US008182965B2

(12) **United States Patent**
Kim et al.

(10) **Patent No.: US 8,182,965 B2**
(45) **Date of Patent: May 22, 2012**

(54) **OPTIMIZED CELL CONFIGURATIONS FOR STABLE LSCF-BASED SOLID OXIDE FUEL CELLS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 828 days.

(21) Appl. No.: **12/241,277**

(22) Filed: **Sep. 30, 2008**

(65) **Prior Publication Data**

US 2010/0081035 A1 Apr. 1, 2010

(51) **Int. Cl.**

H01M 4/02	(2006.01)
H01M 4/36	(2006.01)
H01M 4/62	(2006.01)
H01M 4/90	(2006.01)

(52) **U.S. Cl.** **429/529**; 429/489; 429/523; 429/528; 429/532; 429/533

(58) **Field of Classification Search** 429/489, 429/523, 528, 529, 532, 533
See application file for complete search history.

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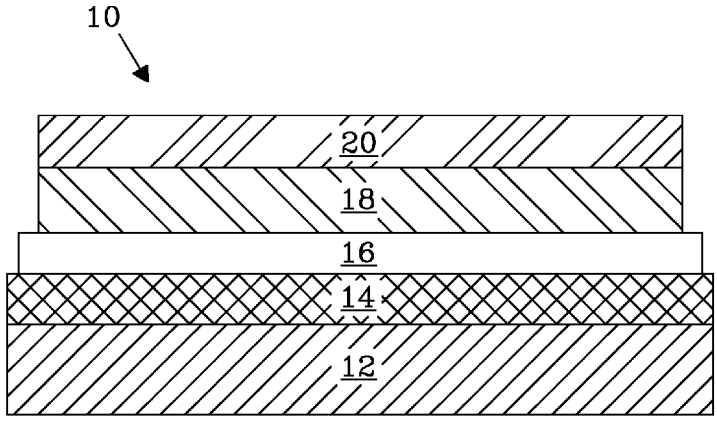
(57) **ABSTRACT**

Lanthanum strontium cobalt iron oxides (La(1-x)Srx-CoyFe1-yO3-f; (LSCF) have excellent power density (>500 mW/cm2 at 750° C.). When covered with a metallization layer, LSCF cathodes have demonstrated increased durability and stability. Other modifications, such as the thickening of the cathode, the preparation of the device by utilizing a firing temperature in a designated range, and the use of a pore former paste having designated characteristics and combinations of these features provide a device with enhanced capabilities.

14 Claims, 4 Drawing Sheets