

## Supporting Information

# Modulation of Properties by Ion Changing Based on Luminescent Ionic Salts Consisting of Spirobi(boron ketoiminate)

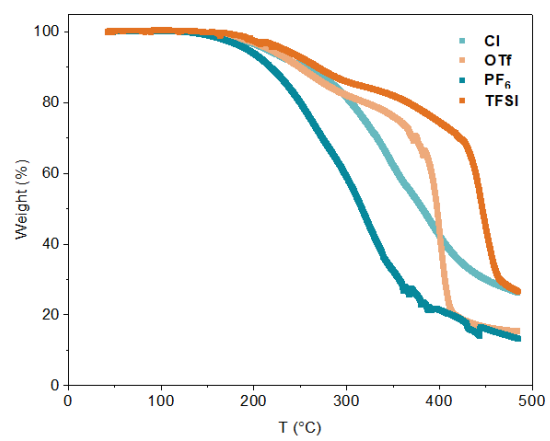
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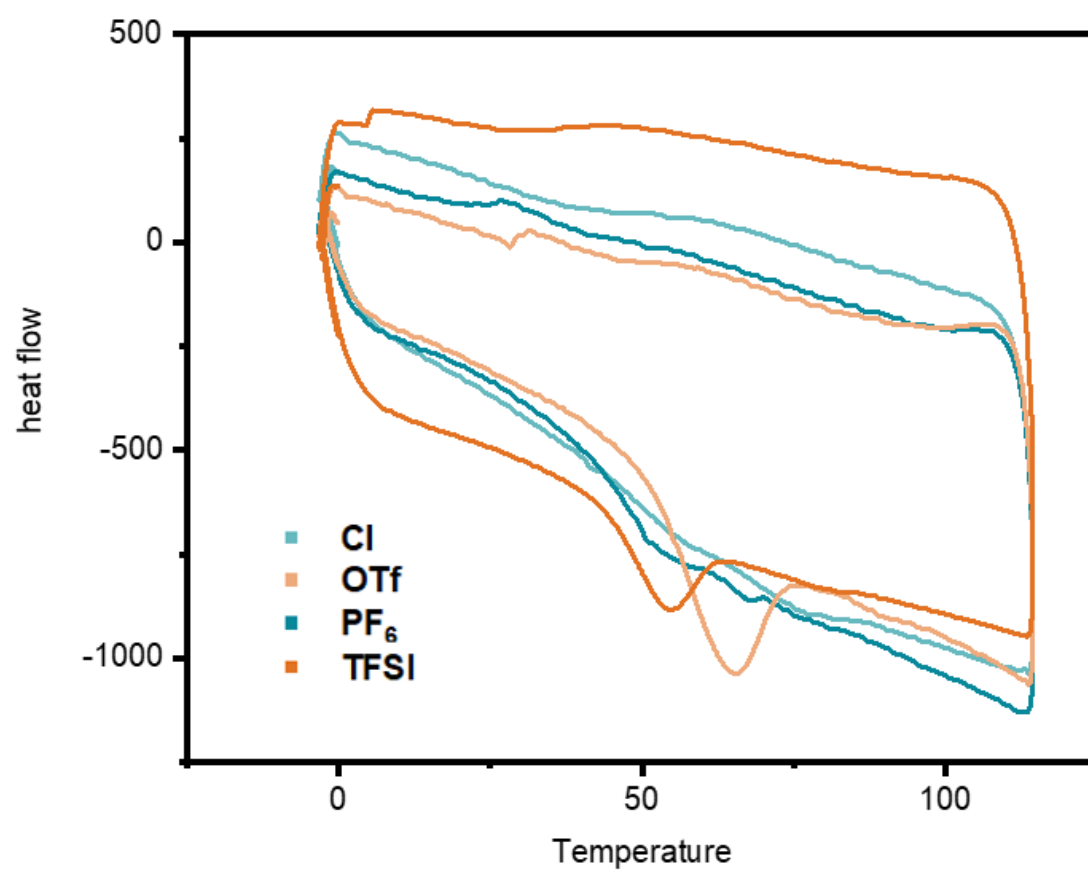
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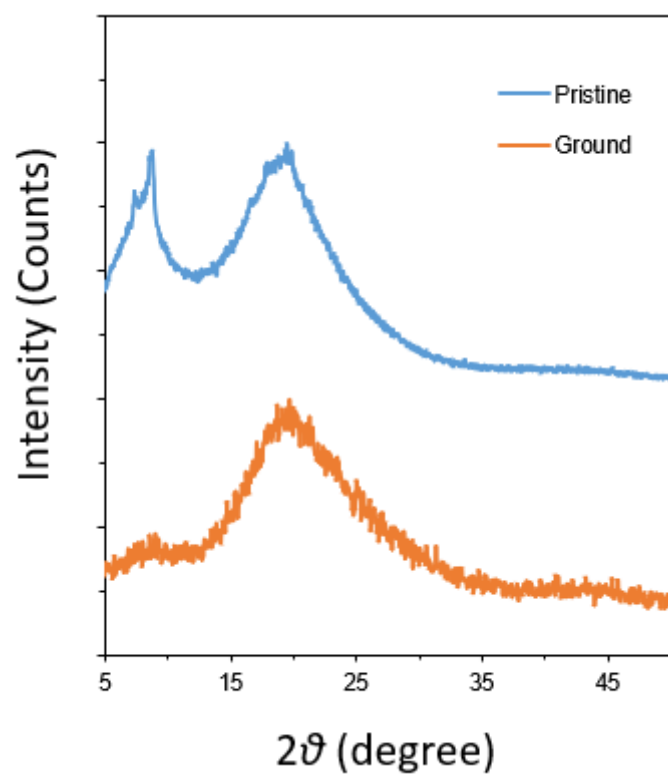
E-mail: [tanaka@poly.synchem.kyoto-u.ac.jp](mailto:tanaka@poly.synchem.kyoto-u.ac.jp)



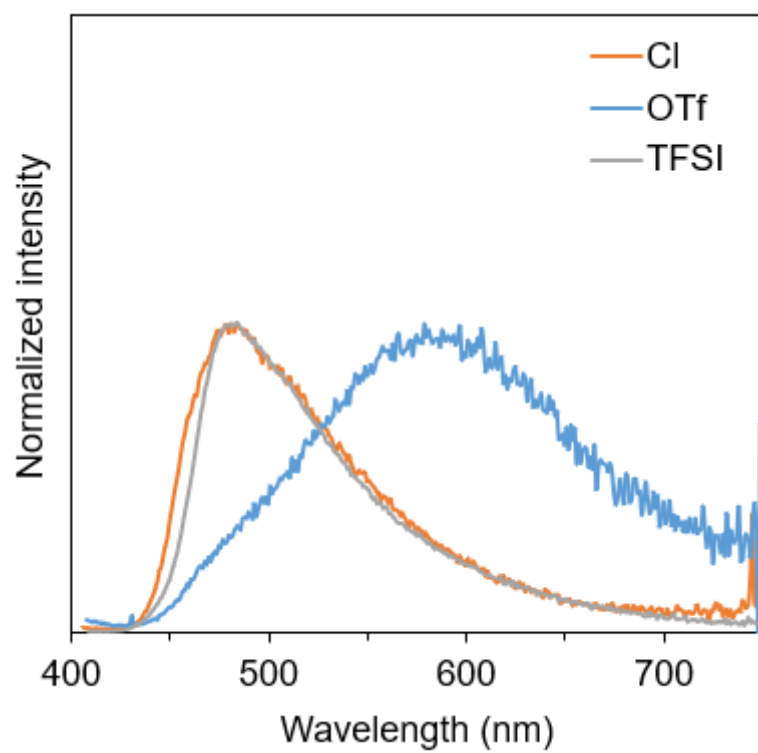
**Figure S1.** TGA diagrams of BBK salts under N<sub>2</sub> flowing.



**Figure S2.** DSC profiles of BBK salts.



**Figure S3.** XRD profiles of BBK-PF<sub>6</sub> before and after the mechanical treatment.



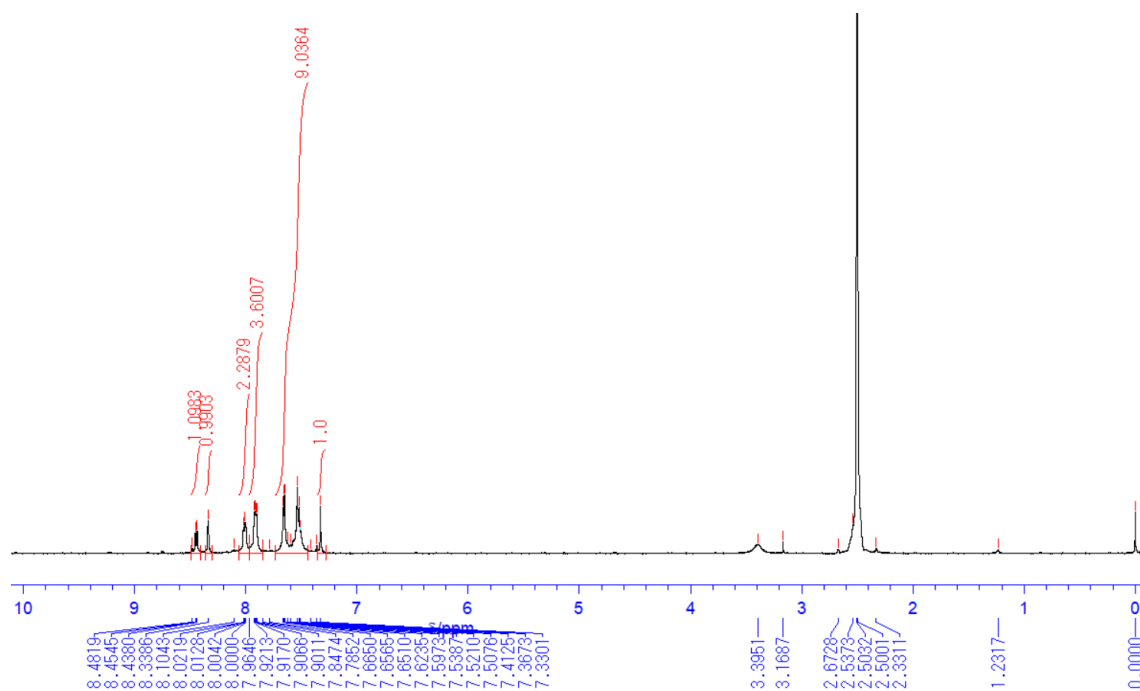
**Figure S4.** Solid-state luminescent properties of BBK salts.

**Table S1.** Optical properties of BBK-PF<sub>6</sub>

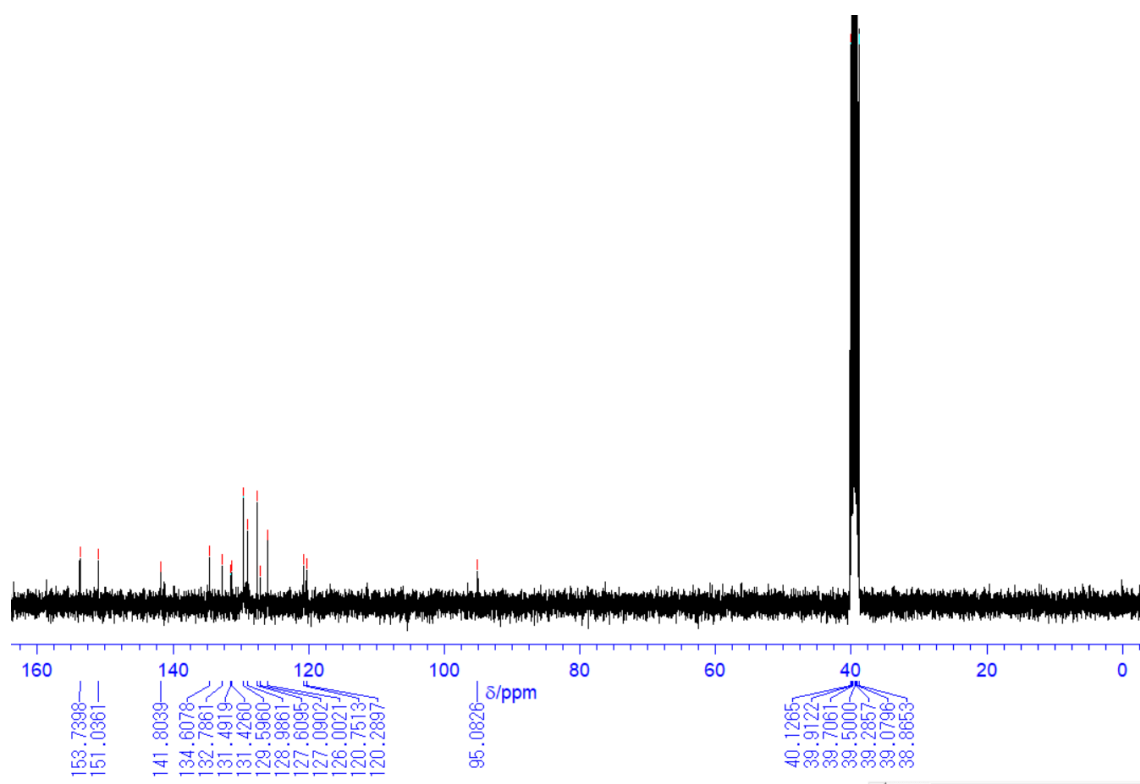
	$\lambda_{ab}$ [nm]	$\lambda_{em}$ [nm]	$\Phi$
Solution	391	453	0.26
Crystal	-	506	0.10
Amorphous	-	477	0.15

**Table S2.** Solid-state luminescent properties of BBK salts

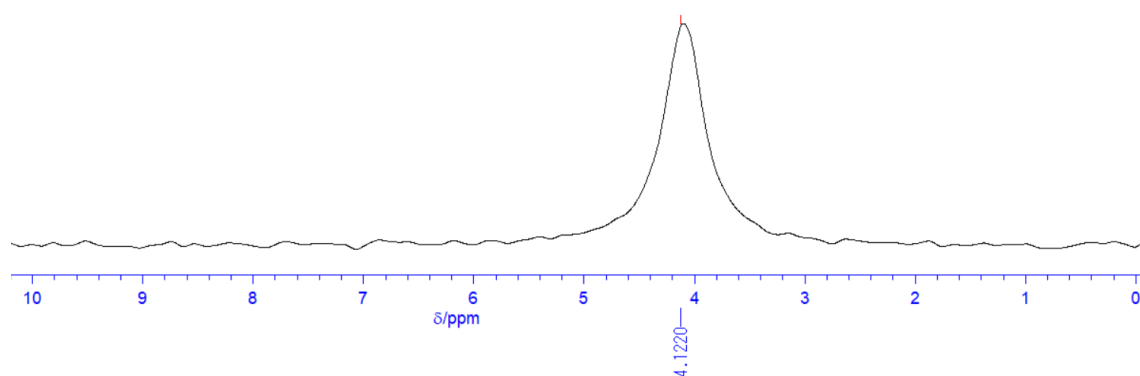
salts	Cl	OTf	TFSI
$\lambda_{em}$ (nm)	484	579	484
$\Phi_{em}$	0.026	0.015	0.063



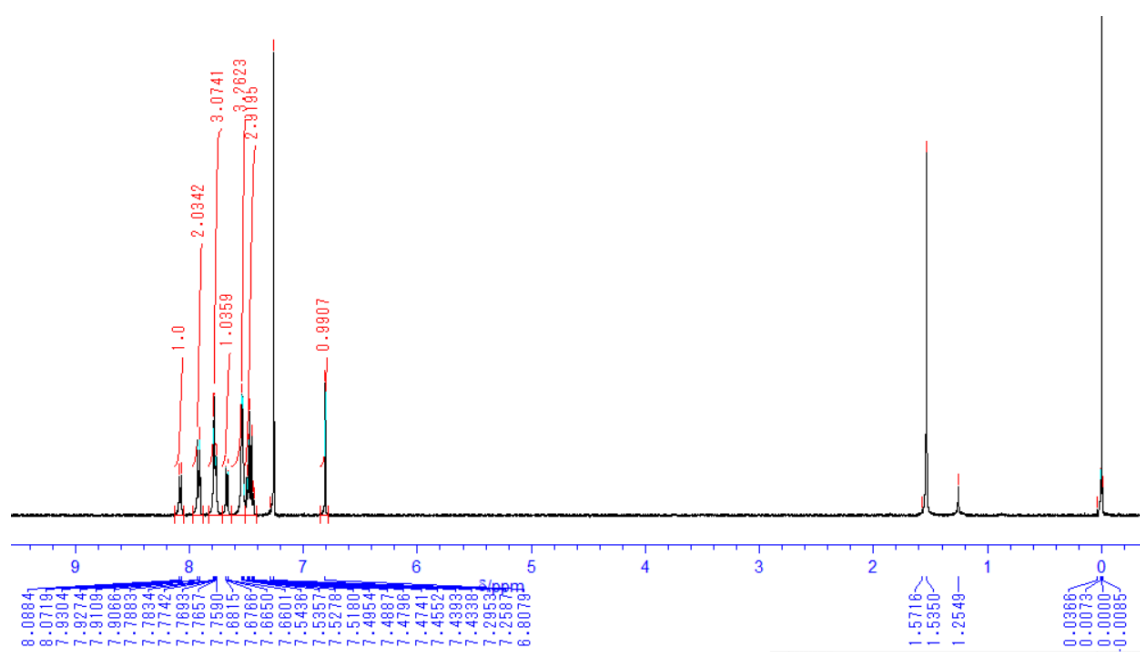
**Figure S5.**  $^1\text{H}$  NMR spectrum of BBK-Cl in  $\text{DMSO-}d_6$ .



**Figure S6.**  $^{13}\text{C}$  NMR spectrum of BBK-Cl in  $\text{DMSO-}d_6$ .

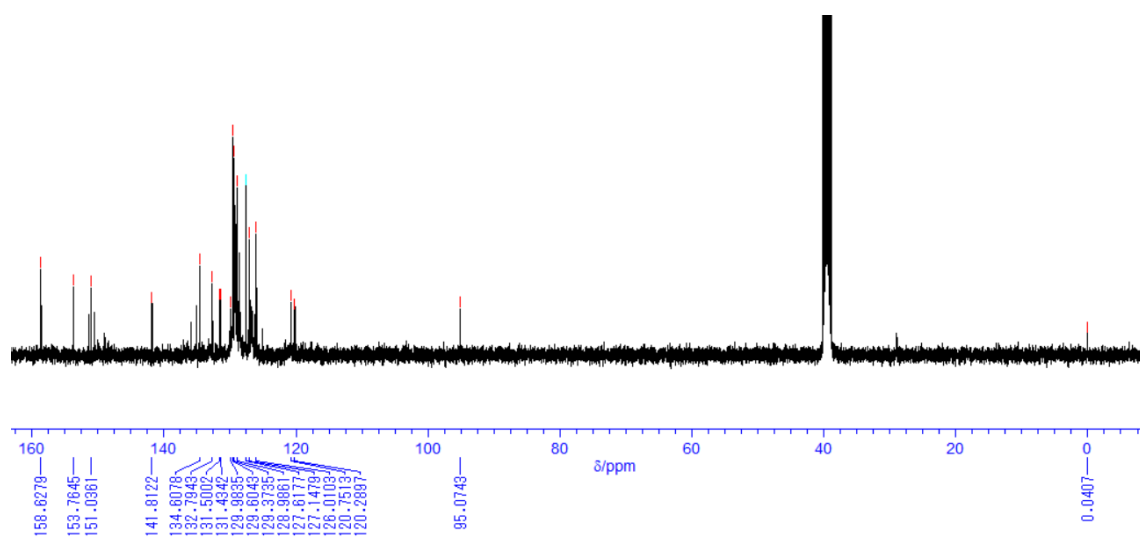


**Figure S7.**  $^{11}\text{B}$  NMR spectrum of BBK-Cl in  $\text{DMSO}-d_6$ .

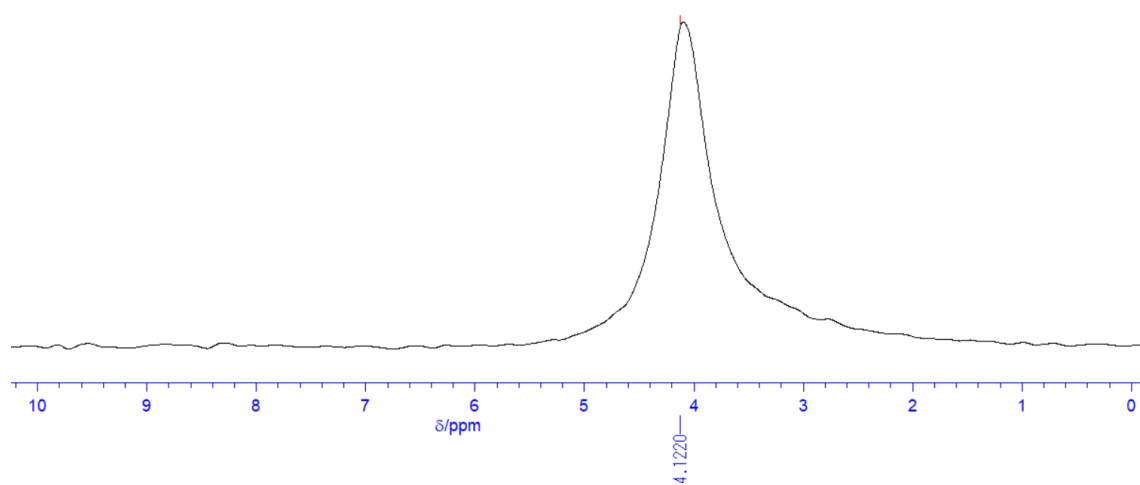


**Figure S8.**  $^1\text{H}$  NMR spectrum of BBK- $\text{PF}_6$  in  $\text{CDCl}_3$ .

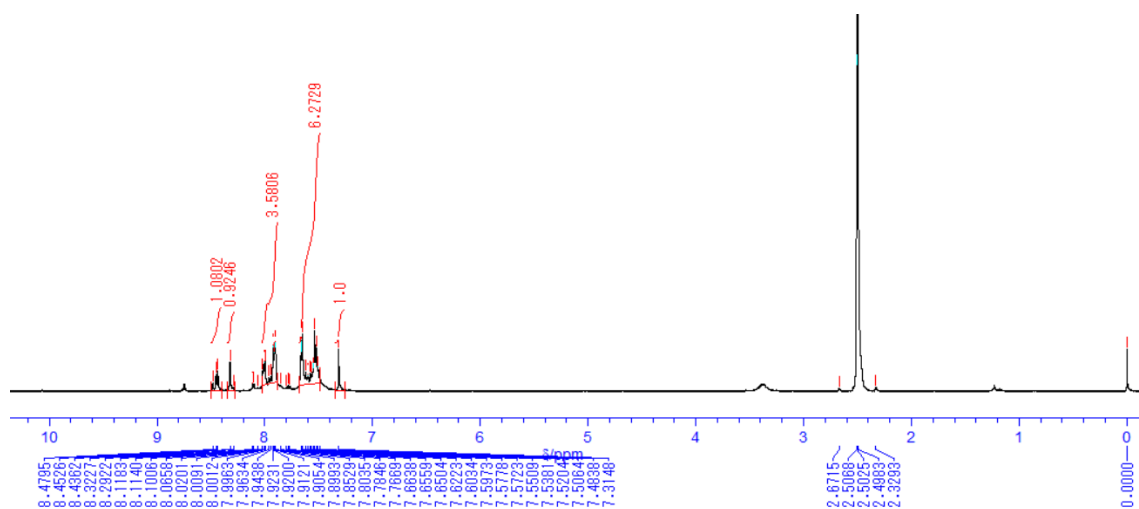




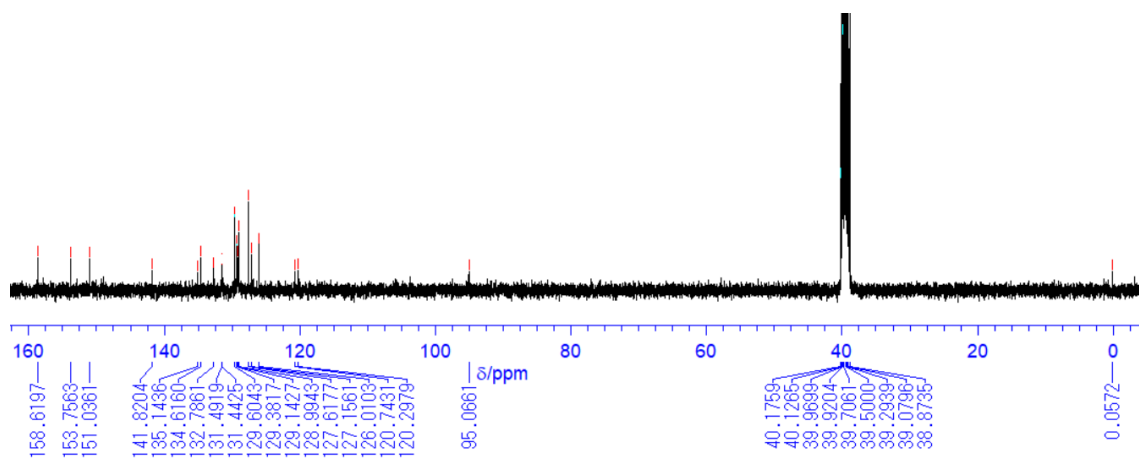
**Figure S9.**  $^{13}\text{C}$  NMR spectrum of BBK- $\text{PF}_6$  in  $\text{DMSO}-d_6$ .



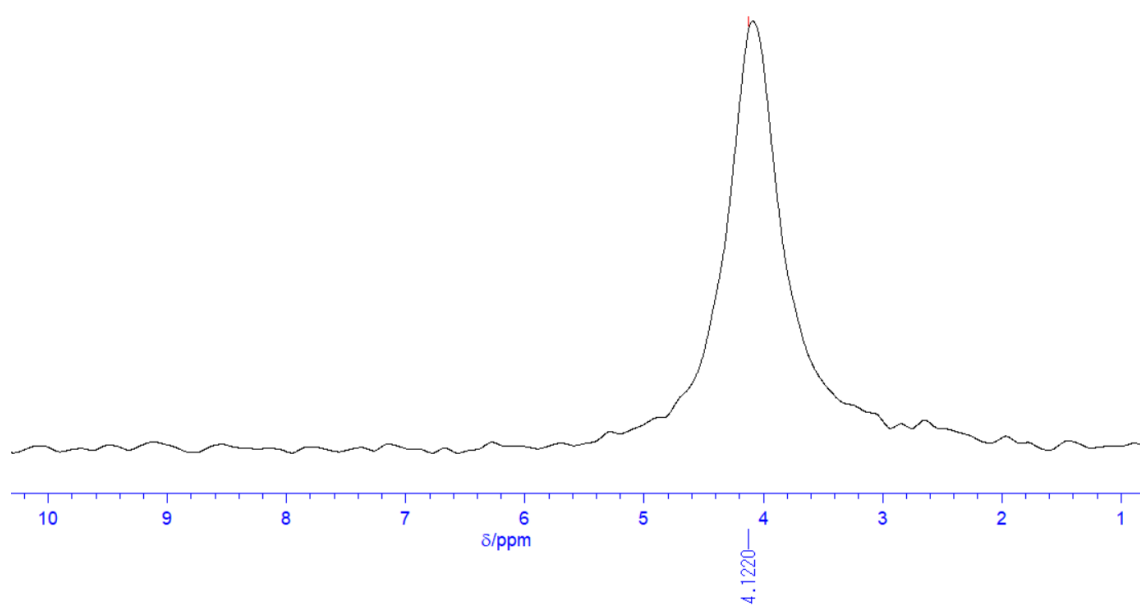
**Figure S10.**  $^{11}\text{B}$  NMR spectrum of BBK- $\text{PF}_6$  in  $\text{DMSO}-d_6$ .



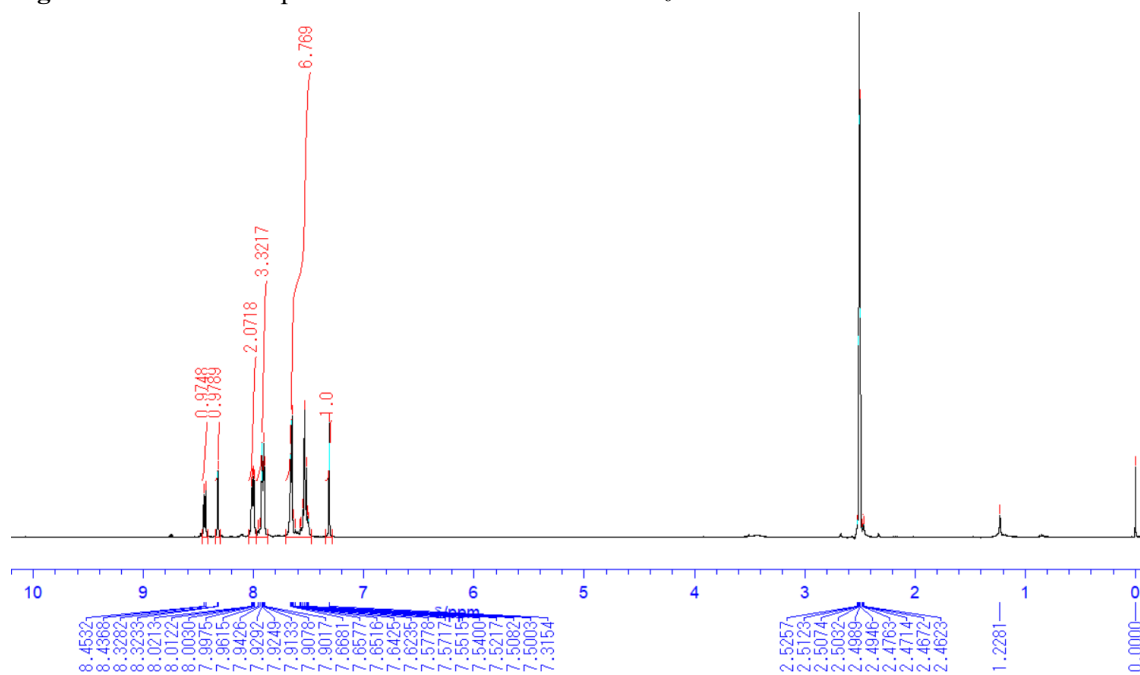
**Figure S11.**  $^1\text{H}$  NMR spectrum of BBK-OTf in  $\text{DMSO}-d_6$ .



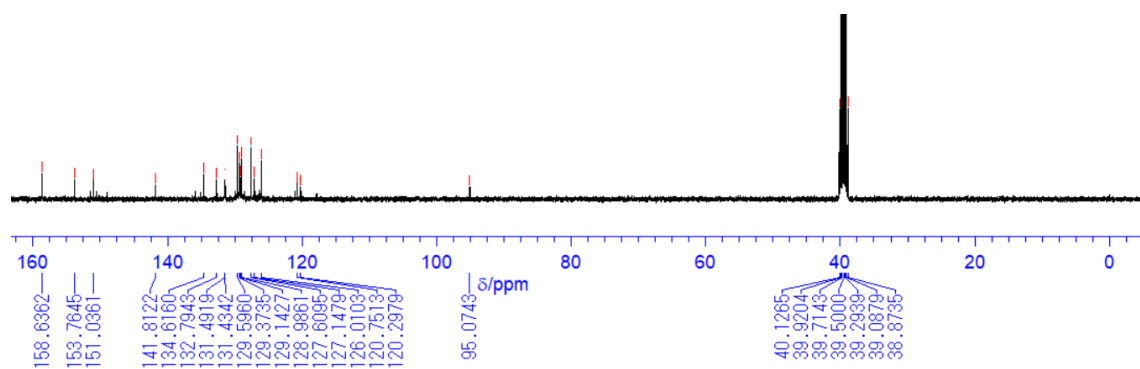
**Figure S12.**  $^{13}\text{C}$  NMR spectrum of BBK-OTf in  $\text{DMSO}-d_6$ .



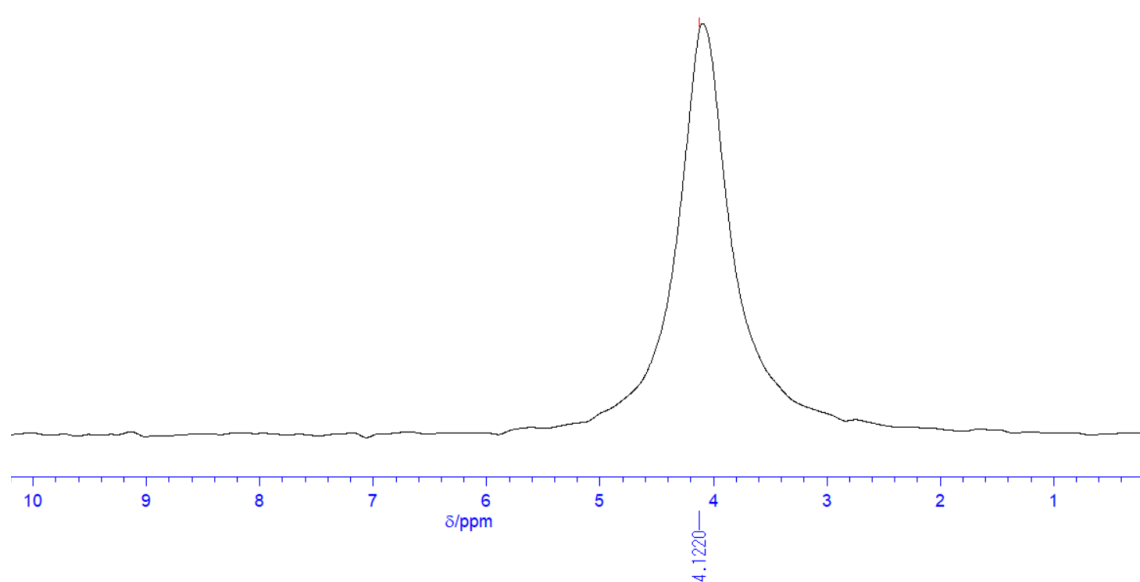
**Figure S13.**  $^{11}\text{B}$  NMR spectrum of BBK-OTf in  $\text{DMSO-}d_6$ .



**Figure S14.**  $^1\text{H}$  NMR spectrum of BBK-TFSI in  $\text{DMSO-}d_6$ .



**Figure S15.**  $^{13}\text{C}$  NMR spectrum of BBK-TFSI in  $\text{DMSO-}d_6$ .



**Figure S16.**  $^{11}\text{B}$  NMR spectrum of BBK-TFSI in  $\text{DMSO-}d_6$ .