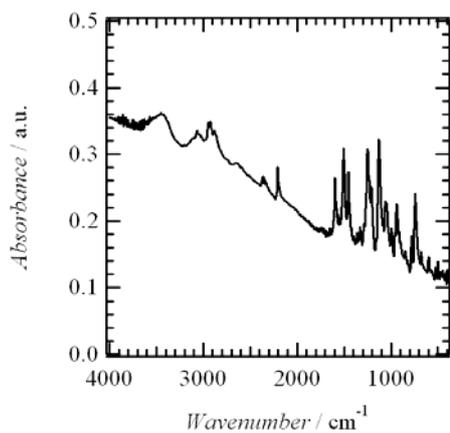


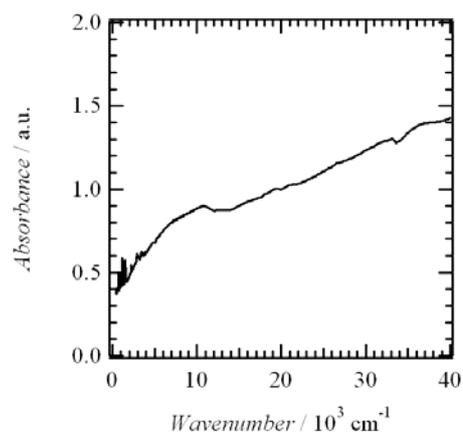
## Supporting Information

# Cation-Anion Packing and Molecular Motion in (*m*-Fluoroanilinium)(dibenzo[18]crown-6)[Ni(mnt)<sub>2</sub>]<sup>-</sup>(CH<sub>3</sub>CN)<sub>0.25</sub> Crystals

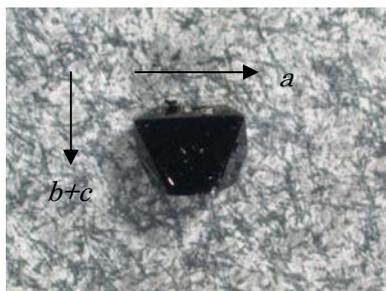
Kiyonori Takahashi, Norihisa Hoshino, Kazuya Kubo, Takayoshi Nakamura, Tomoyuki Akutagawa



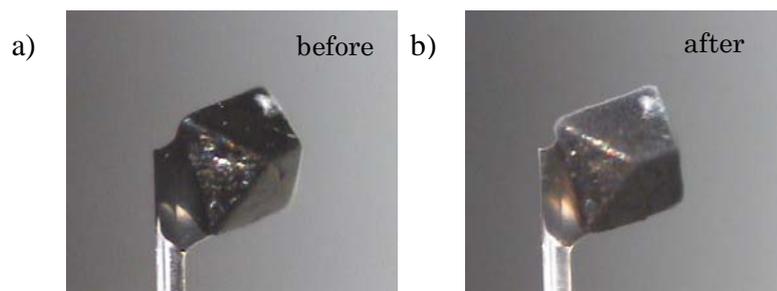
**Figure S1.** IR spectrum of crystal **1** in KBr pellet.



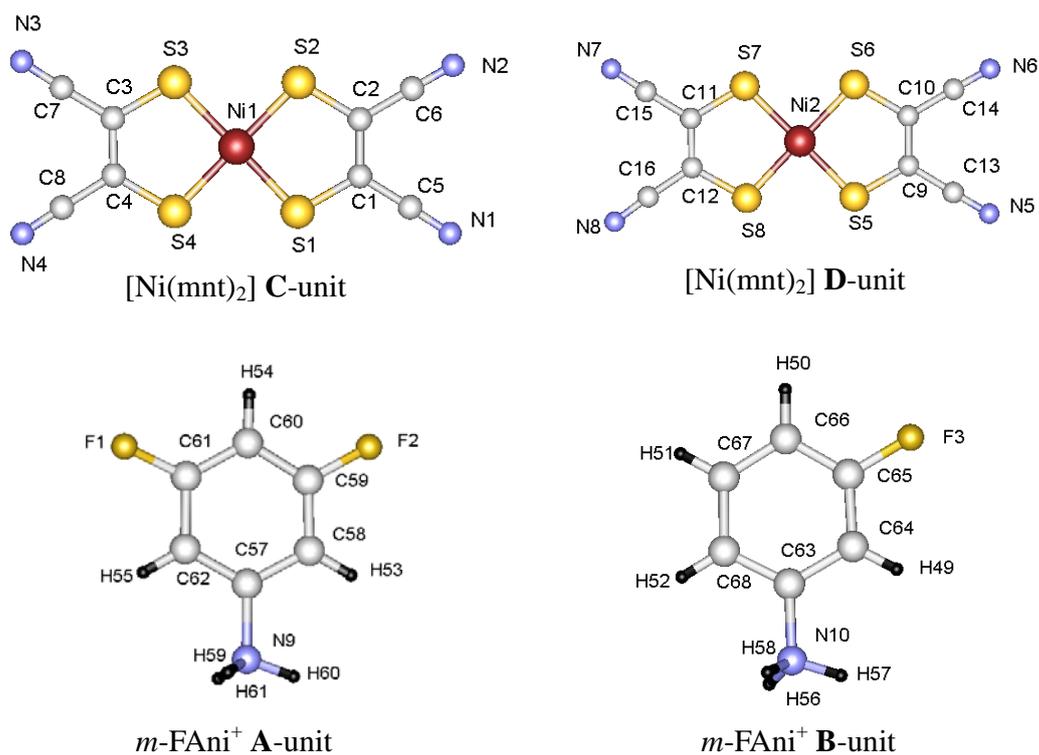
**Figure S2.** UV-vis-NIR spectrum of crystal **1** in KBr pellet.

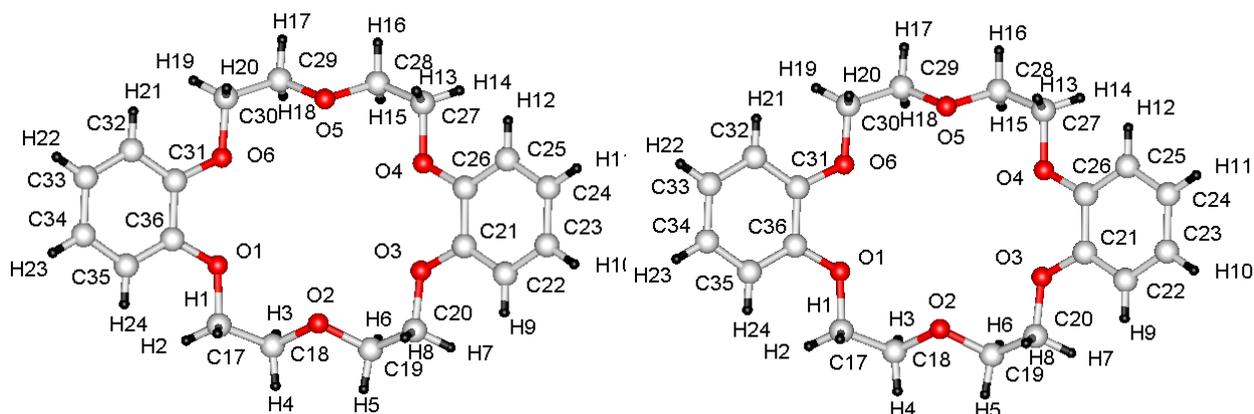


**Figure S3.** The relationship between the crystal shape and axis.

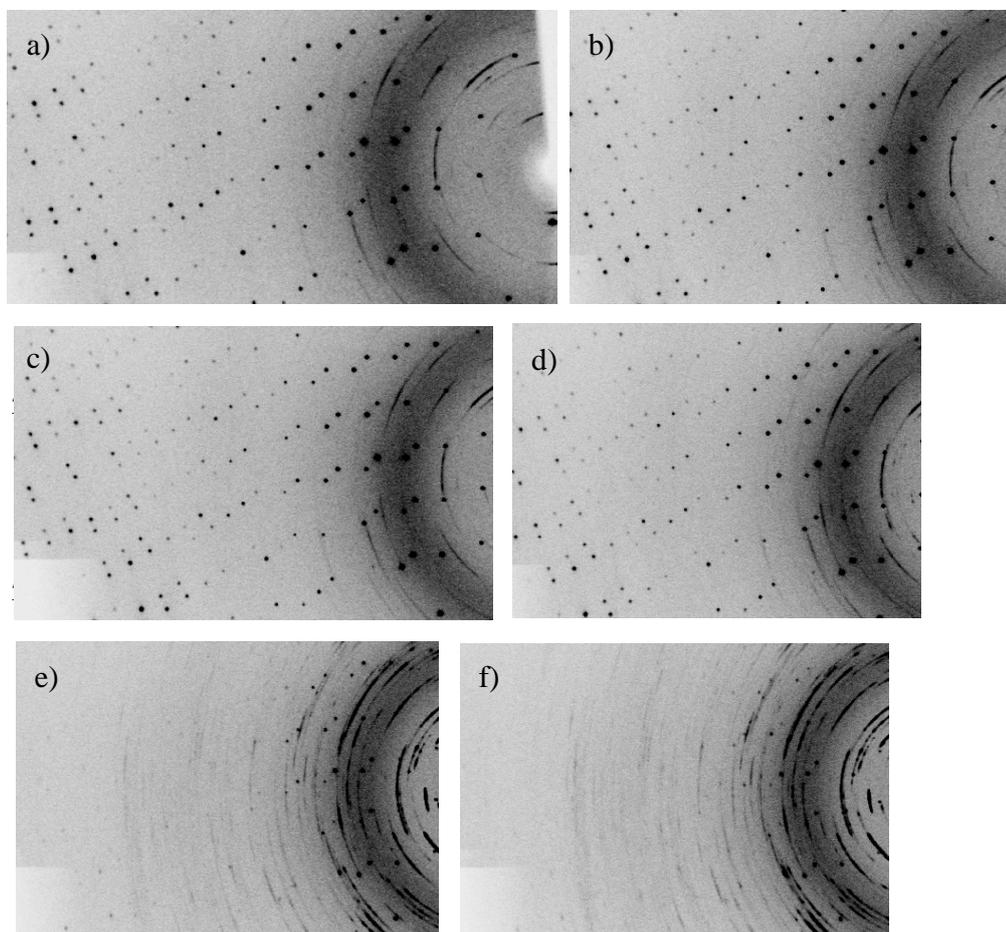


**Figure S4.** The single crystals a) before and b) after the heating up to 400 K.

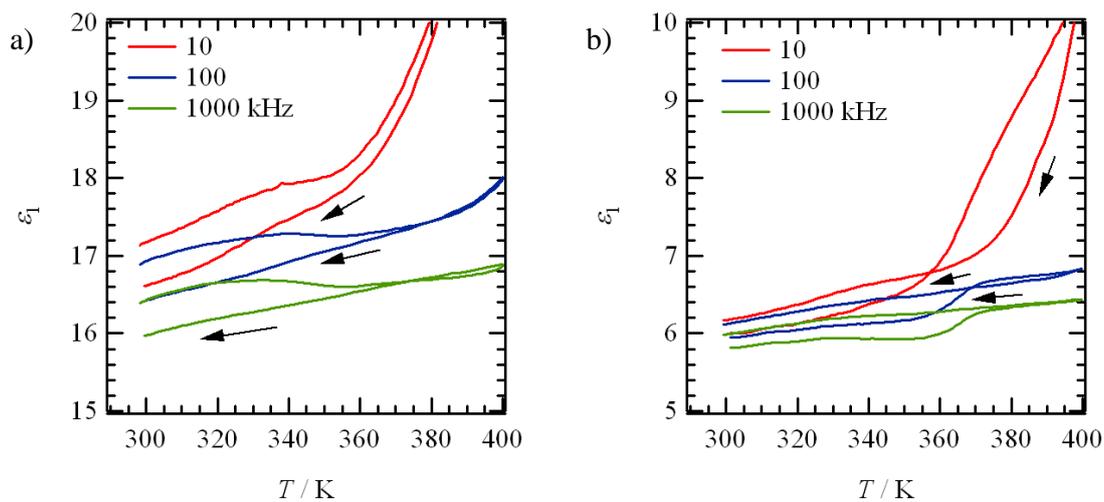




**Figure S5.** Atomic numbering scheme of crystal **1**.



**Figure S6.** Temperature-dependent oscillation photograph of crystal **1** at a) 296 K, b) 326 K, c) 346 K, d) 366 K, e) 386 K, and f) 296 K (cooling from 386 K).



**Fig. S7.** Temperature- ( $400\text{ K} > T > 300\text{ K}$ ) and frequency-dependency ( $1000\text{ kHz} > f > 10\text{ kHz}$ ) of the dielectric constant ( $\epsilon_1$ ) for single crystal **1** along the a)  $a$ - and b)  $b+c$ -axes. The cooling processes were indicated in the allow, showing the different behaviours from those of heating processes due to the loss of  $\text{CH}_3\text{CN}$  molecules.