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Composite solid electrolyte with Li^+ conducting 3D porous garnet-type framework for all-solid-state lithium batteries

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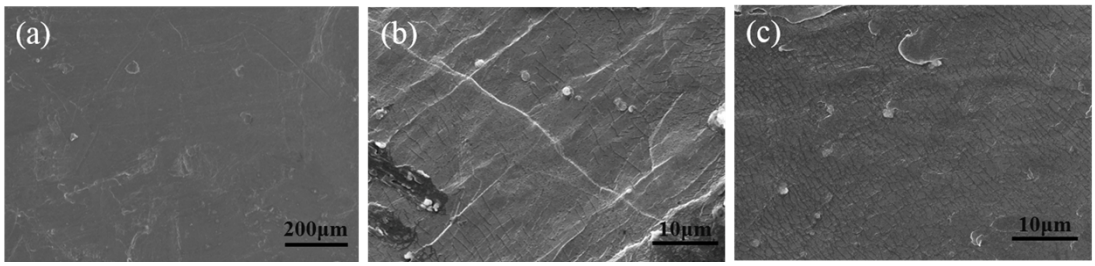

Fig. S1 Surface morphology of Li metal anode: (a)before galvanostatic cycling,(b) after 200h cycling and (c) after 800h cycling at 0.05mA·cm^{-2}.

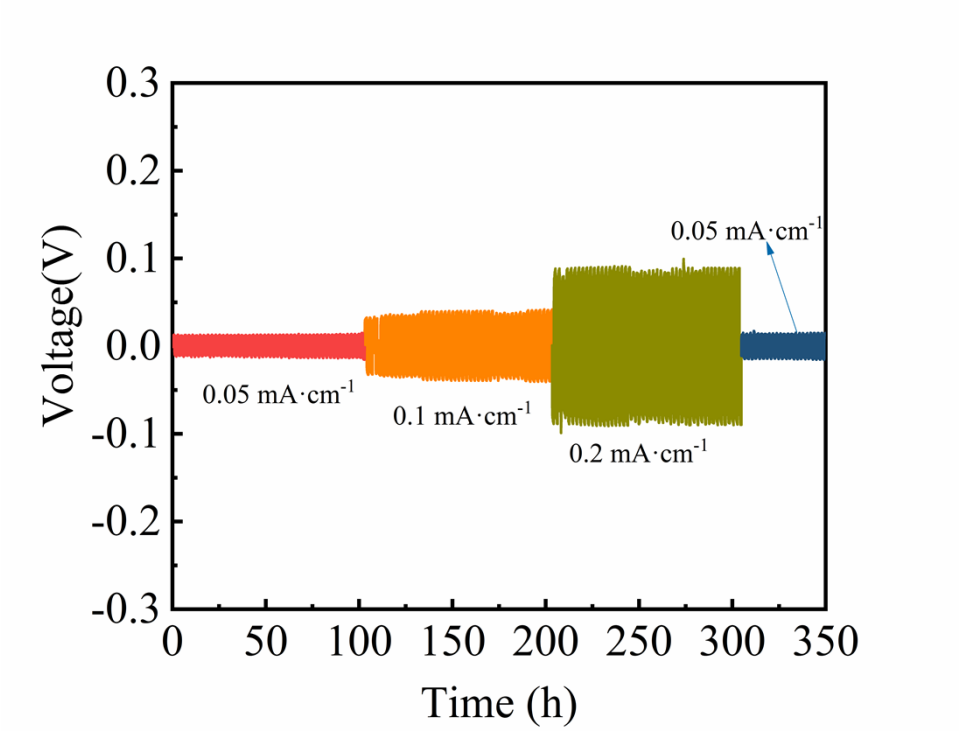

Fig. S2 Voltage profiles of Li/PEO-LLZAO/Li symmetric batteries at different current density of 0.05, 0.1, 0.2 mA·cm^{-2}.

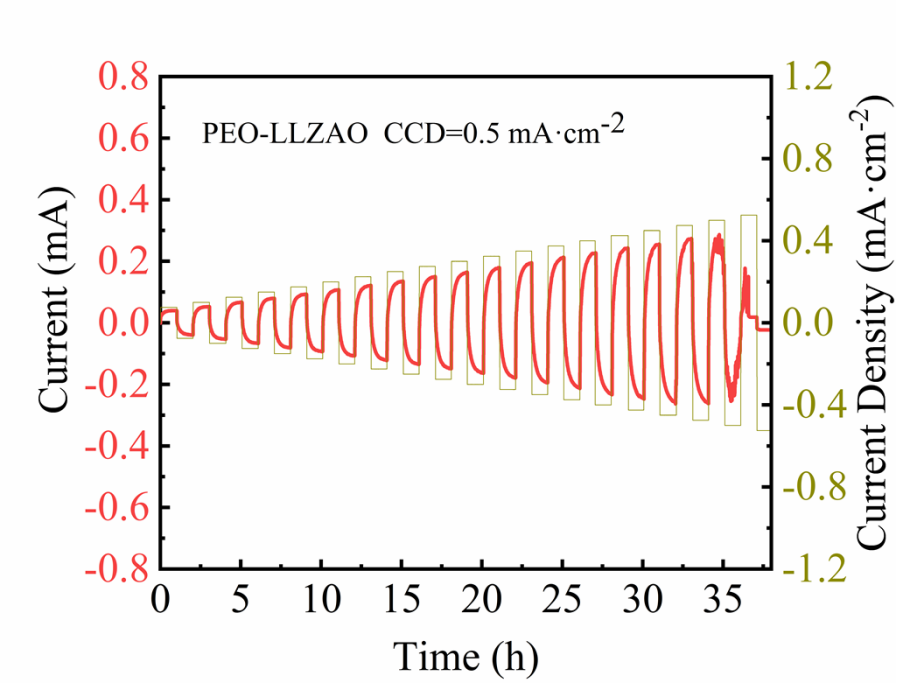

Fig. S3 Voltage profiles of the symmetric cell using PEO-LLZAO as electrolyte

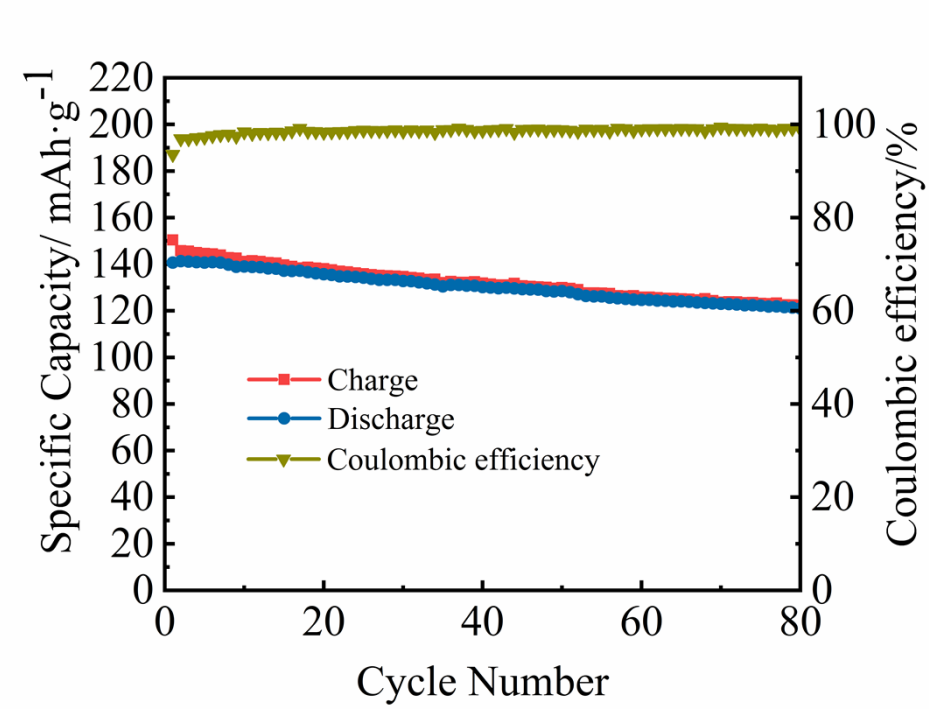

Fig. S4 Cycle performance of $LiFePO_4$/Li cell with PEO-LLZO as electrolyte at 0.1 C at 60 °C

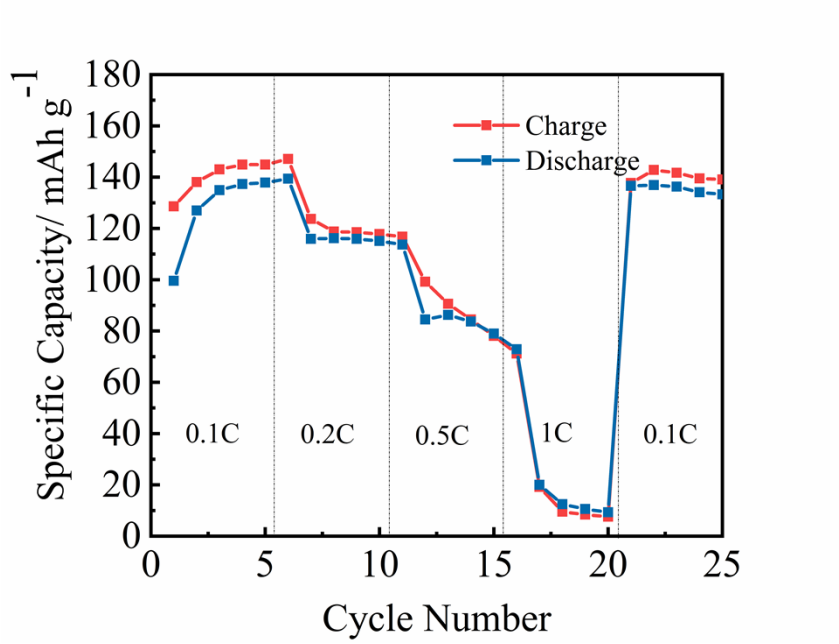

Fig. S5 Rate capability of the $LiCoO_2$/PEO-LLZAO/Li at various current densities from 0.1 C to 1 C