Application of tubular SOFCs using proton conductor of BZCY

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Oxide proton conductor is promising electrolytes for low-temperature SOFCs because of their high ionic conductivitys and low activation energy for proton conduction at low-temperature. Ceramic proton conductors are good candidate materials for fuel cell operation at relatively low temperature. Recently, Zuo et al. reported a new composite materials of proton conductor, Ba(Zr0.1Ce0.7Y0.2)O3-δ (BZCY) which shown good conductivity as well as enough chemical and thermal stability over wide range of operating condition. We report that BZCY powder is synthesized by co-precipitation method for fabrication of anode-supported BZCY electrolyte.