Electronic Supplementary Material (ESI) for RSC Advances.

Preparations of compounds 1 and 2

[m-BrBz-1-APy]I_3 (**1**) was prepared by 3-bromobenzaldehyde (2 mmol) with 1-aminopyridinium iodide (2 mmol) in ethanol (10 cm^3). The solution was heated under reflux for 5 h. On cooling the product was separated out and washed with ether. The methanol solution of iodine (2 mmol) was slowly added to methanol solution of [m-BrBz-1-APy]I_3 (2 mmol) at room temperature. The solution was slowly evaporated and red block crystals **2** were obtained after 7 days. Yield: 75%. Anal. Calc. For $C_{12}H_{10}N_2BrI_3$: C, 22.42; H, 1.57; N, 4.36. Found: C, 22.65; H, 1.48; N, 4.25.

[o-FBz-1-APy]I (**2**). Yield: 80%. Anal. Calc. For $C_{12}H_{10}N_2FI_3$: C, 24.76; H, 1.73; N, 4.81. Found: C, 24.65; H, 2.08; N, 4.47.

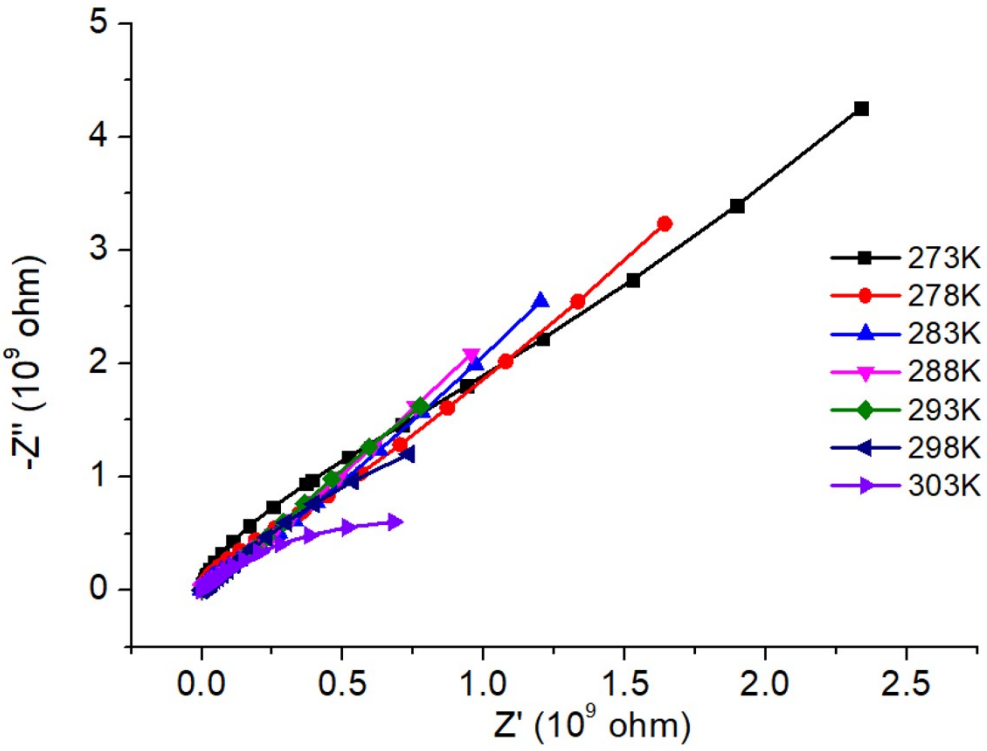

Figure S1. Impedance spectra at the selected temperatures in the range of 273-303 K for **1**

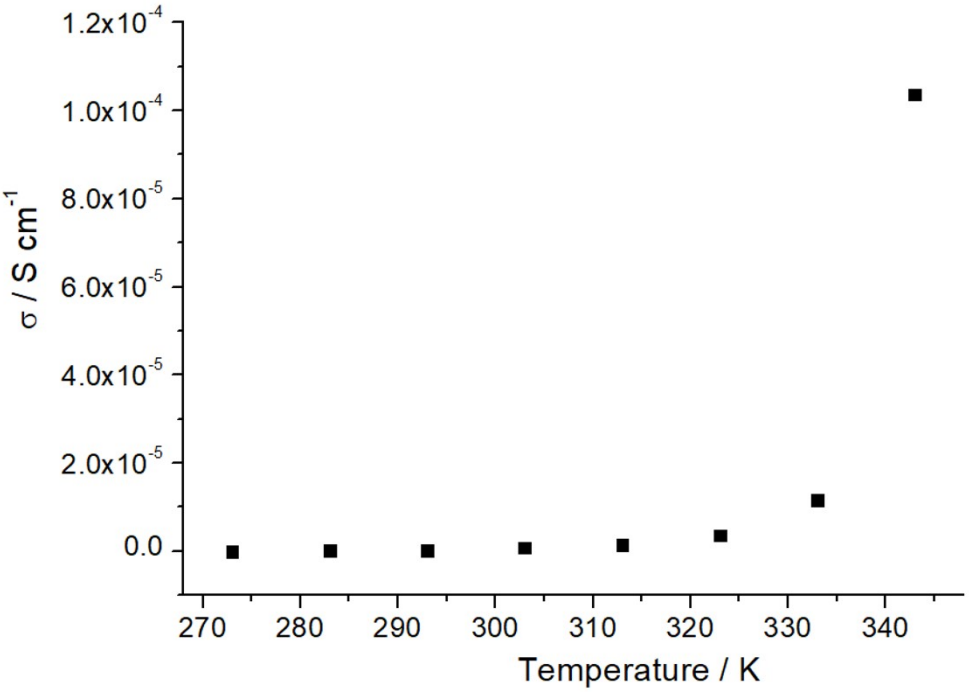

Figure S2. The plot of ionic conductivity versus temperature for **1** showing steeply increase at 343 K.

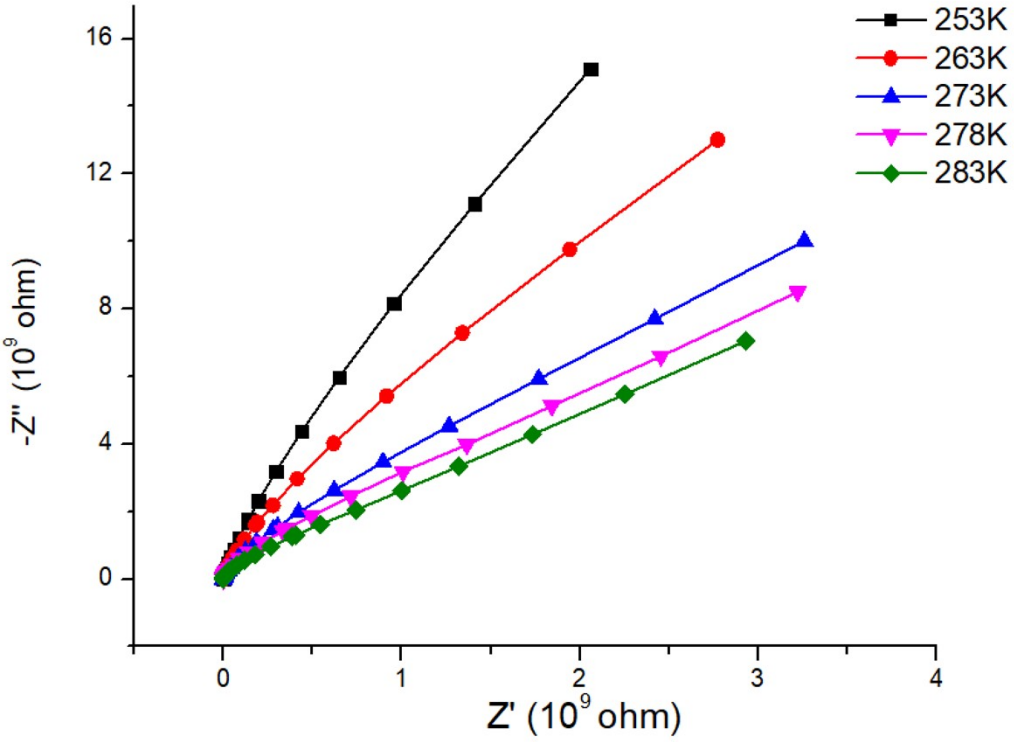

Figure S3. Impedance spectra at the selected temperatures in the range of 253-283 K for **2**.

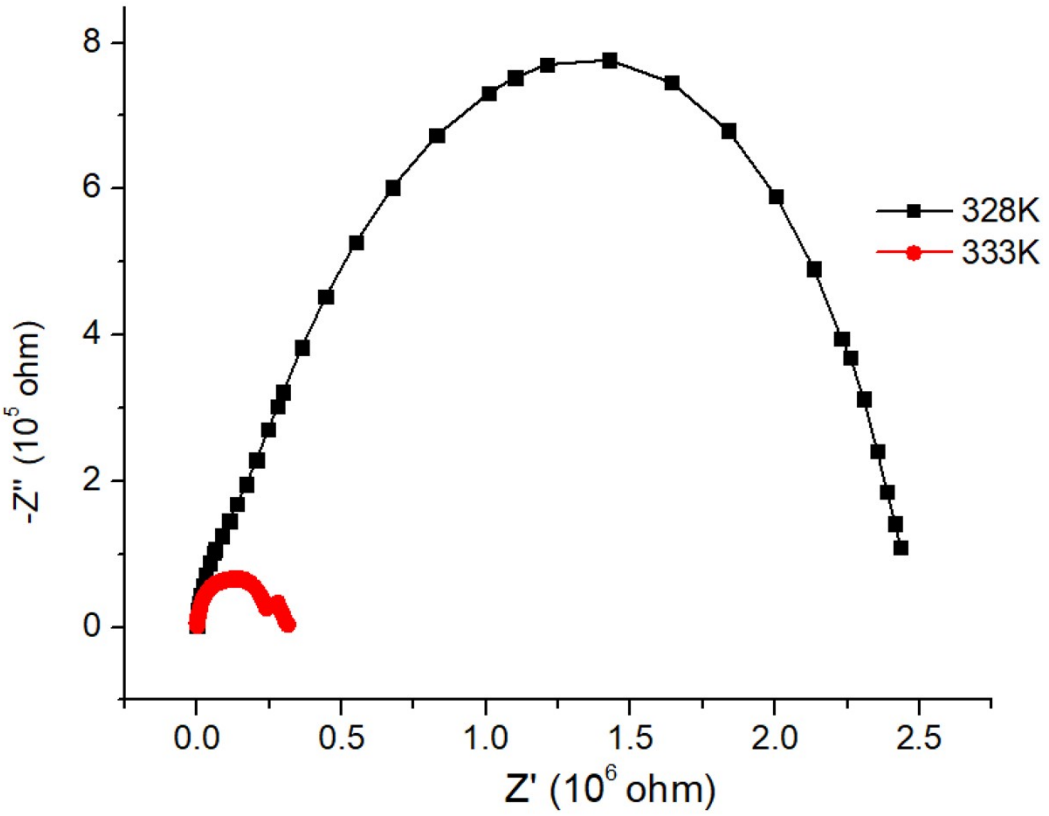

Figure S4. Impedance spectra at the temperatures of 328 and 333 K for **2**.

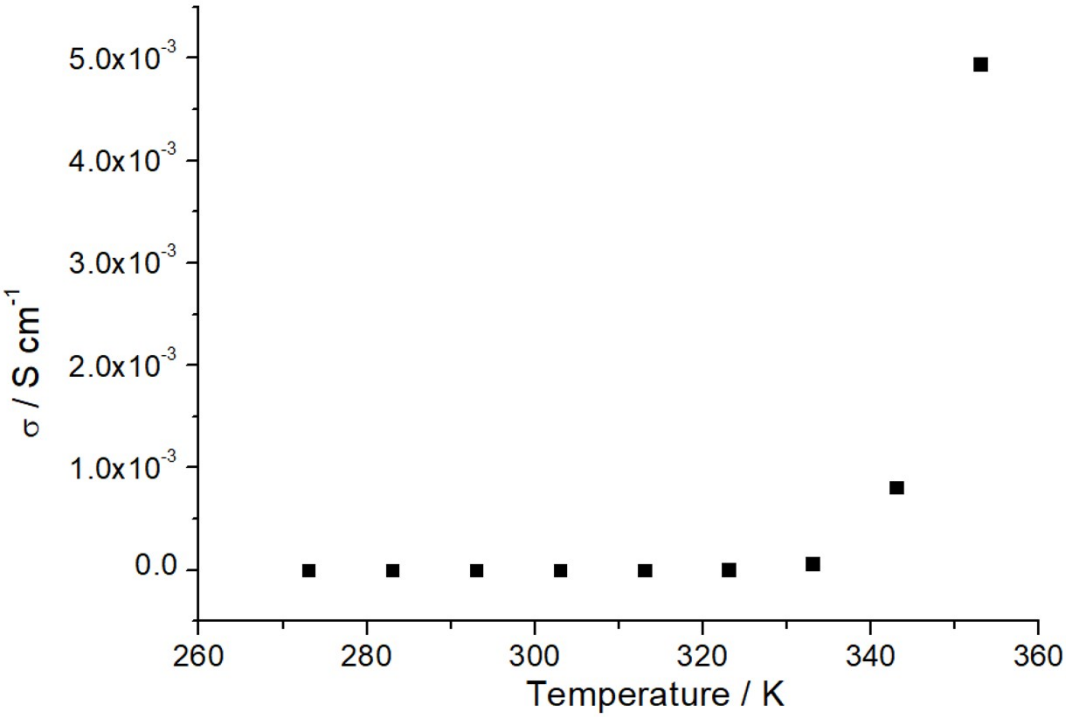

Figure S5. The plot of ionic conductivity versus temperature for **2** showing steeply increase at 353 K.

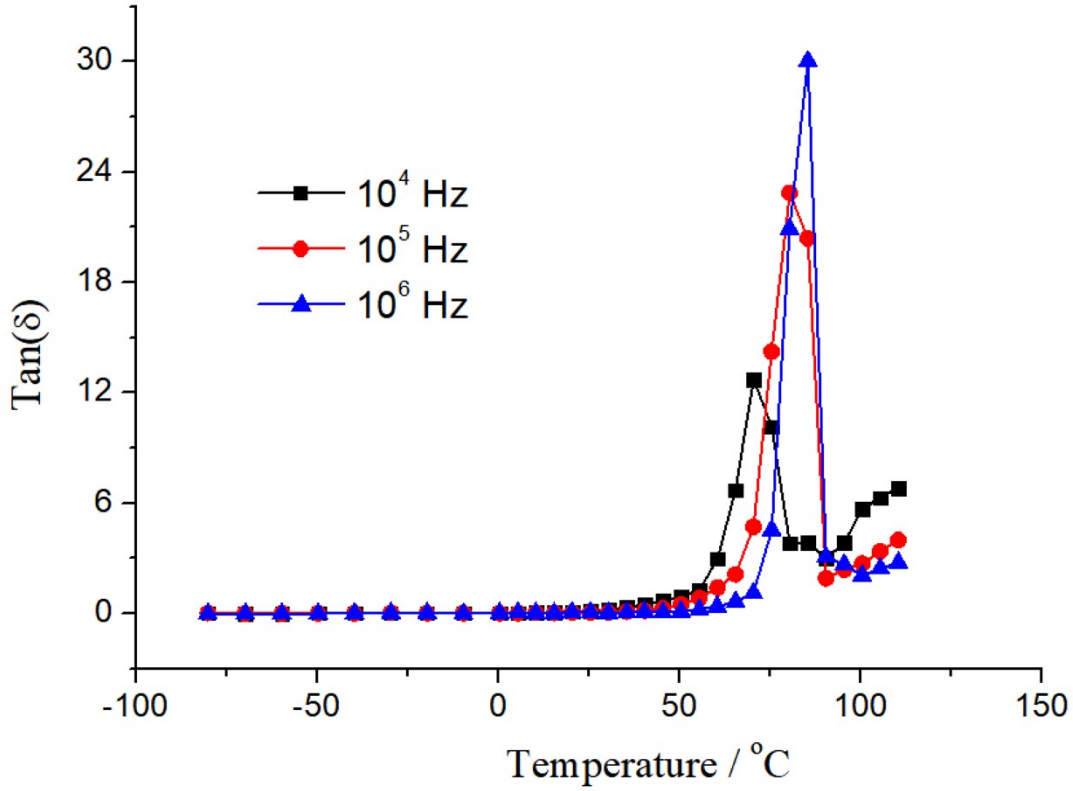

Figure S6. Temperature dependent dielectric loos showing relaxation peak at selected frequency of **1**.

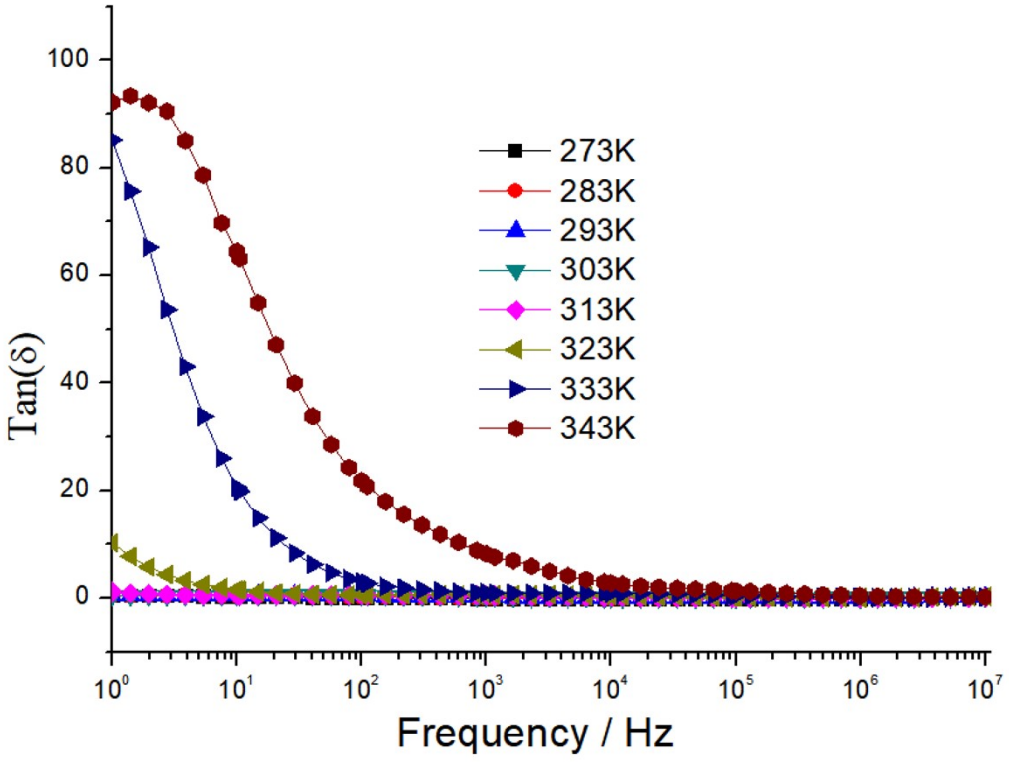

Figure S7. Frequency dependent dielectric loos at selected temperature of **1**.

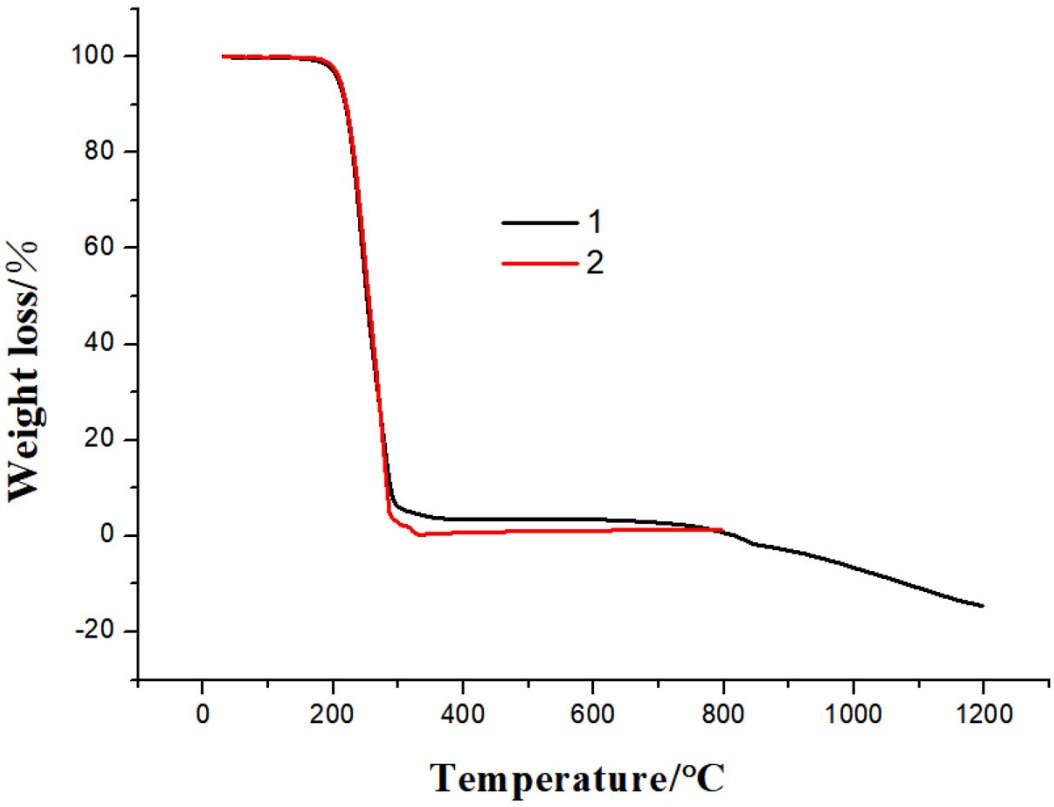

Figure S8. TGA curves of the **1**and **2** under the nitrogen