



## Electrode-Supported Solid Oxide Fuel Cell (SOFC) with Film Protonic Electrolyte

Guest Editor:

**Dr. Liliya Dunyushkina**

Institute of High Temperature  
Electrochemistry, 20  
Akademicheskaya St, 620990  
Ekaterinburg, Russia

lidung@list.ru

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### Message from the Guest Editor

Dear Colleagues,

Solid oxide fuel cells (SOFCs) are efficient energy conversion devices that convert the chemical energy of a fuel into electricity via electrochemical reactions. At present, reduction of operating temperatures to intermediate temperature (IT) range (400–700 °C) is the main task for SOFC development. Now, proton-conducting oxides have attracted widespread interest as electrolyte materials, for use in IT-SOFCs due to their low activation energy and sufficiently high ionic conductivity. Further reduction of SOFC operating temperature is achievable by minimizing the electrolyte thickness and therewith related ohmic losses. In recent decades, great research efforts have been focused on the development of fabrication and electrochemical performance of proton-conducting SOFCs with a film electrolyte. However, significant challenges remain before us, such as with respect to minimizing the material interaction, reduction of polarization losses.

This Special Issue aims to cover recent advances and new trends in the development of materials for different cell components and their processing and performance; cell performance modeling, and so on.

