*Supporting Information for*

# Poly(Ionic Liquid)s Hydrogels Exhibiting Superior Mechanical and Electrochemical Properties as Flexible Electrolytes

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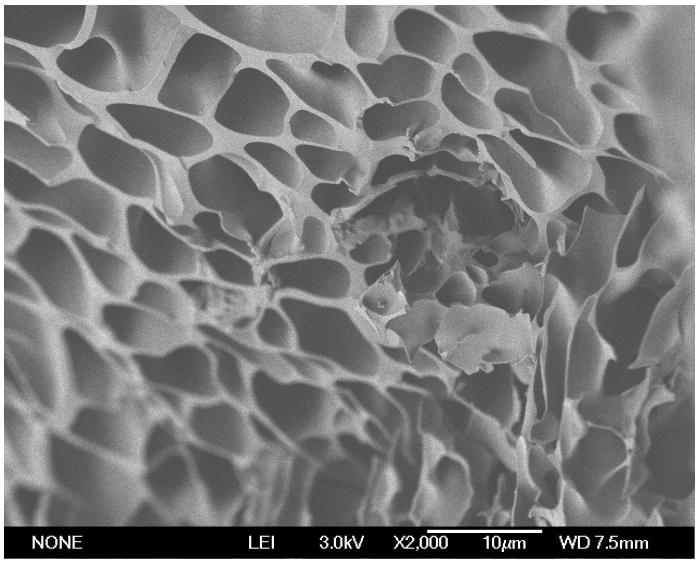


Figure S1 SEM picture of poly(ZIW/NaSS)s xerogels

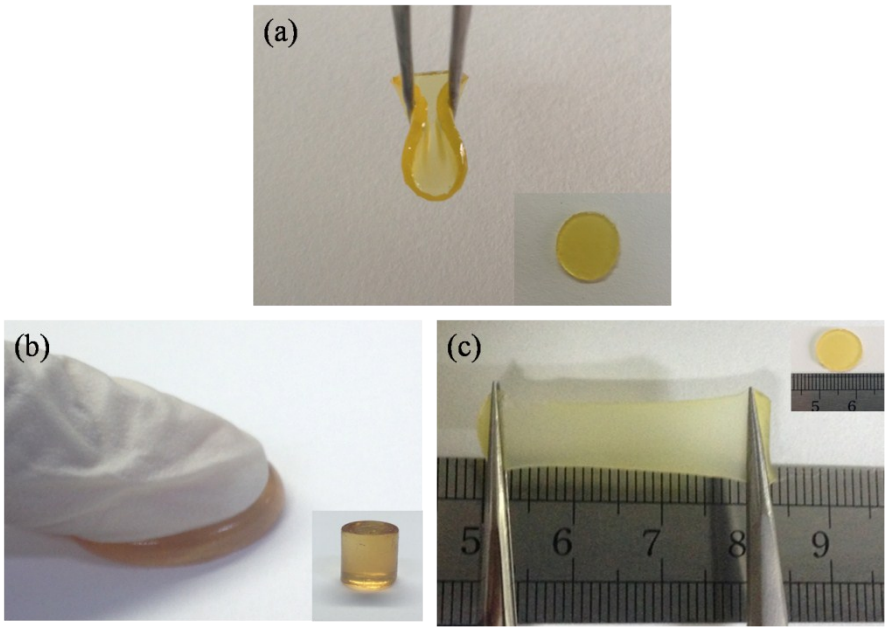


Figure S2 Pictures of poly(ZIW/AMPS)s hydrogels under deformations

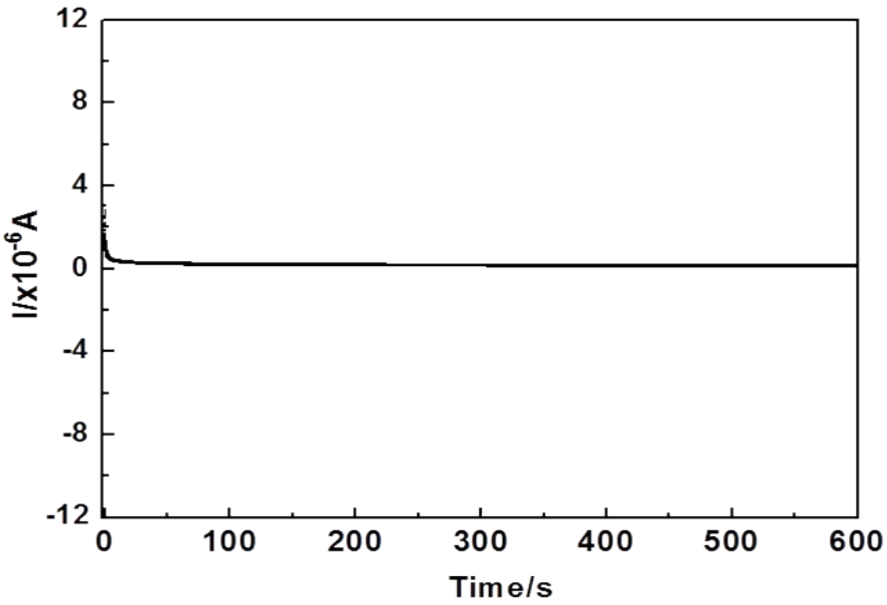


Figure. S3 Potentiostatic curves obtained at U= 0.3 V for poly(ZIW/AMPS)s hydrogels.

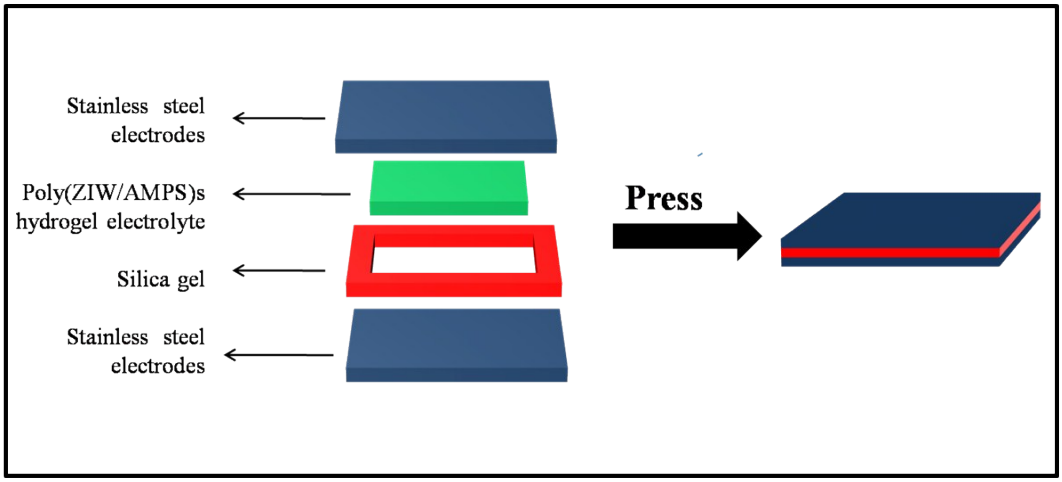


Figure S4 Schematic diagram of flexible devices for electrochemical measurements based on poly(ZIW/AMPS) hydrogel electrolytes.

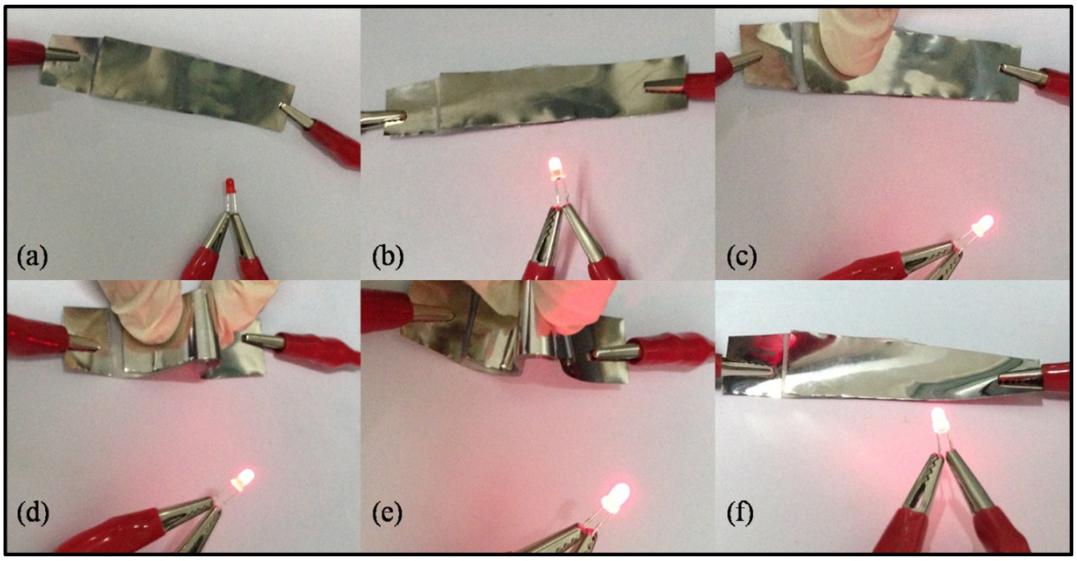


Figure S5 Circuit based on poly(ZIW/AMPS)s hydrogel electrolytes: (a, b) optical images of circuit based on poly(ZIW/AMPS)s hydrogel electrolytes at open and closed states; (c, d, e, f) the circuit functions well under compressed, bended, folded and twisted states.