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# **Fabrication of one-step co-fired proton-conducting solid oxide fuel cells with the assistance of microwave sintering**

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## **Abstract**

A microwave sintering technique is reported for fabricating co-sintered proton-conducting solid oxide fuel cells. With this method, high-quality ceramic electrolyte membranes can be prepared at 1100 °C, thus enabling the fabrication of entire cells in a single step. The microwave sintering method not only enhances electrolyte densification but also improves the cathode/electrolyte interface, which is critical for improving fuel cell performance. The power output of the co-sintered cell prepared

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