Supplementary Material (ESI) for Dalton Transactions

Supporting Information.

Supramolecular cations of the *m*-fluoroanilinium(dibenzo[18]crown-6) in ferromagnetic salt

Toru Endo,[a] Tomoyuki Akutagawa*[c], Shin-ichiro Noro[a,b] and Takayoshi Nakamura*[a,b]

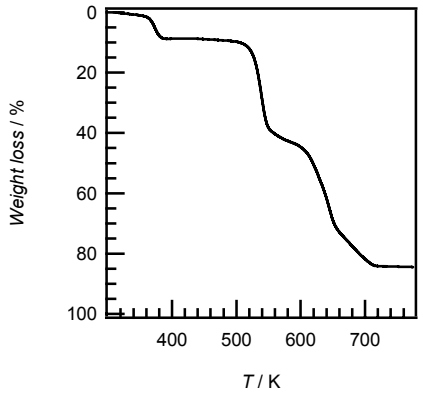

Fig. S1 Thermogravimetry analysis of salt **1**. Thermal analysis station using an Al_2O_3 reference in the temperature range from 298 to 773 K with a heating rate of 10 K min^{-1} under nitrogen. The existence of one CH_3OH and CH_3CN in salt **1** was confirmed by the weight-loss of 8.7 % at 450 K in the thermogravimetry measurement. Since the weight loss of the salt began already at room temperature and both of the CH_3OH and CH_3CN molecules were gradually removed from the salt. The decomposition of the salt was observed at 520 K.

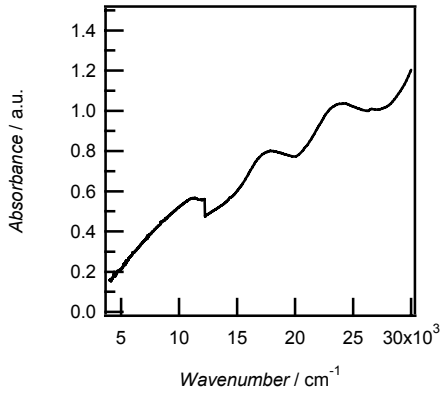

Fig. S2 UV - vis - NIR - IR spectrum (KBr pellet) of **1**. Absorption bands due to Cr^{III} appeared at around 10.6 x 10^3, 17.5 x 10^3 and 23.4 x 10^3 cm^{-1}.

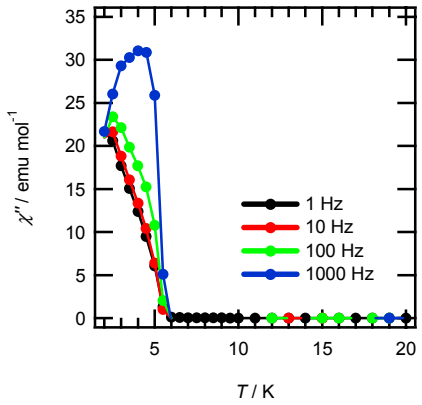

Fig. S3 Magnetic properties of **1**. The out-phase signal in the AC susceptibility measurements was measured at temperatures between 2 to 20 K in an applied AC field of ±3 Oe at frequencies of 1, 10, 100, and 1000 Hz. The out-of-phase signal becoming nonzero at 5.5 K, which defines T_c for this material.