Electronic Supplementary Information

**Fig.S1.** Variation of dielectric constant with temperature for polymer electrolytes having composition DMOImTf + PVdF-HFP + 2M HCF$_3$SO$_3$ +x(ml) PC with (a) x = 0 and (b) x = 0.1 at 42Hz(●), 100Hz(○), 200Hz(●), 400Hz(●), 600Hz(○) and 1KHz(▲).

**Fig.S2.** Dependence of conductivity upon temperature for plasticized polymer electrolytes having composition DMOImTf + PVdF-HFP + 2M HCF$_3$SO$_3$ + 0.1ml PC during first heating (●), cooling (●) and second heating (x).
Fig. S1

Temperature (°C)

ε (x10^6)

Fig. S1
Fig. S2