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Supporting Information

$BiFeO_3$/YSZ bilayer electrolyte for low temperature solid oxide fuel cell

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Table S1 EDX elemental Analysis of BFO electrolyte with and without YSZ protecting layer after the fuel cell operated at 700°C.

Element	Atomic (%)	
	With YSZ	Without YSZ
Bi	18.00	2.74
Fe	18.03	37.62
O	63.97	59.64

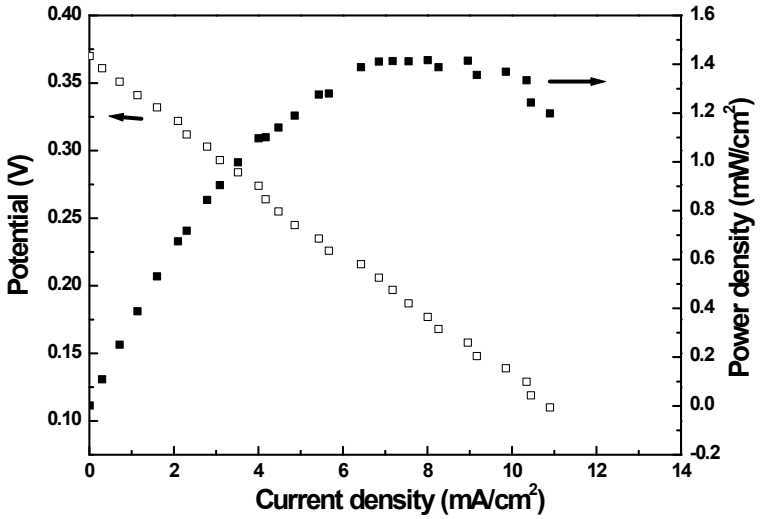

Fig. S1 Fuel cell performance using BFO only electrolyte at 700°C.

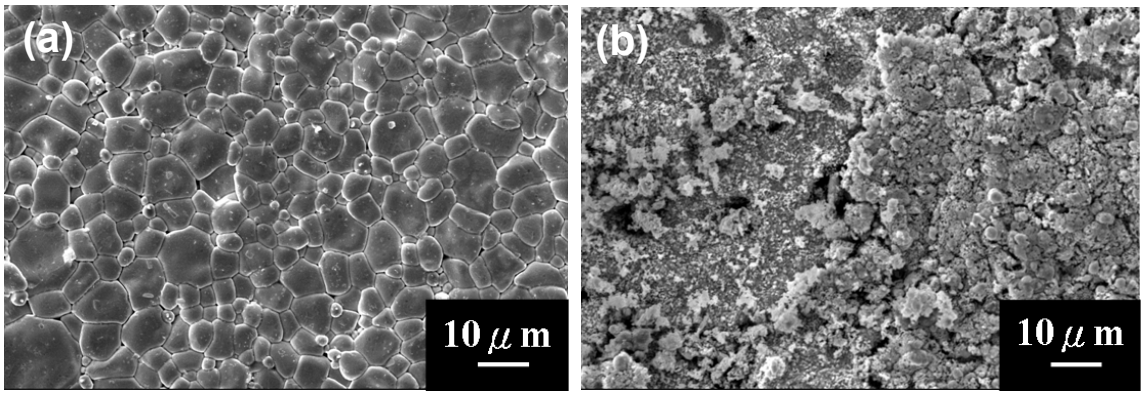

Fig. S2 SEM photos of BFO only electrolyte **(a)** before and **(b)** after the fuel cell operated at 700°C.

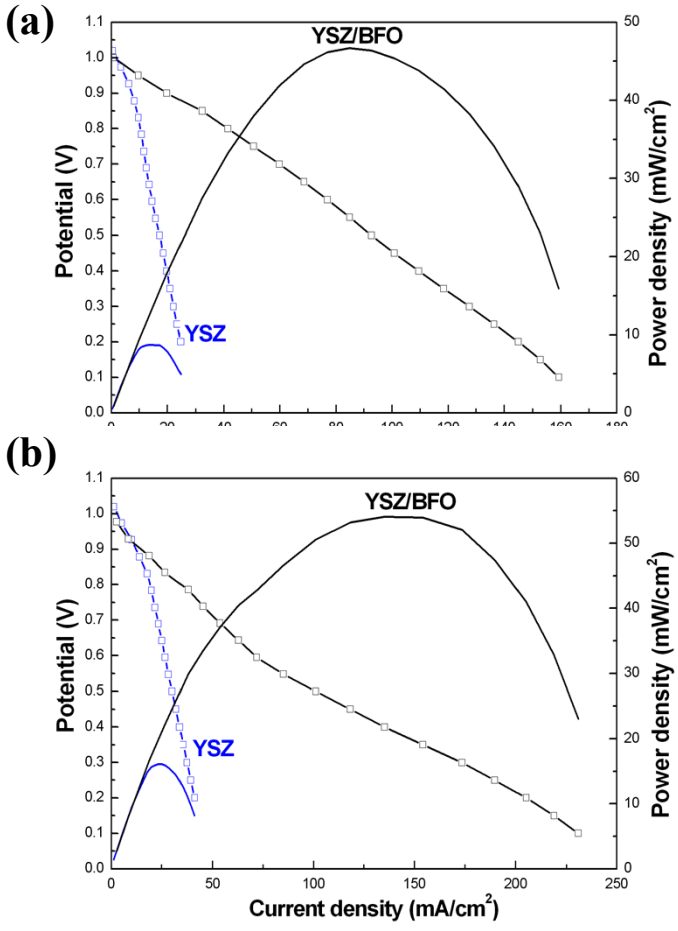

Fig. S3 Comparison of fuel cells performance with YSZ/BFO (103μm/38μm) electrolytes or YSZ (98μm) electrolyte at **(a)** 650°C and **(b)** 700°C operating temperature.