

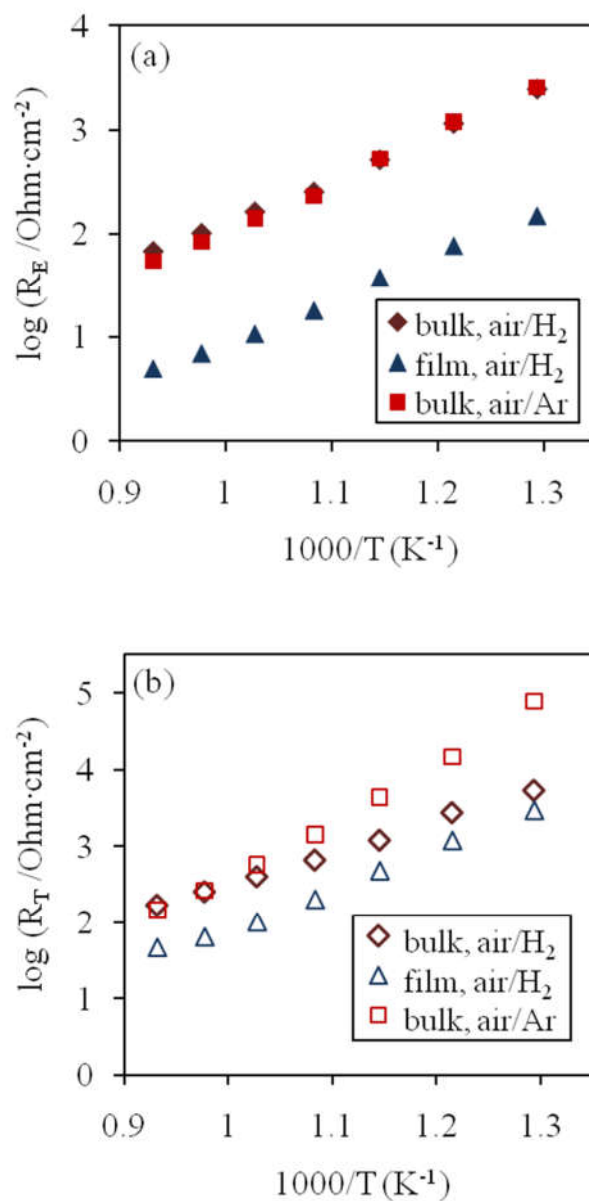
# Supplementary Data

## Transport Properties of Film and Bulk $\text{Sr}_{0.98}\text{Zr}_{0.95}\text{Y}_{0.05}\text{O}_{3-\delta}$ membranes

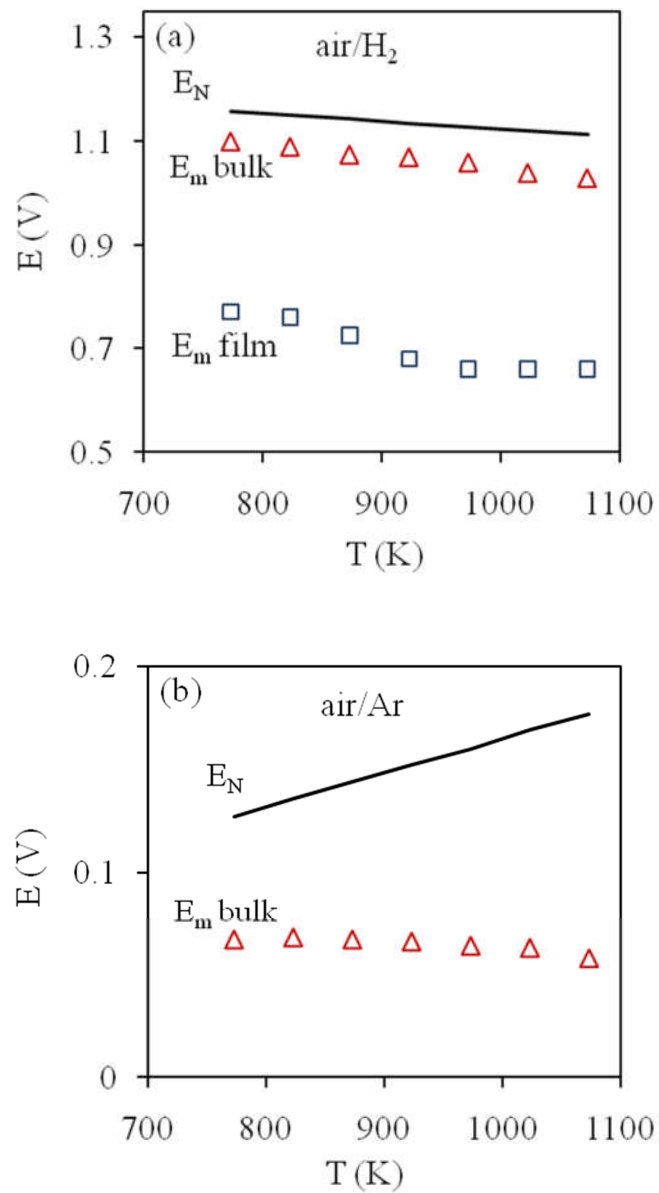
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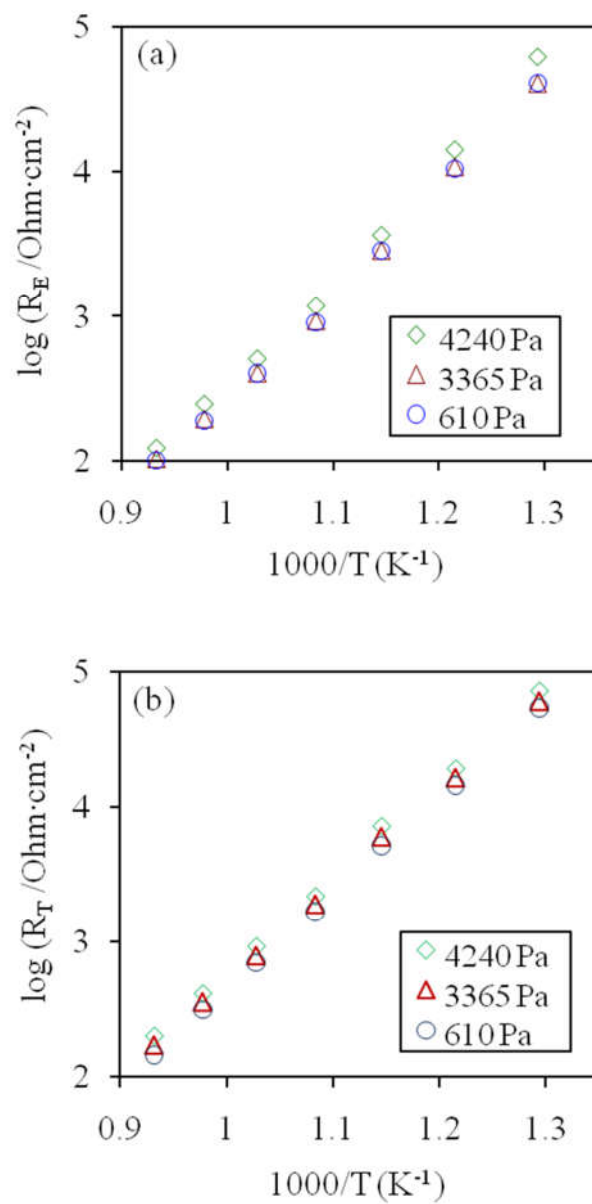
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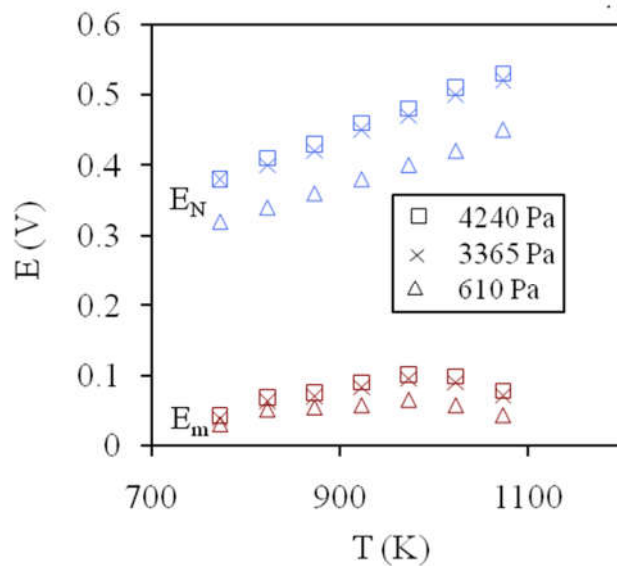
**Figure S1.** The area-specific values of  $R_E$  (a) and  $R_T$  (b) as functions of inverse temperature for the gas concentration cells air/ $\text{H}_2$  and air/Ar with the bulk and film SZY membranes.



**Figure S2.** Temperature dependences of  $E_m$  and  $E_N$  for the gas concentration cells: (a) air/ $H_2$ , (b) air/Ar.



**Figure S3.** The area-specific values of  $R_E$  (a) and  $R_T$  (b) as functions of inverse temperature for the gas concentration cells  $p\text{H}_2\text{O}'$ , Pt/SZY/Pt,  $p\text{H}_2\text{O}''$  in air at  $p\text{H}_2\text{O}' = 40$  Pa and  $p\text{H}_2\text{O}'' = 4240, 3365$  and 610 Pa.



**Figure S4.** Temperature dependences of  $E_N$  and  $E_m$  for the gas concentration cell  $p_{H_2O'}$ , Pt/SZY/Pt,  $p_{H_2O''}$  in air at  $p_{H_2O'} = 40$  Pa and  $p_{H_2O''} = 4240, 3365$  and  $610$  Pa.