

Supplementary Information

Hydroxide Ion Conduction in Molybdenum(VI) or Tungsten(VI)-Doped Tin Pyrophosphate at Intermediate Temperatures

Takashi Hibino* and Kazuyo Kobayashi

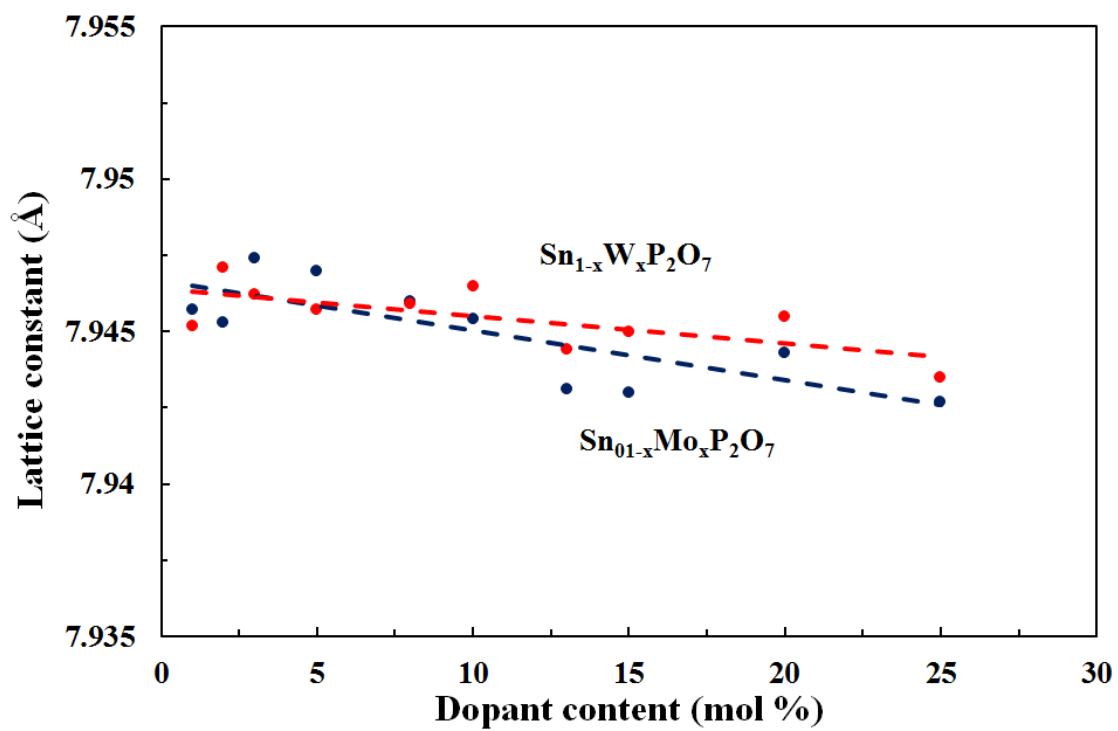


Fig. S1. Lattice constants for $\text{Sn}_{1-x}\text{Mo}_x\text{P}_2\text{O}_7$ and $\text{Sn}_{1-x}\text{W}_x\text{P}_2\text{O}_7$.

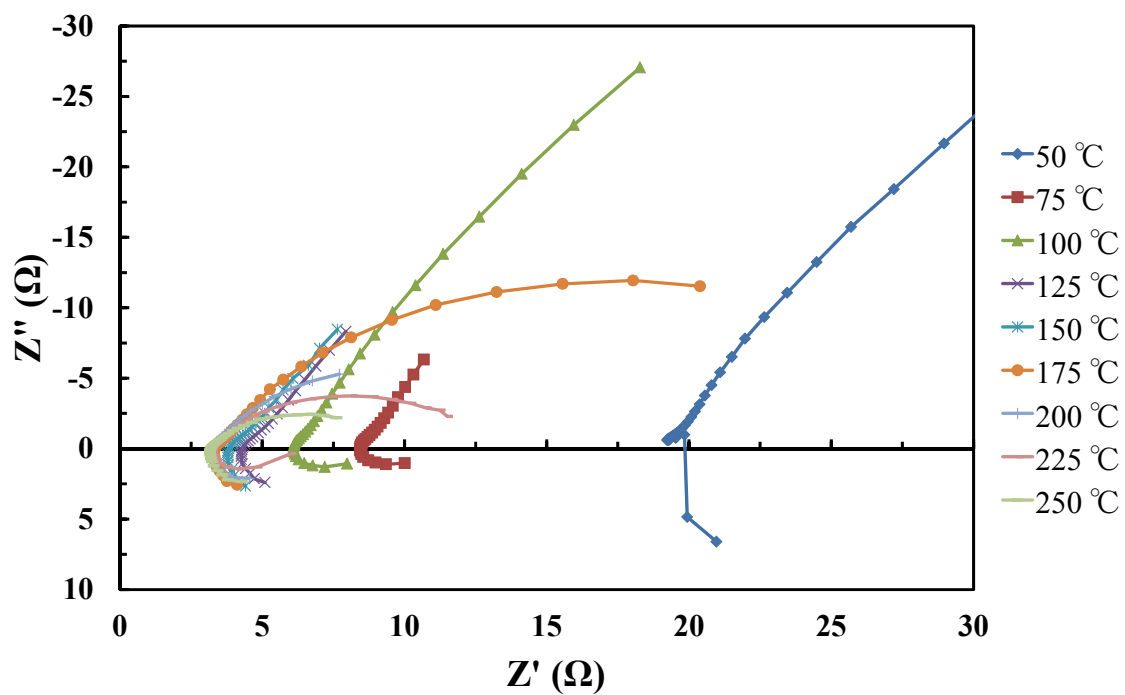


Fig. S2. Impedance spectra for $\text{Sn}_{0.85}\text{Mo}_{0.15}\text{P}_2\text{O}_7$.

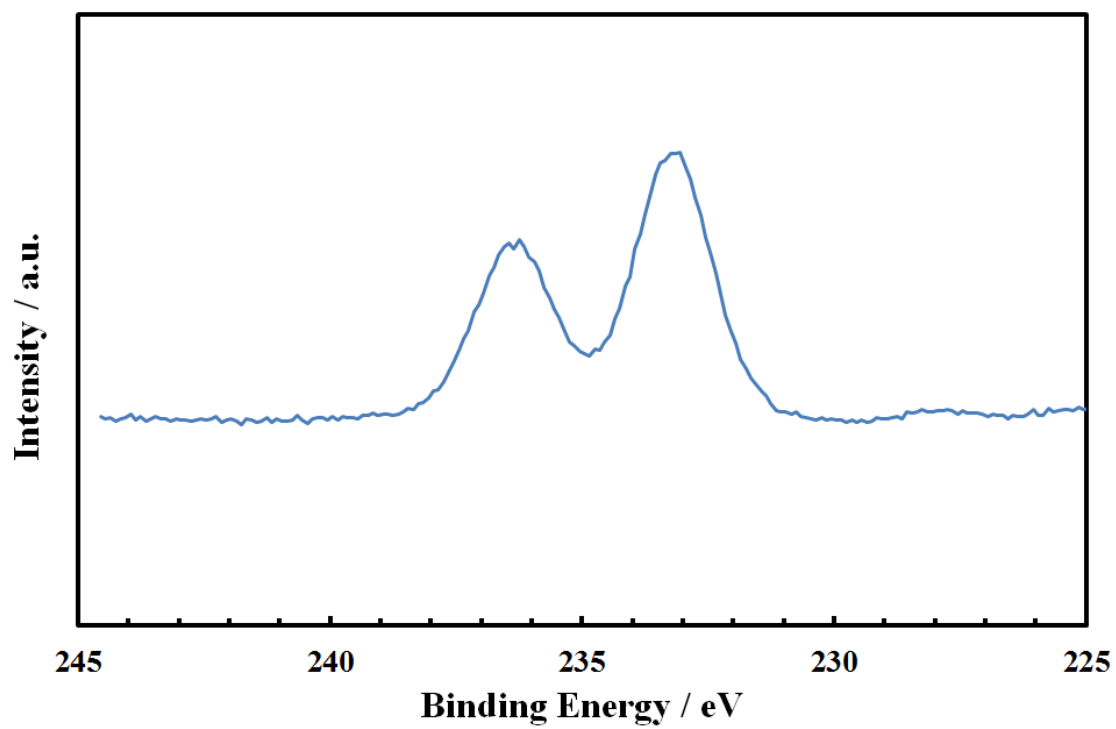


Fig. S3. XPS spectrum for $\text{Sn}_{0.85}\text{Mo}_{0.15}\text{P}_2\text{O}_7$.

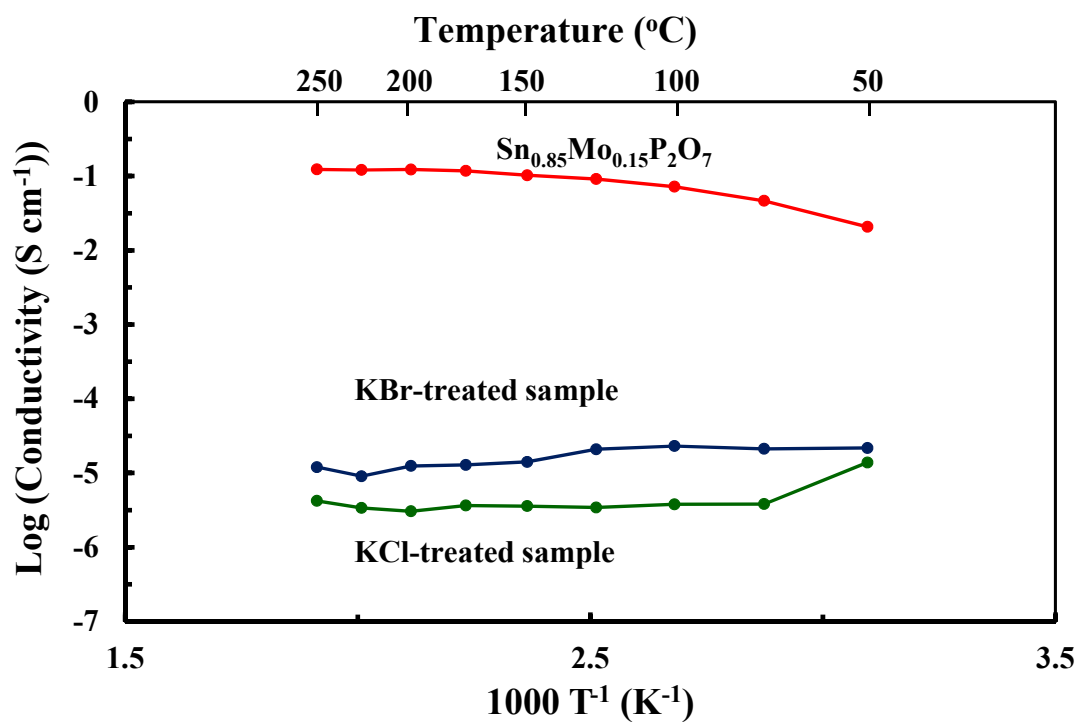


Fig. S4. Temperature dependence of conductivity for KCl or KBr-treated $\text{Sn}_{0.85}\text{Mo}_{0.15}\text{P}_2\text{O}_7$.

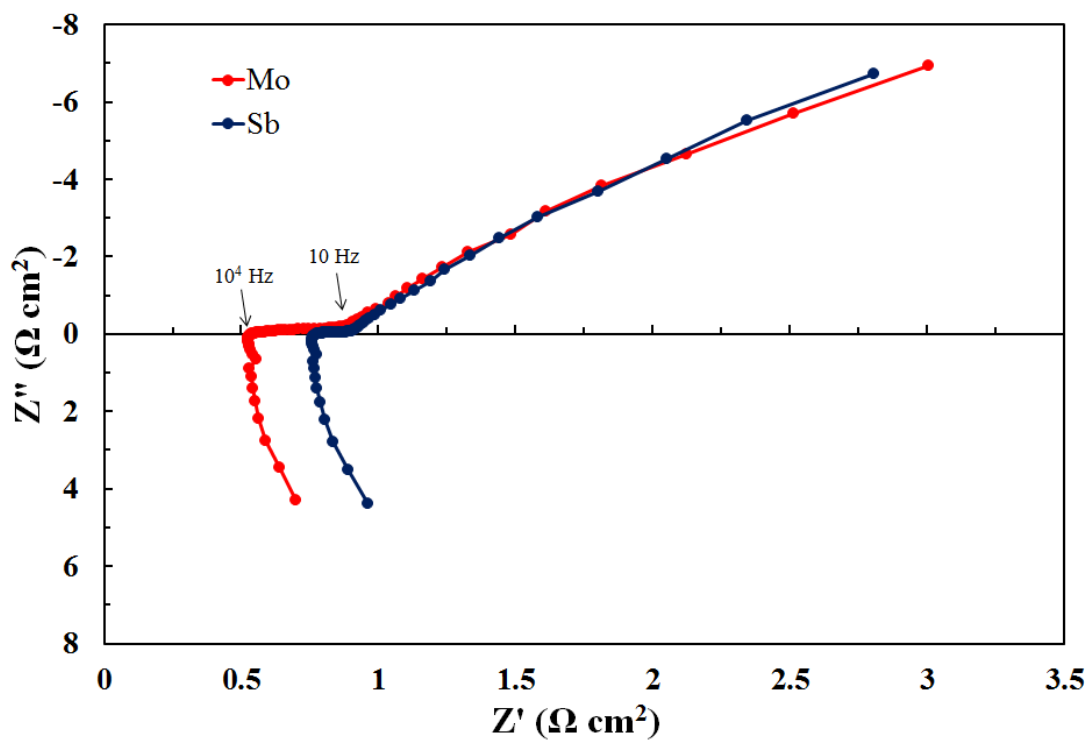


Fig. S5. Impedance spectra for fuel cells with the $\text{Sn}_{0.85}\text{Mo}_{0.15}\text{P}_2\text{O}_7$ and $\text{Sn}_{0.92}\text{Sb}_{0.08}\text{P}_2\text{O}_7$ electrolytes under open-circuit conditions at 150 °C.

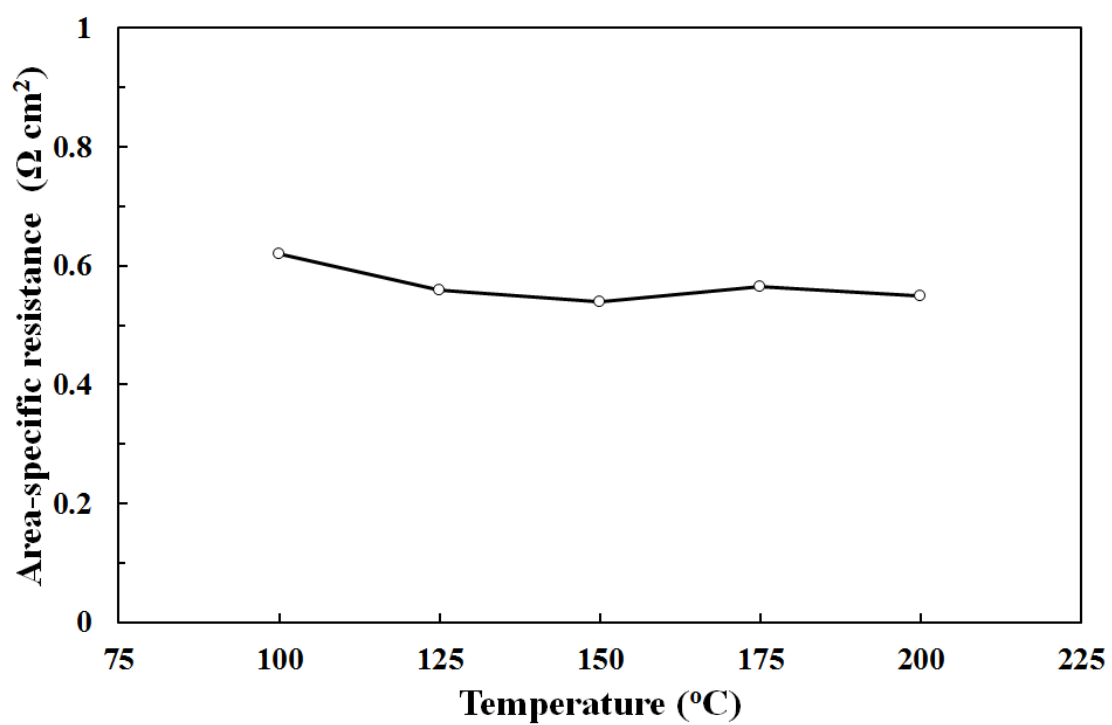


Fig. S6. Area-specific resistance for a $\text{Sn}_{0.85}\text{Mo}_{0.15}\text{P}_2\text{O}_7$ electrolyte at various temperatures.