S4 Dependence of pH in aqueous solutions and E_{Cs} on γ -dose when Cs^+ extraction from the aqueous solution using irradiated $[\text{C}_4\text{mim}][\text{NTf}_2]$ in combination with BPC6.

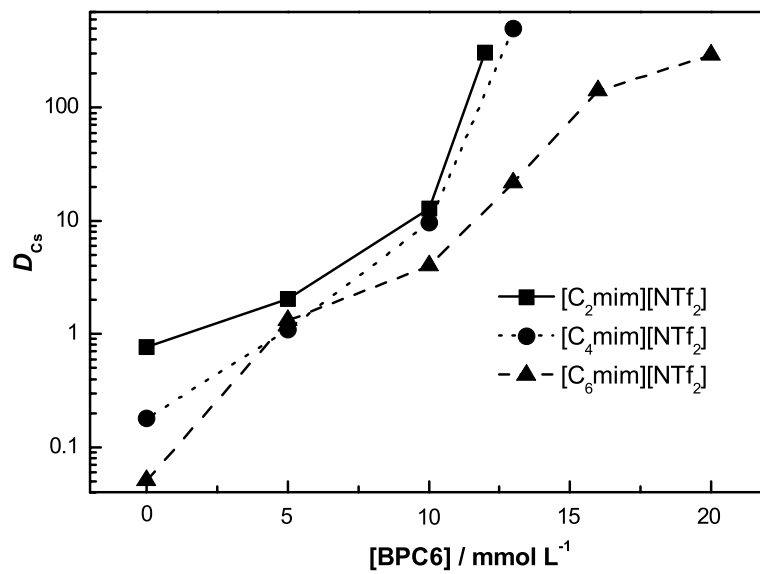


Fig. S1 Relations between D_{Cs} and the concentration of BPC6 in [C_nmim][NTf₂].

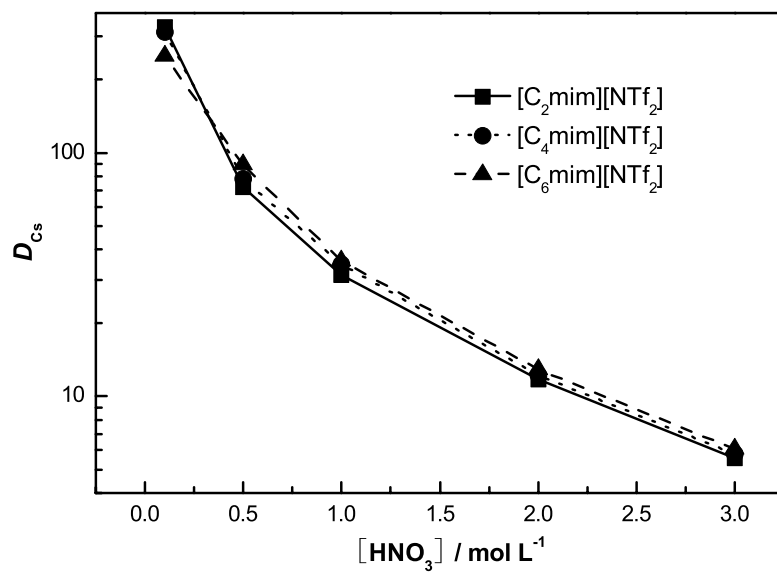


Fig. S2 Dependence of D_{Cs} on the initial HNO_3 concentration in aqueous phase of BPC6/ $[C_n\text{mim}][NTf_2]$ systems. $[BPC6]_{\text{initial}} = 15 \text{ mmol L}^{-1}$, $[Cs^+]_{\text{initial}} = 10 \text{ mmol L}^{-1}$.

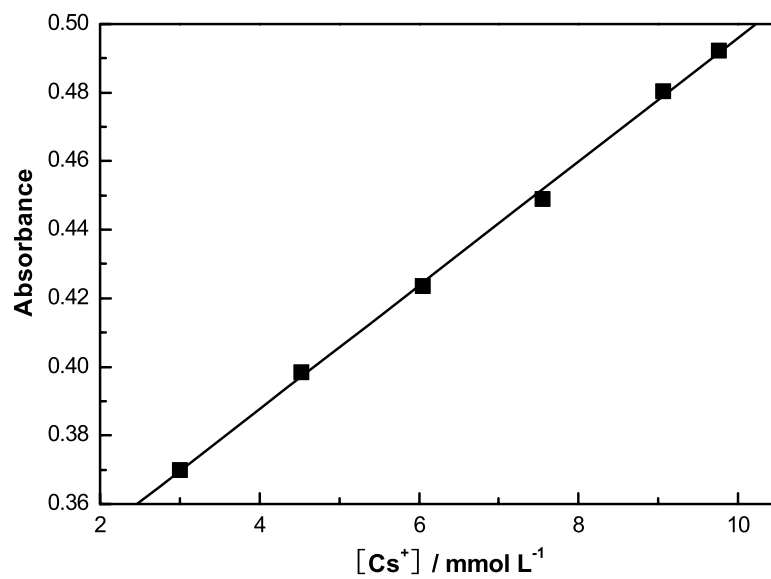


Fig. S3 Dependence of the absorbance of $[\text{C}_4\text{mim}]^+$ at 211 nm in the aqueous phase on the concentration of extracted Cs^+ . Apparently illustrated by this figure, there is a linear correlation between the two variables. More Cs^+ extracted, more $[\text{C}_4\text{mim}]^+$ exchanged to the aqueous phase.

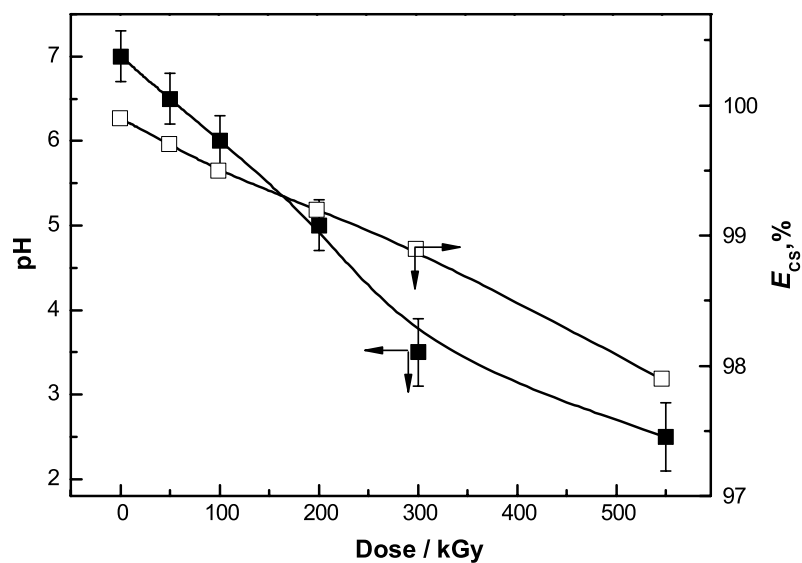


Fig. S4 Dependence of pH in aqueous solutions and E_{Cs} on γ -dose when Cs^+ extraction from the aqueous solutions using irradiated $[C_4mim][NTf_2]$ in combination with BPC6. pH in aqueous solutions decreases with increasing absorbed dose of $[C_4mim][NTf_2]$, leading to the decrease of E_{Cs} .