

Nanomaterials and technologies for low temperature solid oxide fuel cells: Recent advances, challenges and opportunities

Liangdong Fan, Bin Zhu, Pei-Chen Su, Chuanxin He



PII: S2211-2855(17)30820-0  
DOI: <https://doi.org/10.1016/j.nanoen.2017.12.044>  
Reference: NANOEN2425

To appear in: *Nano Energy*

Received date: 29 October 2017  
Revised date: 23 December 2017  
Accepted date: 27 December 2017

Cite this article as: Liangdong Fan, Bin Zhu, Pei-Chen Su and Chuanxin He, Nanomaterials and technologies for low temperature solid oxide fuel cells: Recent advances, challenges and opportunities, *Nano Energy*, <https://doi.org/10.1016/j.nanoen.2017.12.044>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Nanomaterials and technologies for low temperature solid oxide fuel cells:

## Recent advances, challenges and opportunities

Liangdong Fan<sup>a,c,d\*</sup>, Bin Zhu<sup>b,c\*</sup>, Pei-Chen Su<sup>d\*</sup>, Chuanxin He<sup>a\*</sup>

<sup>a</sup>College of Chemistry and Environmental Engineering, Shenzhen University, Shenzhen  
518060, Guangdong, PR China

<sup>b</sup>Faculty of Materials Science and Chemistry, China University of Geosciences (Wuhan),  
Wuhan 430074, China

<sup>c</sup>Department of Energy Technology, Royal Institute of Technology, Stockholm, SE-10044,  
Sweden

<sup>d</sup>School of Mechanical and Aerospace Engineering Nanyang Technological University, 50  
Nanyang Avenue, Singapore 639798, Singapore

fanld@szu.edu.cn (L. Fan);

zhubin@hubu.edu.cn

binzhu@kth.se (B. Zhu);

peichensu@ntu.edu.sg (P-C. Su);

hecx@szu.edu.cn (C.X. He)

Corresponding authors. Tel.: +86 755 26533769.

### Abstract

Solid oxide fuel cells (SOFCs) show considerable promise for meeting the current ever-increasing energy demand and environmental sustainability requirements because of their high efficiency, low environmental impact, and distinct fuel diversity. In the past few decades, extensive R&D efforts have been focused on lowering operational temperatures in order to decrease the system (stack and balance-of-plant) cost and improve the longevity of operationally

Download English Version:

<https://daneshyari.com/en/article/7952816>

Download Persian Version:

<https://daneshyari.com/article/7952816>

[Daneshyari.com](https://daneshyari.com)