

Table 1 Anhydrous proton conductivity and the activation energies (E_a) of compounds **6a-e**

Compound	Proton conductivity	Activation energy [E_a]
6a	8×10^{-7} S/cm at 80 °C	0.34 eV
6b	9×10^{-3} S/cm at 180 °C	0.11 eV
6c	7×10^{-6} S/cm at 120 °C	0.302 eV
6d	8×10^{-6} S/cm at 140 °C	2.11 eV
6e	8×10^{-2} S/cm at 140 °C	0.09 eV

Table 2 Phase transition and ionic conductivity of compounds **6a-e**

Compound	Col _h	Conductivity ^a	Iso
		[S/cm]	
6a	25 °C	2.5×10^{-9}	65 °C
6b	-	5.5×10^{-3}	-
6c	-	1.5×10^{-9}	-
6d	85 °C	2.4×10^{-11}	130 °C
6e	35 °C	5.5×10^{-2}	140 °C

^a) Measured under N₂ atmosphere

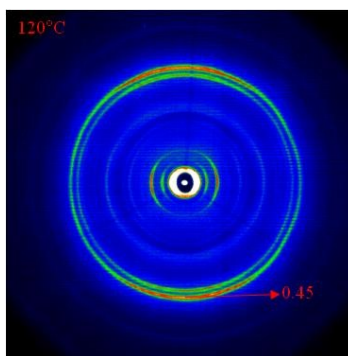


Figure 1 2DWAXS Diffractogram for compound 6d done at 120 °C. The significantly reduced scattering patterns indicates disruption of columns upon heating the sample