Electronic Supplementary Information

Investigation of cyano resin based gel polymer electrolyte: in-situ gelation mechanism and electrode/electrolyte interfacial fabrication in lithium-ion battery

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Fig. S1 Optical images of PVA-CN sample (a), PVA-CN based GPE (b), commercial 034352 type battery before formation (c) and PVA-CN based GPE battery (d).
**Fig. S2** A schematic representation of the separation and purification of the polymer matrix from GPEs.

**Fig. S3** Experimental and simulation EIS curves of a polymer LIB using an equivalent circuit by Z-view software.
Fig. S4 Charge and discharge curves of PVA-CN based polymer LIBs with Technology 1 (a) and Technology 2 (b) at 0.2C for some selected cycle numbers.