## Solid Oxide Fuel Cells - The Low Temperature Challenge

Guest Editor:

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## Message from the Guest Editor

Solid Oxide Fuel Cells (SOFCs) are the most efficient technology yet invented for the conversion of the chemical energy of fuels directly into electrical energy. SOFCs are all-solid-state power systems, their heart being the oxygen-ion conducting electrolyte. At present, the state-of-the-art electrolyte is the same used in the Nernst glower lamp in 1899: yttria stabilized zirconia, which requires an operating temperature of $850-900^{\circ} \mathrm{C}$, resulting in materials limitations and operating complexity. This special issue collects original research papers, reviews and commentaries focused on the challenge of lowering the operating temperature to $600-800^{\circ} \mathrm{C}$ (IT-SOFC, i.e. Intermediate Temperature SOFC) or even down to approximately $350^{\circ} \mathrm{C}$ (LT-SOFC, i.e. Low Temperature SOFC), as well as on the associated challenge of increasing lifetime. Submissions are welcome in all areas of ITSOFC and LT-SOFC science and engineering.

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