

Unique protonconduction 3D ZnII metal organic frameworks exposure to aquaammonia vapor for enhancing conductivity

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Supporting information

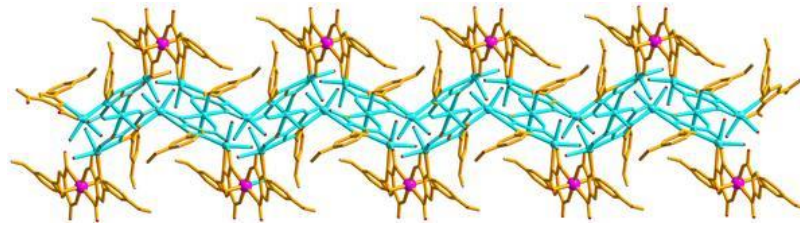


Fig. S1 The one-dimensional chain of ZS-1.

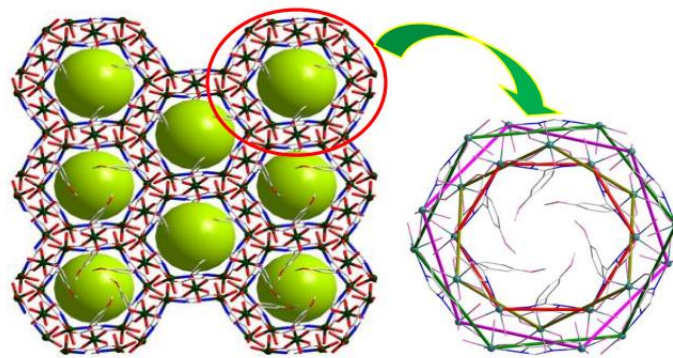


Fig. S2 The three-dimensional network structure of ZS-1.

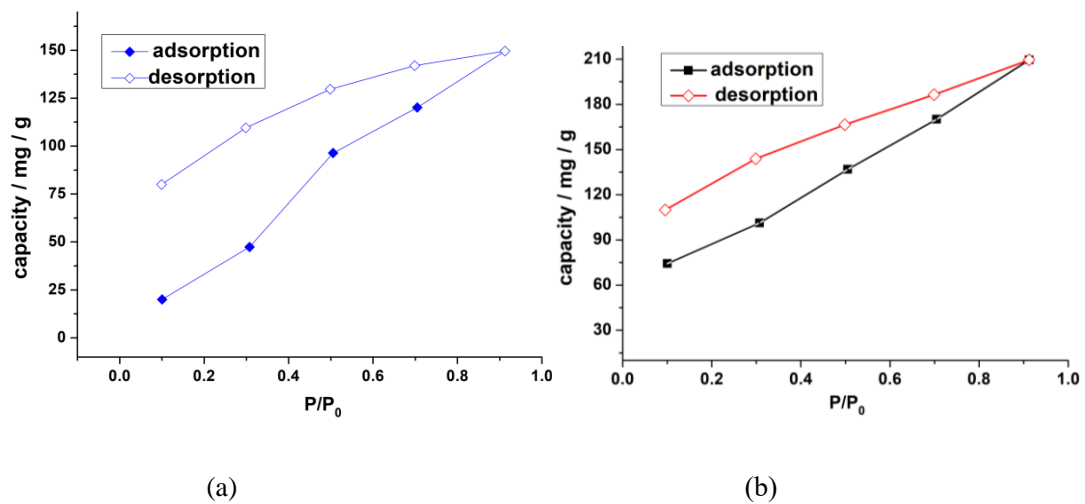


Fig. S3 Water and ammonia vapors vapor adsorption/desorption isotherms of ZS-1 at 25 °C.

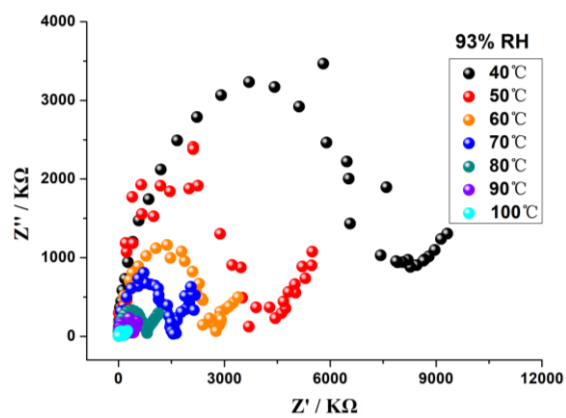


Fig. S4 Nyquist plots of ZS-1 from 40 to 100 °C at 93% RH.

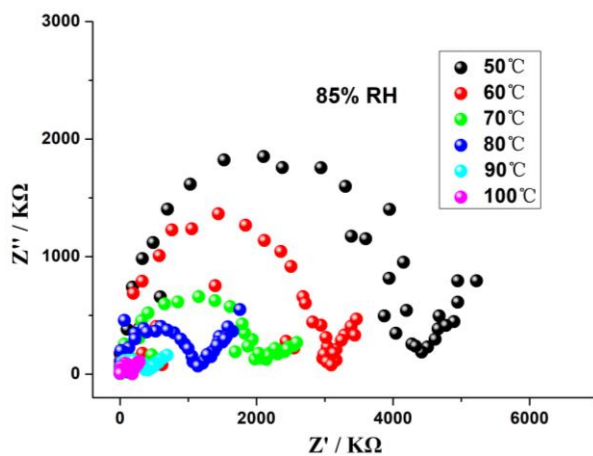


Fig. S5 Nyquist plots of ZS-1 from 50 to 100 °C at 85% RH.

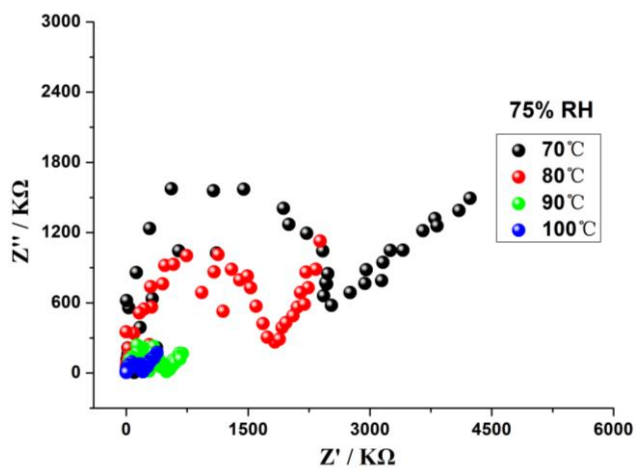


Fig. S6 Nyquist plots of ZS-1 from 70 to 100 °C at 75% RH.

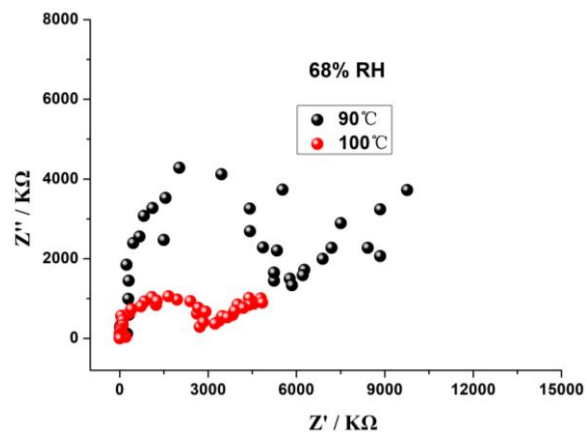


Fig. S7 Nyquist plots of ZS-1 from 90 to 100 °C at 68% RH

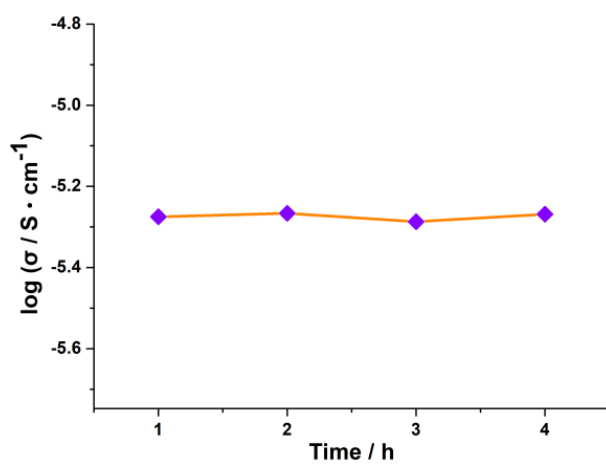


Fig. S8 Proton conductivity of ZS-1 measured at 100 °C-98% RH.

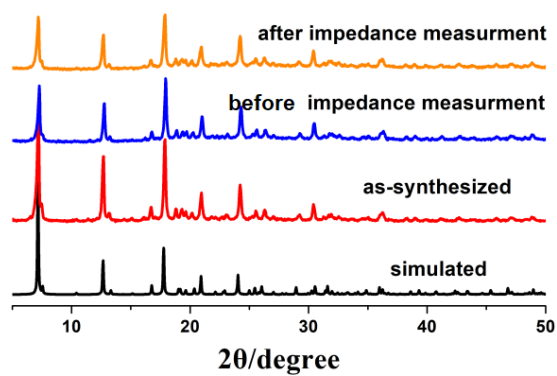


Fig. S9 XRD patterns of ZS-1 before and after proton conductivity measurement.

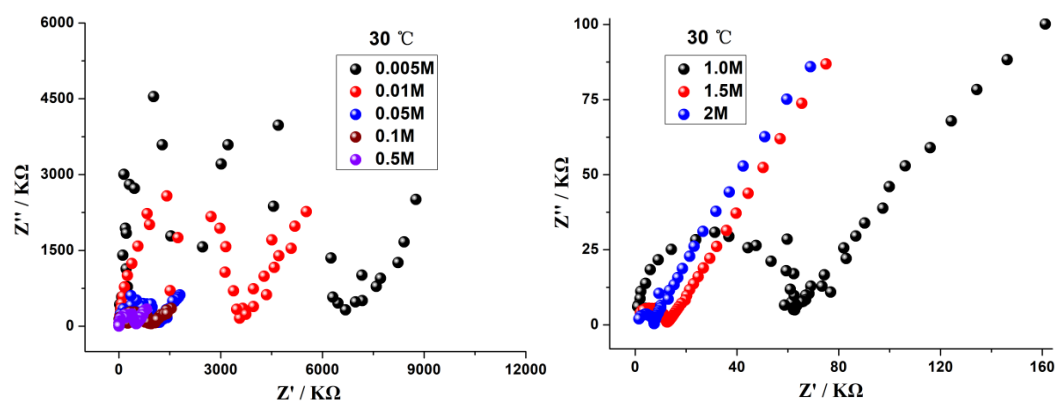


Fig. S10 Impedance spectra of ZS-1 at 0.005-2.0 M-30 °C.

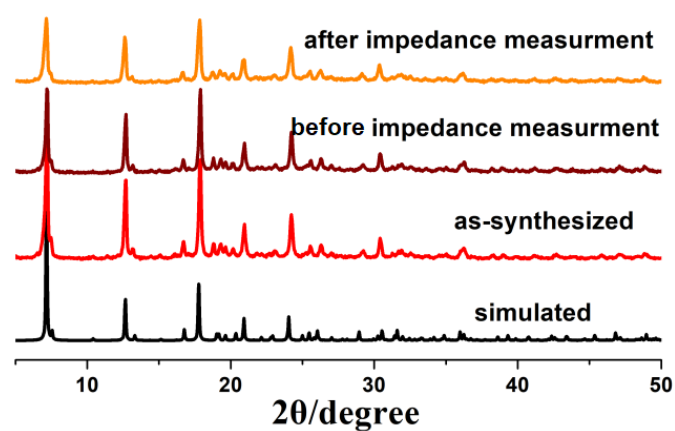


Fig. S11 XRD patterns of ZS-1 before and after proton conductivity measurement.

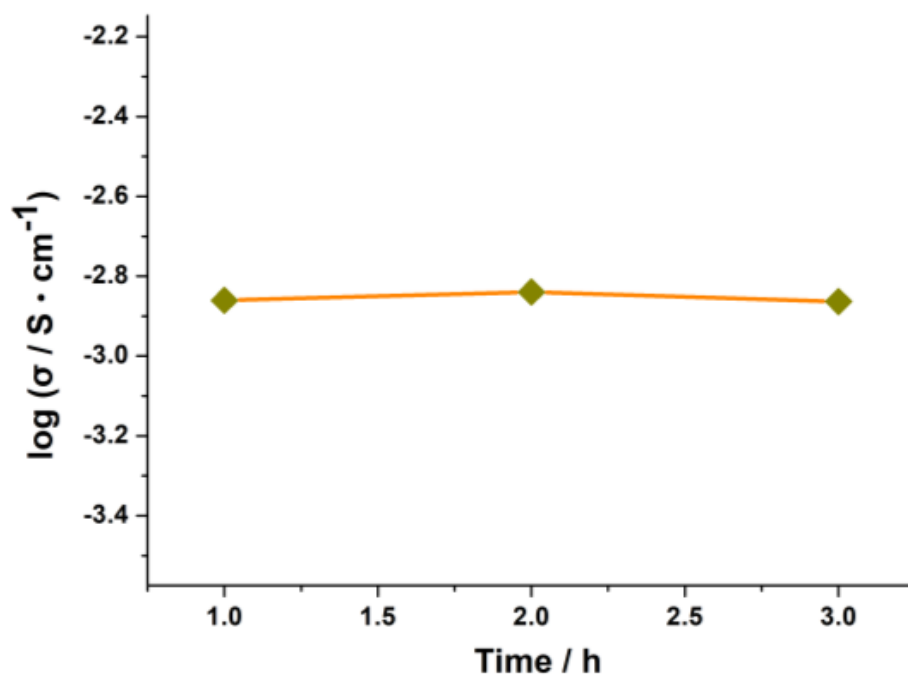


Fig. S12 The time persistence of ZS-1 at 100 °C-2 M aquaammonia vapor.