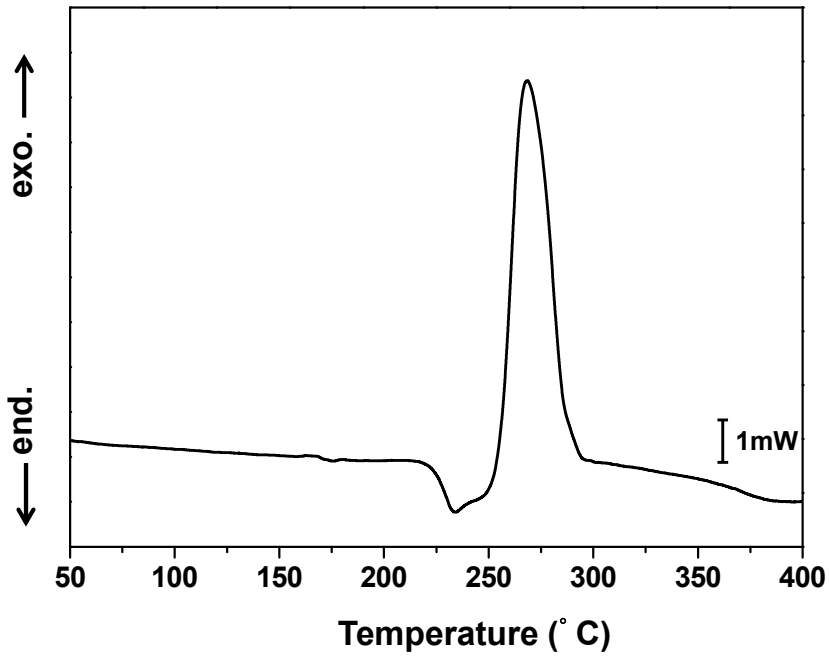

Figure S1. Differential scanning calorimetry (DSC) curve for the Li_2S–P_2S_5 glass. The DSC was performed for a powdered sample sealed in a titanium pan using a scanning calorimeter (Perkin Elmer, Diamond DSC) at a heating rate of 10 °C/min. The change of the specific heat at about 230°C corresponds to the glass transition, and the exothermic peak from 255°C to 280°C corresponds to the crystalliztion.

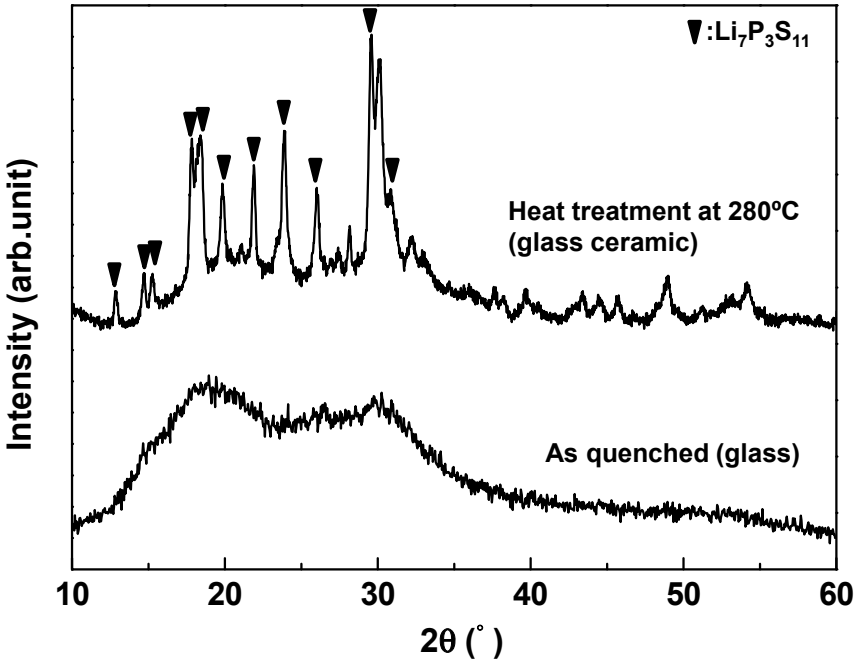

Figure S2. Powder X-ray diffraction patterns for the as-quenched glass and that after the heat treatment at 280 °C. XRD patterns were taken on a diffractometer (Rigaku, RINT-2000) using Cu–Kα radiation.

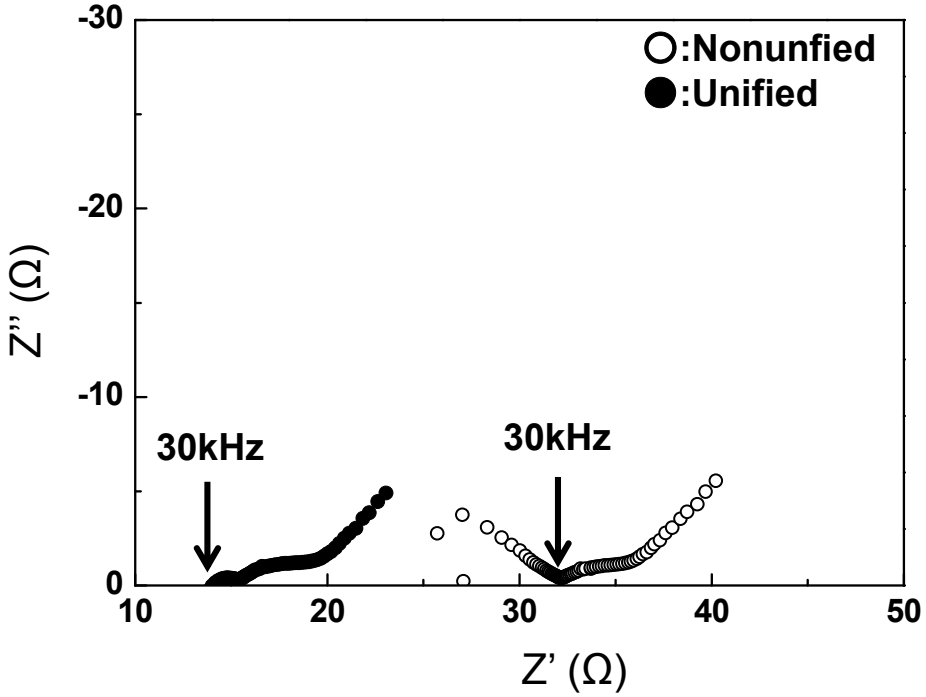

Figure S3. Complex impedance plots at 25 °C for a graphite/In–Li model cell unified at 280 °C model cell and a non-uified counterpart.

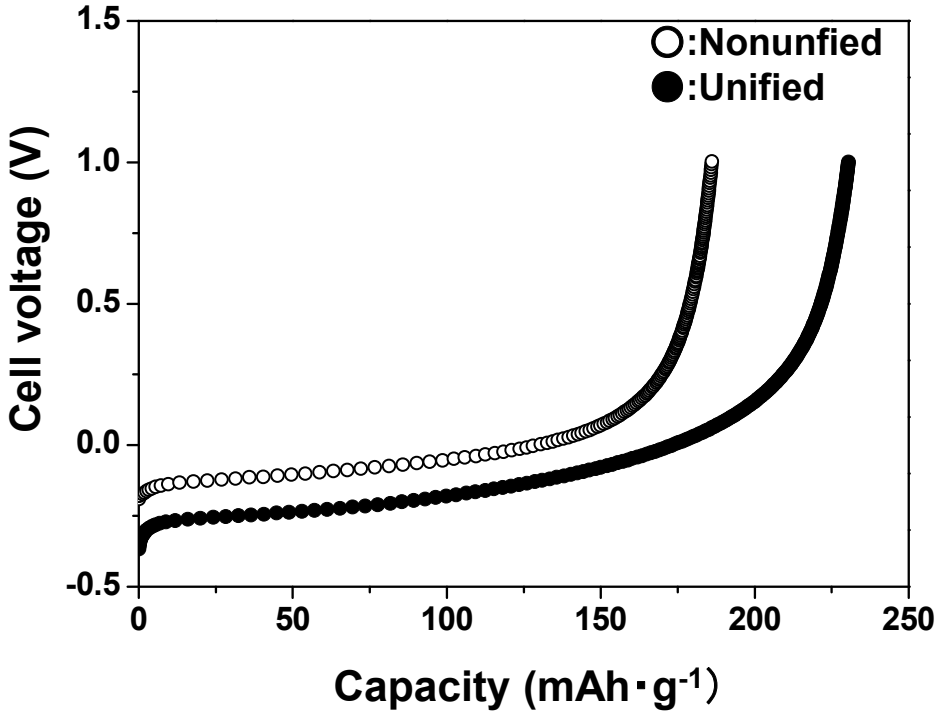

Figure S4. Discharge carves of graphite electrodes in a model cell unified at 280 °C and a non-uified model cell. Counter electrodes are In-Li alloy, and the discharge current density is 10mAcm^{-2}.