

Figure S1. a) Ion mobility number of Cel Separator; b) Ion mobility number of Pc

Separator.

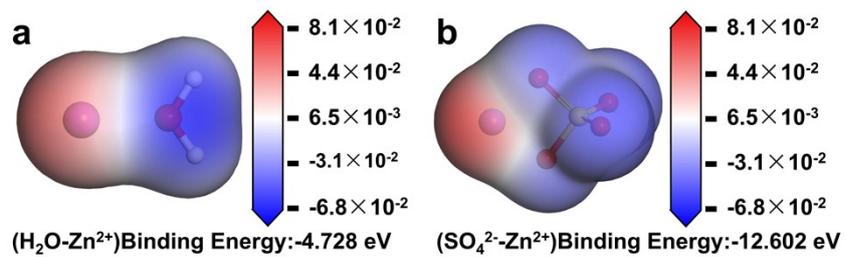


Figure S2. a, b) binding energy of zinc ions with H_2O and SO_4^{2-} as well as the electrostatic potential.

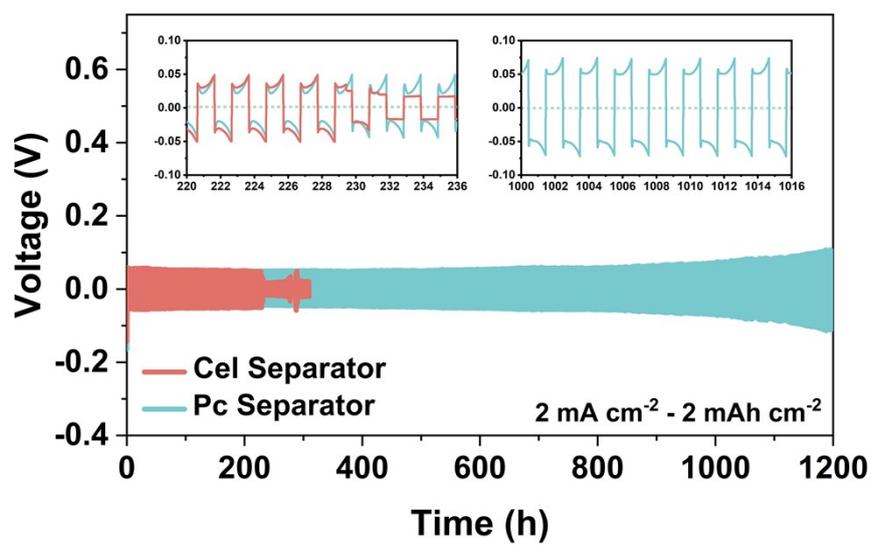


Figure S3. Cycling data of Zn//Zn symmetric battery at 2 mA cm⁻² and 2 mA h cm⁻² conditions.

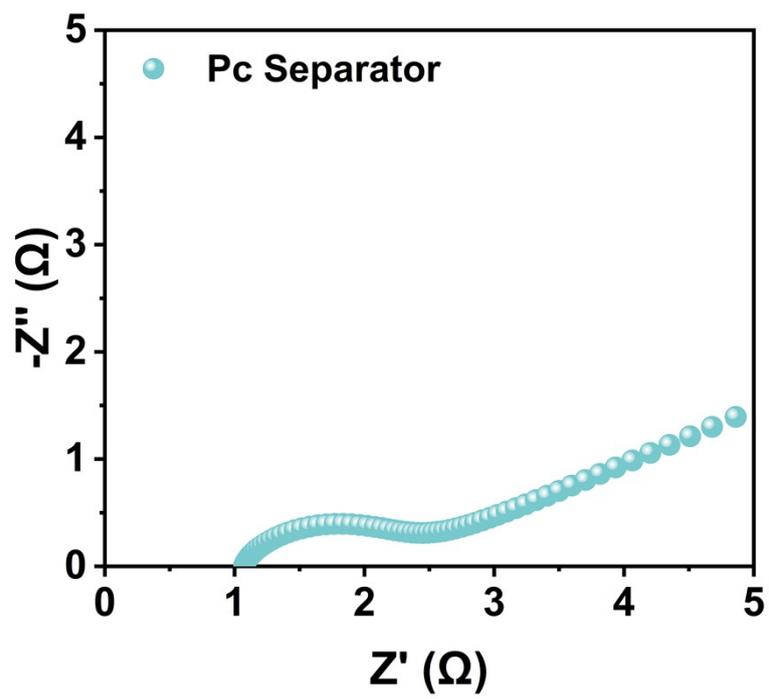


Figure S4. EIS plots of the Zn-I₂ full cell with Pc Separator

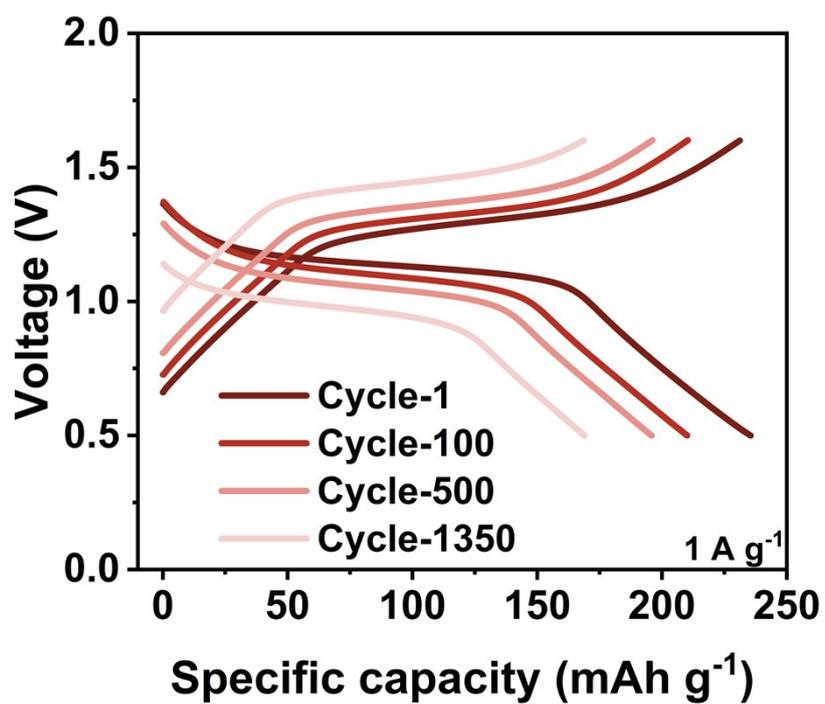


Figure S5. Galvanostatic charge-discharge (GCD) curves of the Cel Separator at a current density of 1 A g⁻¹