

## Supporting Information for

### Study of Segmental Dynamics and Ion Transport in Polymer-Ceramic Composite Electrolytes by Quasi-elastic Neutron Scattering

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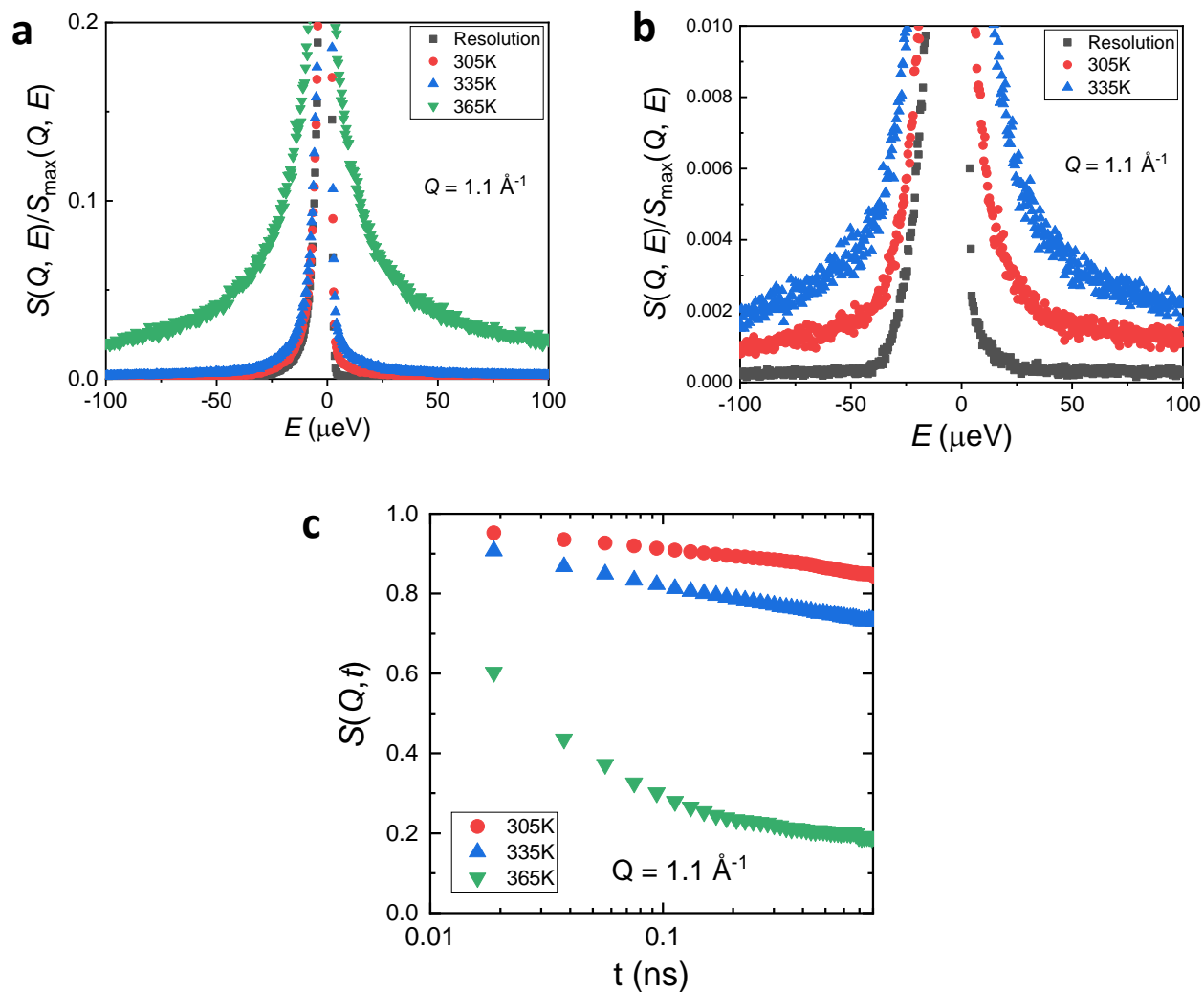
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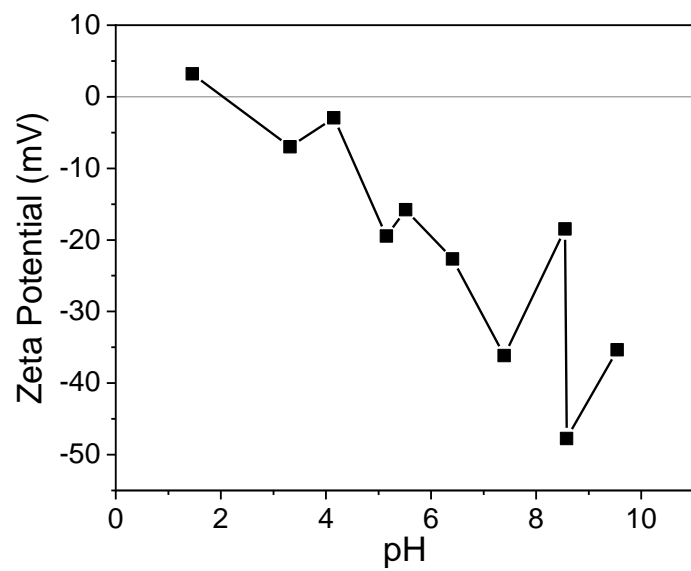
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**Figure S1 a**, Normalized dynamic structure factor,  $S(Q, E)$ , of polymer electrolyte PEO + lithium triflate salt as a function of energy,  $E$ , at a representative spatial scale  $Q = 1.1 \text{ \AA}^{-1}$ , at 305K (red circles), 335K (blue up triangles) and 365K (green down triangles). The resolution function (black squares) was taken at 20K. Data was collected at BASIS beamline of Spallation Neutron Source. **b**, a zoomed-in view of **a** showing results at 305K and 335K. **c**, Intermediate scattering function,  $S(Q, t)$ , as a function of time,  $t$  at  $Q = 1.1 \text{ \AA}^{-1}$ , at 305K (red circles), 335K (blue up triangles) and 365K (green down triangles).



**Figure S2** Zeta potential of Ohara ceramic aqueous suspensions as a function of pH.