

Fig. S1. (a) The XRD of hydrophobic SiO₂. (b) TEM image of nano SiO₂.

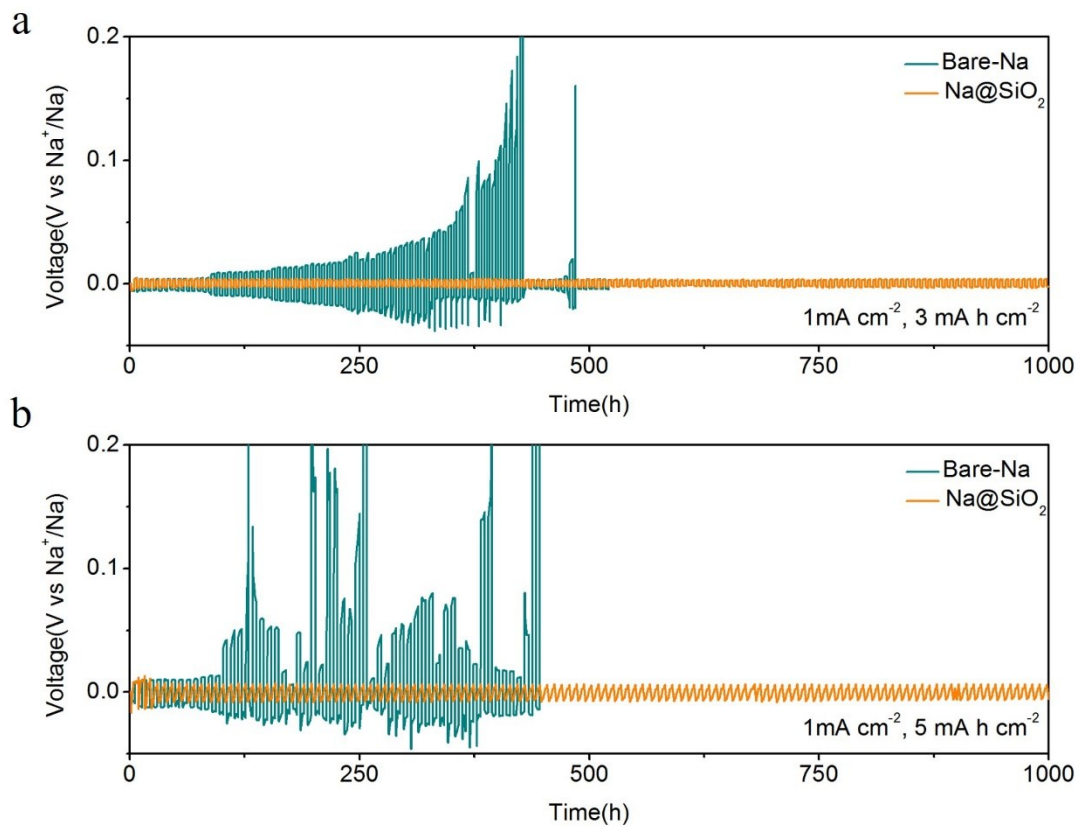


Fig. S2. Comparison of the cycling stability of Na@SiO₂ composite electrodes and bare Na symmetrical cells at 1 mA cm⁻² with a stripping/plating capacity of (a) 3 mA h cm⁻² and (b) 5 mA h cm⁻² in 1M NaPF₆/diglyme electrolyte.

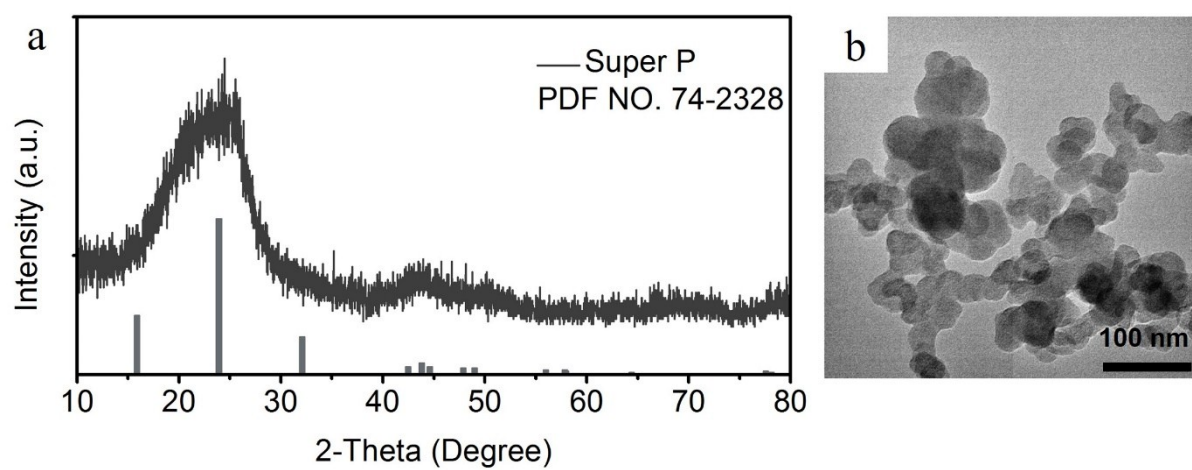


Fig. S3. (a) The XRD of Super P. (b) TEM image of Super P.

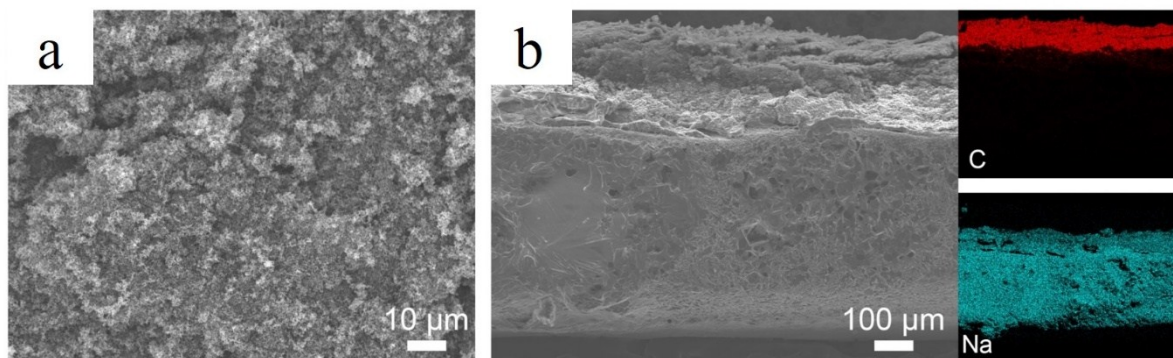


Fig. S4. (a) Top-view SEM image of Na@Super P electrode. (b) cross-sectional SEM image of Na@Super P electrode and the corresponding EDX elemental mappings of C and Na.

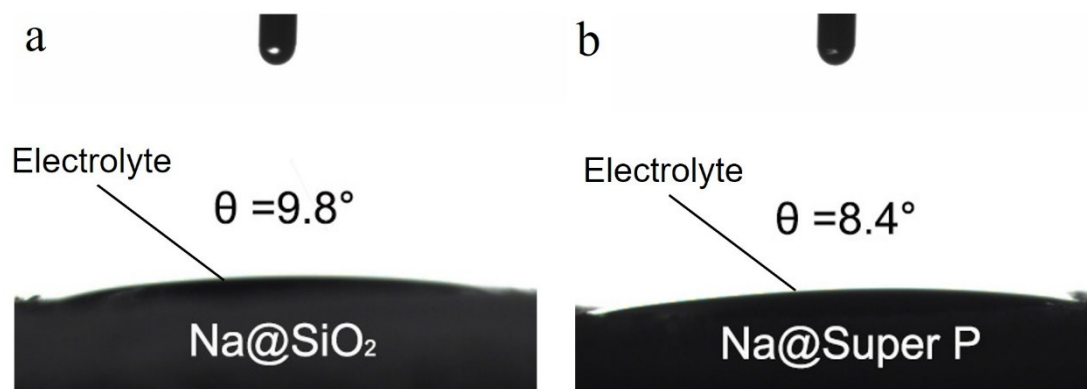


Fig. S5. Contact angles of NaPF₆/diglyme electrolyte on (a) Na@SiO₂ electrodes and (b) Na@Super P electrodes, respectively.

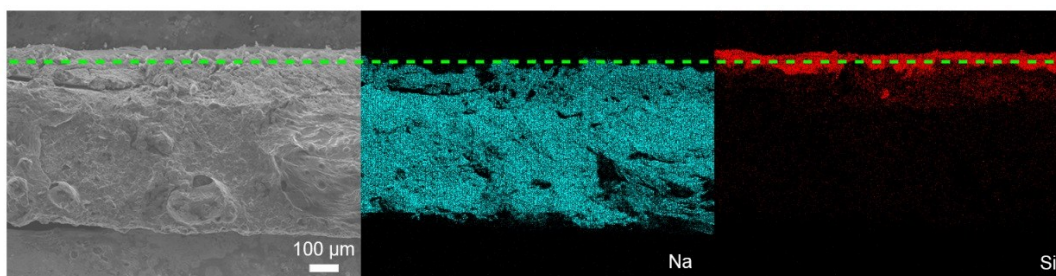


Fig. S6. Cross-sectional SEM image of Na@SiO₂ electrode and corresponding EDX elemental mappings of Si and Na after 50 cycles.

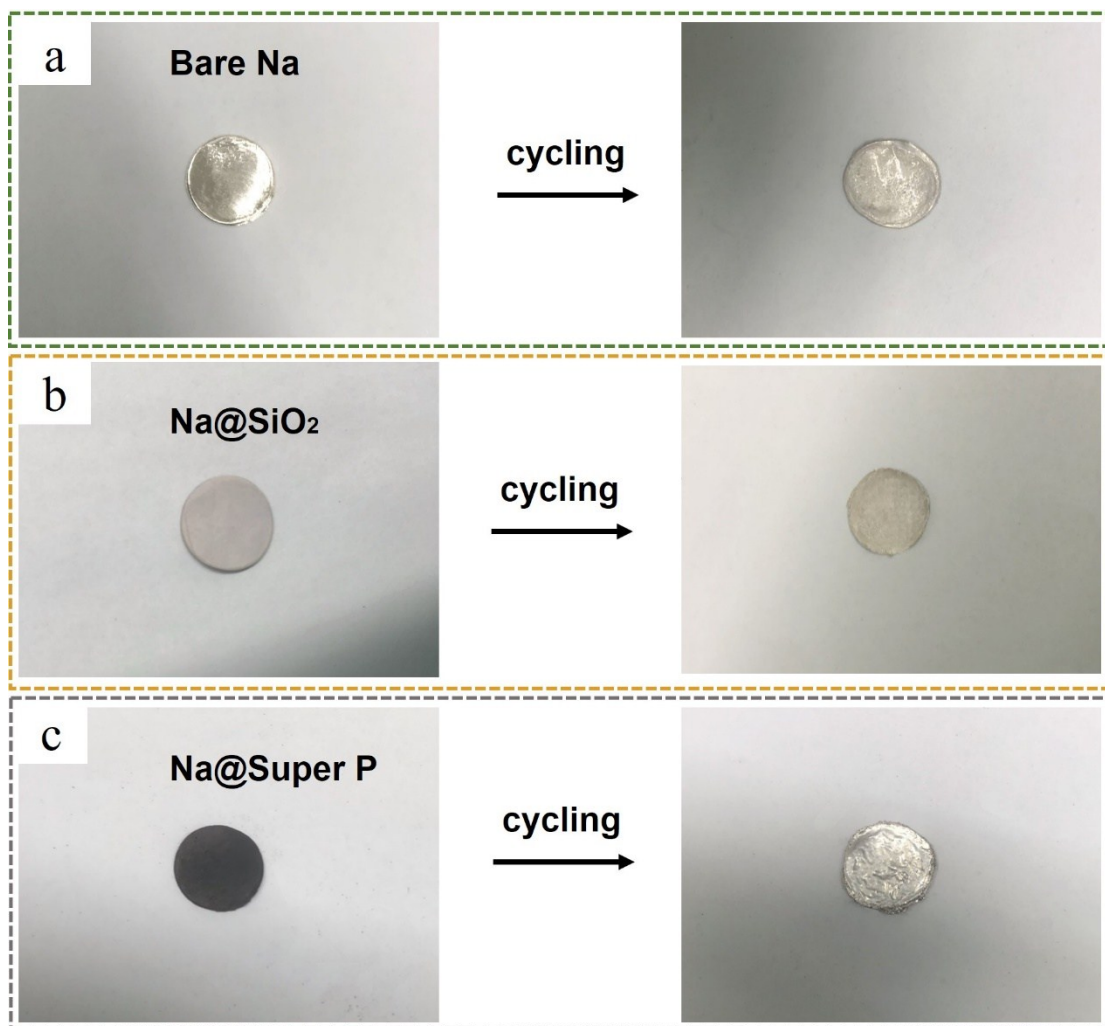


Fig. S7. Digital images of bare Na, Na@SiO₂ and Na@Super P electrode before and after cycling. (a) Bare Na. (b) Na@SiO₂. (c) Na@Super P.

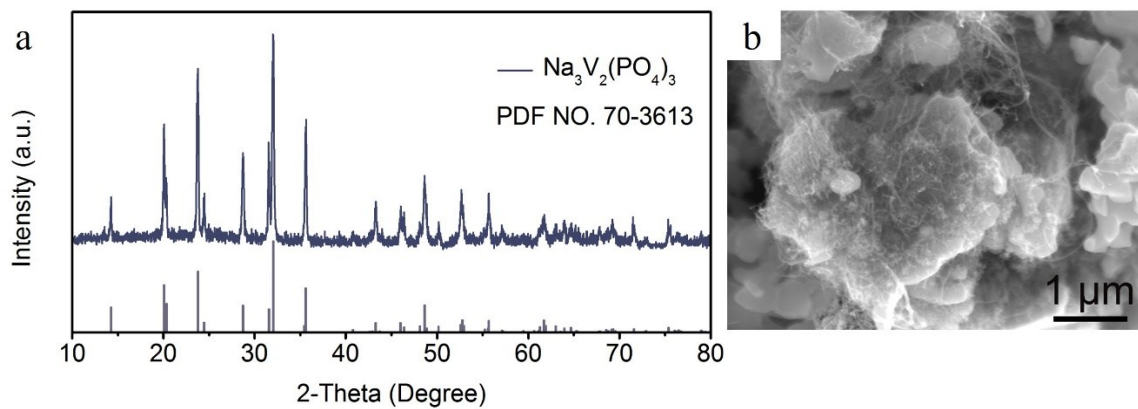


Fig. S8. (a) The XRD of NVP cathode fabricated by a sol-gel method. (b) SEM image of NVP cathode.

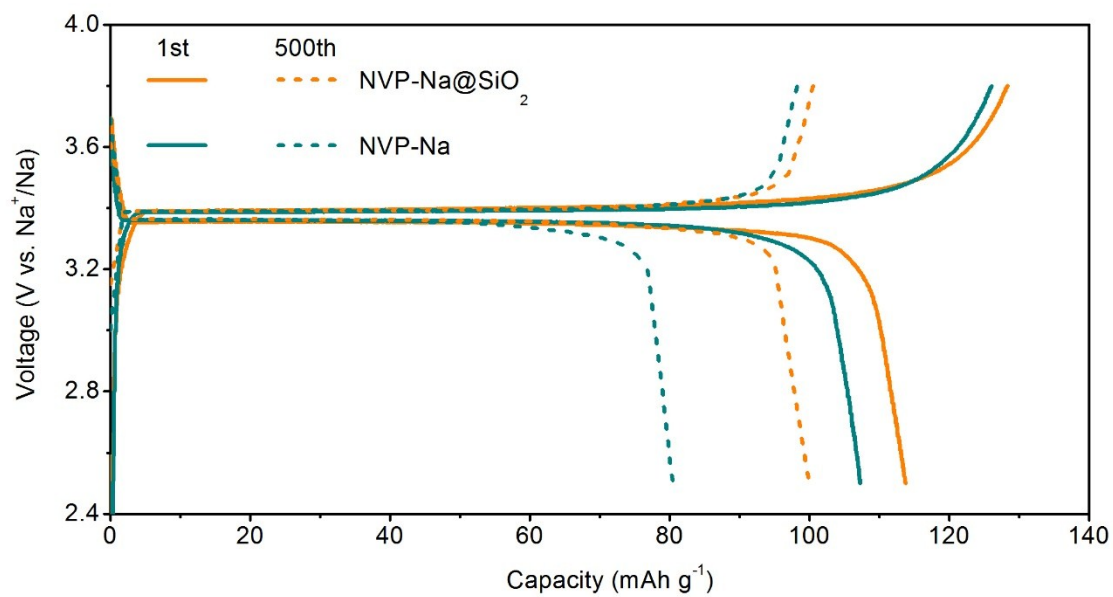


Fig. S9. Voltage profiles of the full batteries with bare Na or Na@SiO₂ as anodes and NVP as cathode at 1 C.