

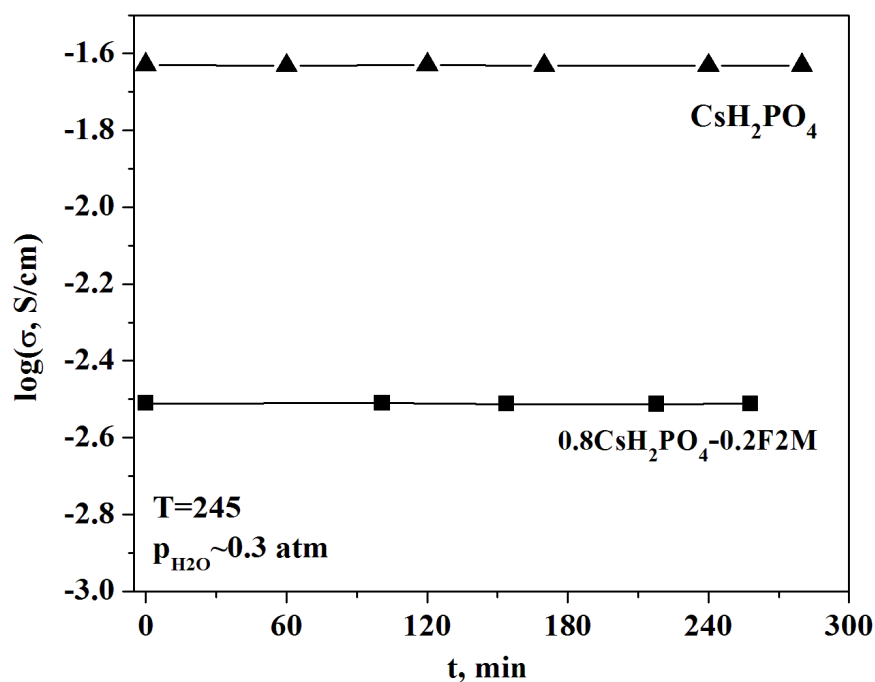
# Copolymer of VDF/TFE as a promising polymer additive for CsH<sub>2</sub>PO<sub>4</sub>-based composite electrolytes

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**Figure S1.** The conductivity dependence as a function of the time holding at  $T=245^\circ\text{C}$ .

The storage of the sample  $x=0.2$  at the high temperatures ( $T=245^\circ\text{C}$ ,  $p_{\text{H}_2\text{O}} \sim 0.3 \text{ atm}$ ) for  $\sim 4$  hours shows the short term stability of the proton conductivity values for the membranes. The PXRD of the used samples also confirmed the immutability of the structural properties of  $\text{CsH}_2\text{PO}_4$ -F-2M polymer systems.