Supplementary Information (SI) for New Journal of Chemistry.
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Supporting Information

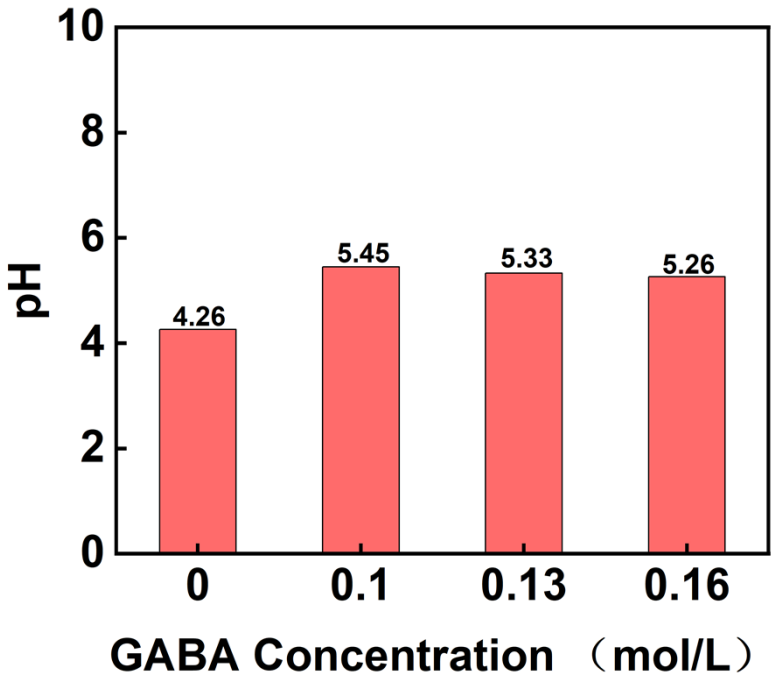

Fig. S1. The pH of PE solutions adding with different concentrations of GABA.

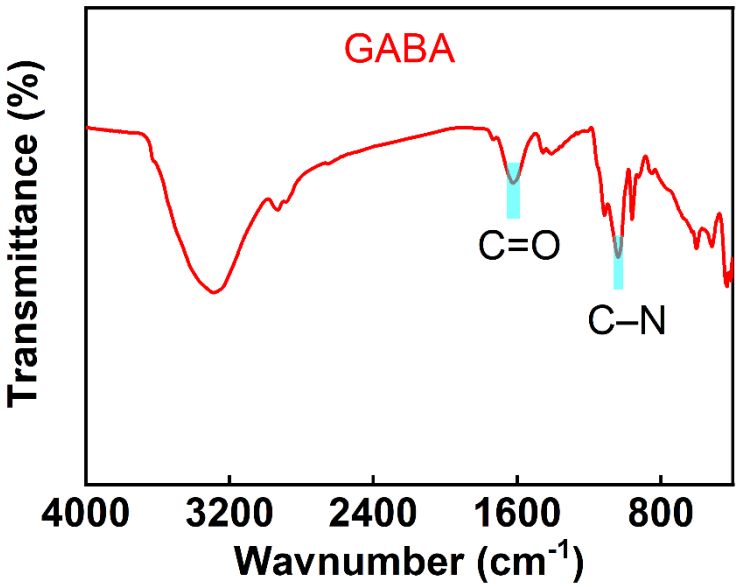

Fig. S2. FTIR spectroscopy of GABA powder.

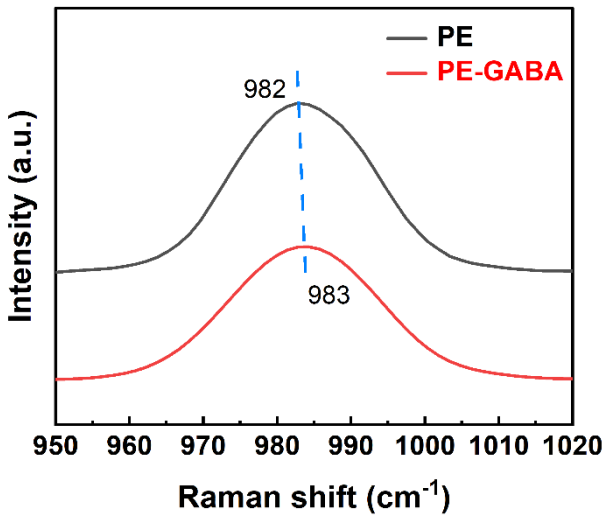

Fig. S3. Raman spectra of PE and PE-GABA.

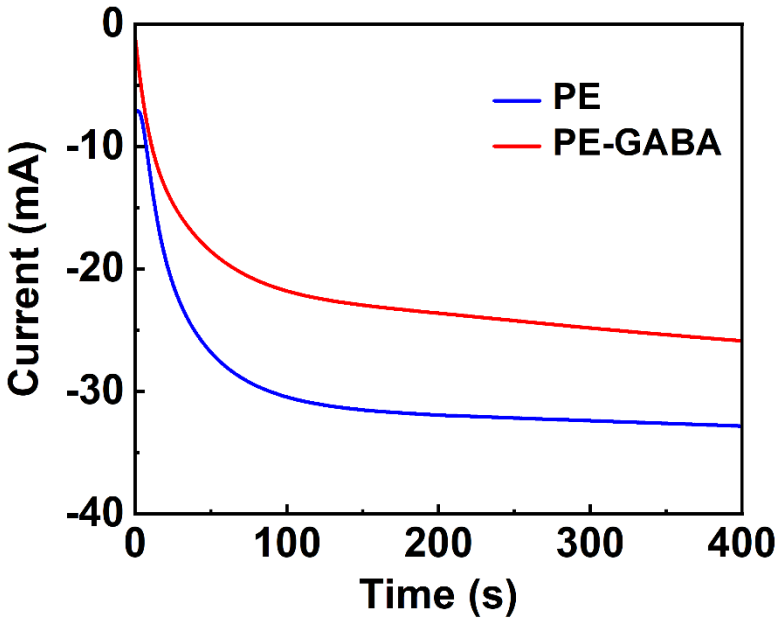

Fig. S4. CA curves of PE and PE-GABA.

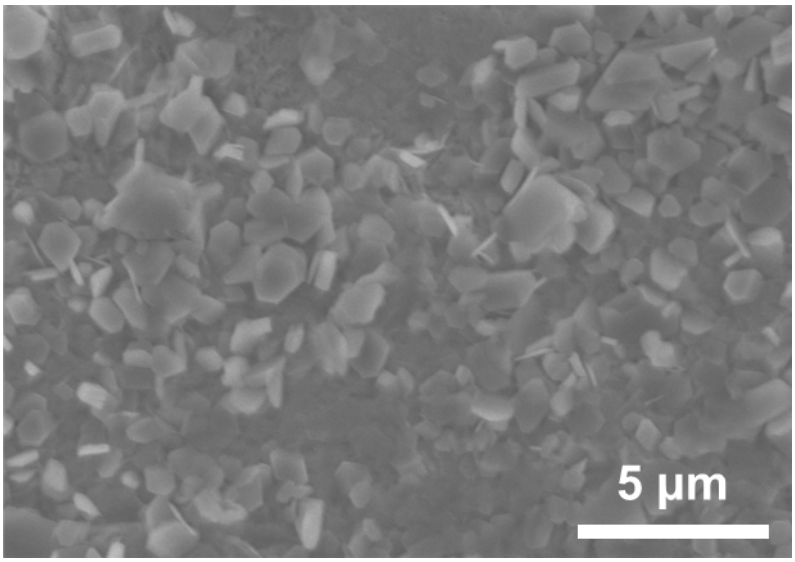

Fig. S5. SEM images of Zn electrode plated with 3 mAh cm^{-2} in (a) pristine $ZnSO_4$ electrolyte.

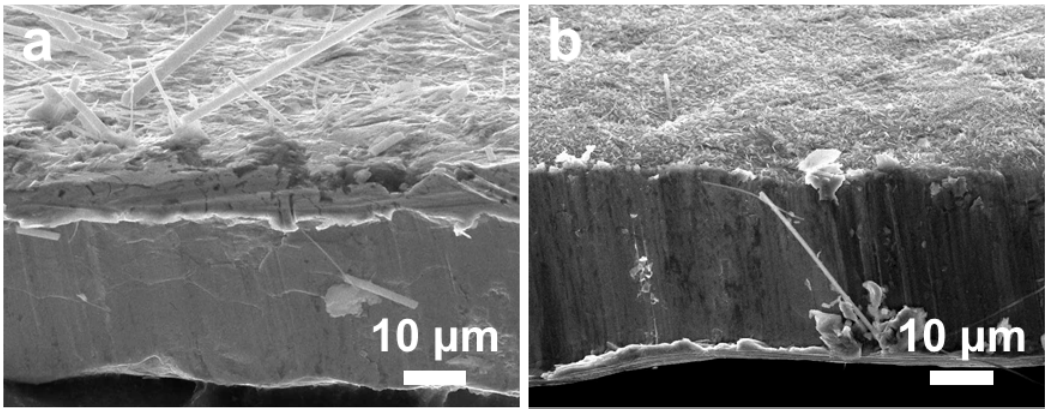

Fig. S6. Cross-sectional SEM images of cycled Zn electrode in (a) PE-GABA and (b) PE.

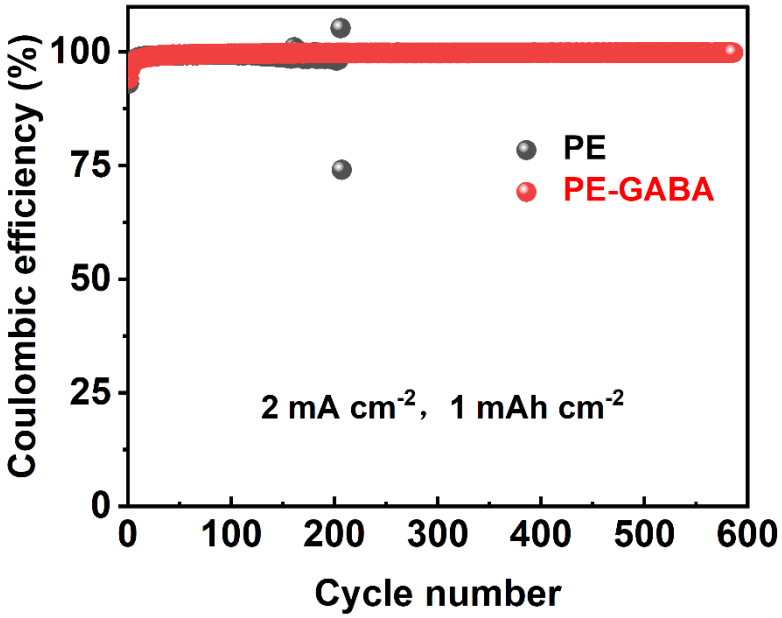

Fig. S7. CE curves at 2 mA cm^{-2} in PE and PE-GABA.

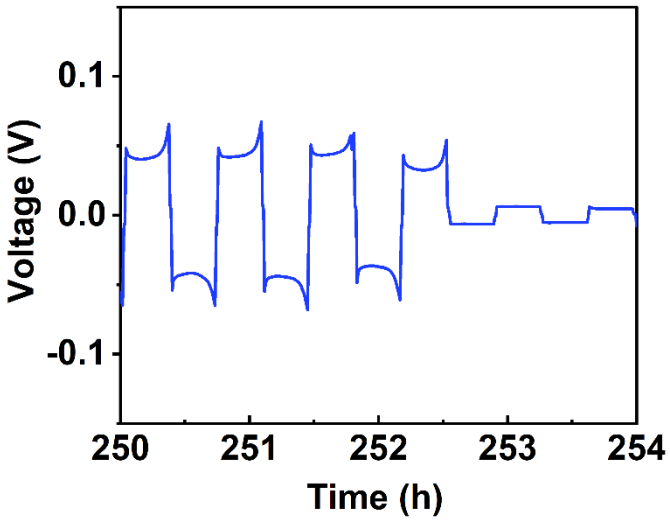

Fig. S8. Specific cycling behavior of the cell using PE.

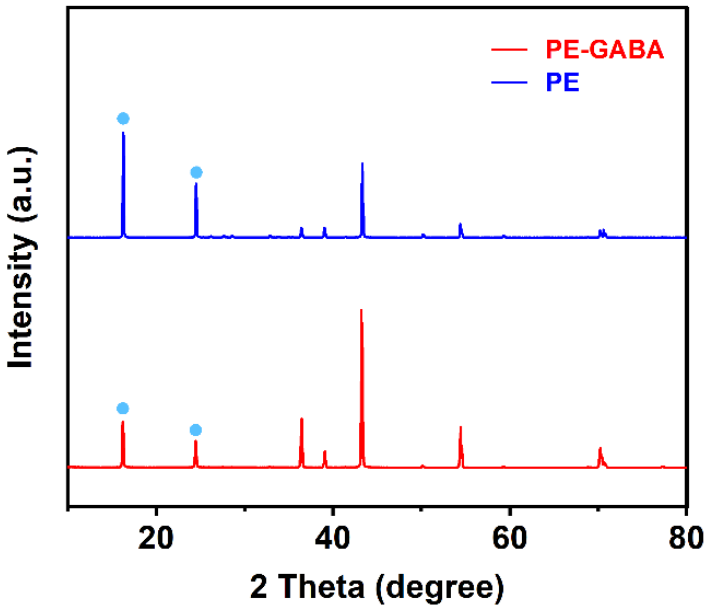

Fig. S9. XRD patterns of Zn electrodes worked at 3 mA cm^{-2} after 200 cycles in PE and PE-GABA.

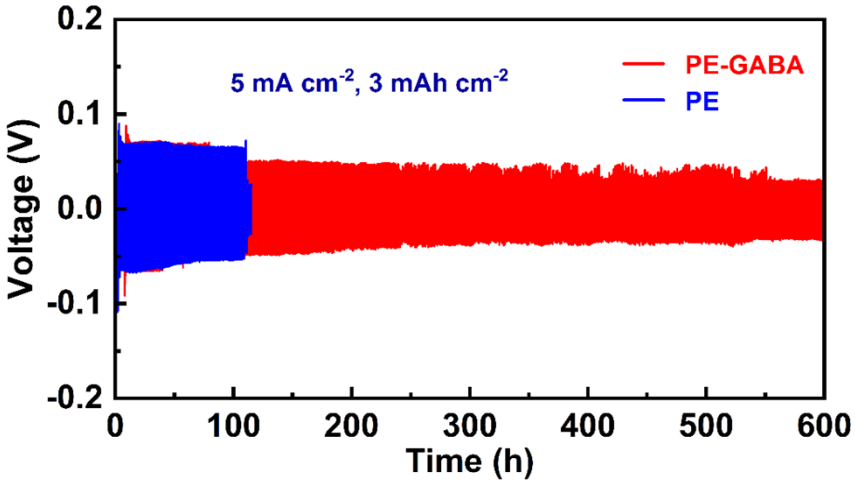

Fig. S10. Long-term cycling performances of cells at 5 mA cm^{-2} and 3 mAh cm^{-2}.

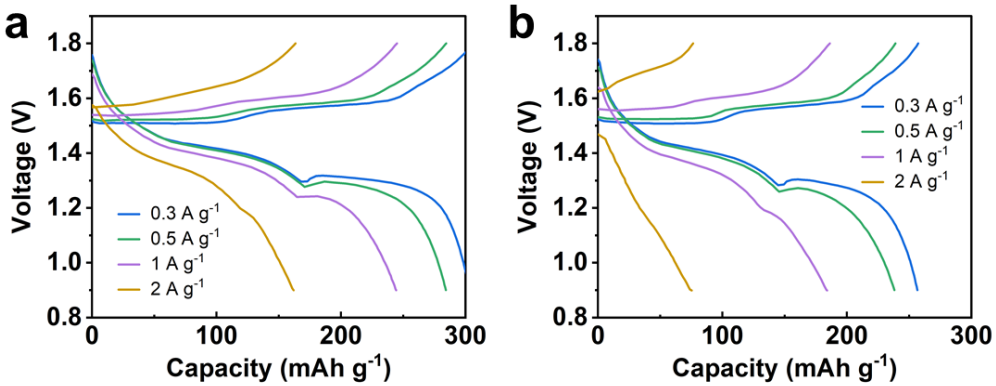

Fig. S11. Capacity-voltage plots of full cells with (a) PE-GABA and (b) PE at various current densities.

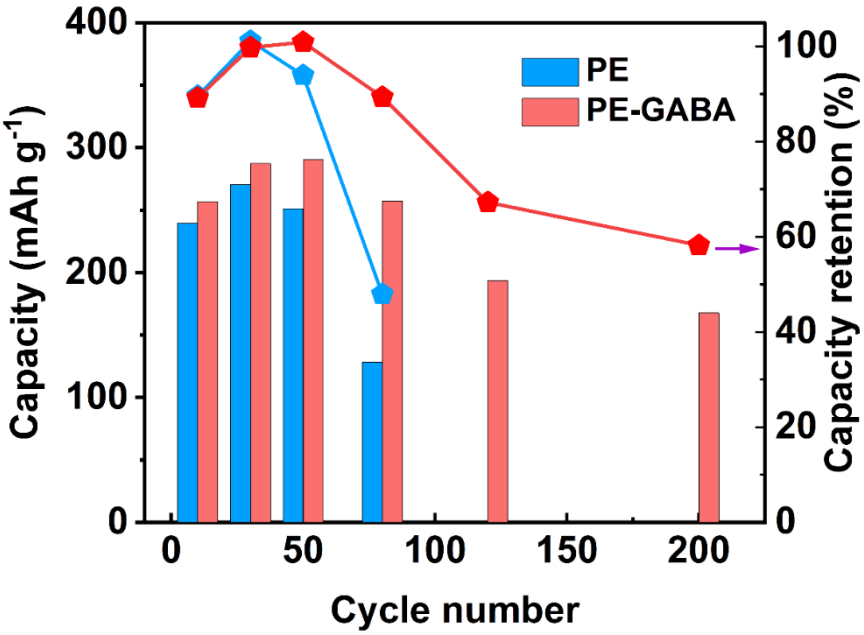

Fig. S12. Capacity delivery and retention ratio of full cells at different cycles.