

Polymer Electrolyte Fuel Cells: challenges and perspectives

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Electrochemical devices for energy conversion such as Polymer Electrolyte Fuel Cells (PEFC) play an important role due to highly efficient electric power generation and low environment impact. However, the PEFC systems market penetration is strongly limited by the use of critical raw materials such as Platinum and metals of the Platinum group (PGM) and Fluorine for both electrodes and membranes preparation. The CNR-ITAE approach is mainly based on the development of high-performance, durable and cost-effective materials based on non-critical raw materials.