Highly-Ordered Polypyrrole Coated Co(OH)$_2$ Architectures for High-Performance Asymmetric Supercapacitors

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1. SAED pattern of Co(OH)$_2$

**Figure S1.** Selected area electron diffraction (SAED) pattern of Co(OH)$_2$NSs.
2. XRD spectrum of the Co(OH)$_2$ architectures

![XRD spectrum of Co(OH)$_2$ architectures](image)

**Figure S2.** X-ray diffraction (XRD) pattern of Co(OH)$_2$ architectures and pristine carbon cloth (black: pristine carbon cloth; red: Co(OH)$_2$MP; blue: Co(OH)$_2$MF; green: Co(OH)$_2$NS).
3. Gravimetric capacitance of each electrode

**Figure S3.** Calculated gravimetric capacitance (F g$^{-1}$) of each electrode for various scan rates (10 to 200 mV s$^{-1}$).
4. Structure of the ASCs

Figure S4. (a) Schematic diagram of asymmetric supercapacitors (ASCs) composed of two different electrodes (Co(OH)$_2$@PPy: positive; CNTMN: negative) and polymer-gel electrolyte. (b) Low- and (c) high-magnification of FE-SEM images of the CNTMN decorated carbon cloth.
5. Deformations of the ASCs

**Figure S5.** Digital photographs of (a) flat-, (b) bended-, and (c) twisted-ASCs.
6. Volumetric and gravimetric capacitance of the ASCs

Figure S6. Volumetric (left) and gravimetric (right) capacitances of the ASCs calculated from the galvanostatic charge-discharge curves as a function of current density.
7. Real application of the ASCs

Figure S7. Blue light-emitting diode (LED) powered by the fabricated ASC.
8. CV curves of the ASCs with deformations

Figure S8. CV curves (scan rate: 50 mV s\(^{-1}\)) of ASCs for various deformations (black: flat; red: bend; blue: twist).