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## Nanomaterials for Solid Oxide Fuel Cell

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### Message from the Guest Editor

Solid oxide fuel cells (SOFCs) are open thermodynamic devices which permit the continuous conversion of a wide range of fuels such as hydrogen, hydrocarbon gases such as methane, propane etc. or biofuels like methanol and formic acid into electrical power. SOFCs are comprised of a layered structure of a dense solid electrolyte, which behaves as a conductor of oxygen ions at high temperatures (500°C-1000°C), sandwiched between porous anode and cathode. Oxidation of the fuel takes place on the electrolyte-anode interface forming H<sub>2</sub>O and liberating electrons to flow in an external circuit to generate electrical power. Although many electrode and electrolyte materials for SOFCs have been developed over the past few decades, challenges of cost and limited durability still exists.



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## Message from the Editor-in-Chief

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