**Assessment of Reversible Hydrogen-Chlorine PEM fuel cell working with different anode compositions.**

Manuel Andrés Rodrigo\*, Mireya Carvela, Sergio Díaz, Carmen María Fernández-Marchante, Justo Lobato

*Department of Chemical Engineering, Faculty of Chemical Sciences and Technologies, University of Castilla-La Mancha, Enrique Costa Novella Building, Av. Camilo José Cela nº12, 13071, Ciudad Real, Spain*

*Manuel.rodrigo@uclm.es*

**Highlights**

* Easy reversible operation
* Important influence of anode materials
* Easy regulation of solar energy
* Significance of membrane selection

Reversible Chlorine cells are a promising type of devices for the regulation of the energy produced by wind turbines and solar PV panels [1]. In the electrolytic mode, this type of cell transforms hydrochloric acid into hydrogen and chlorine, which can be stored helping to regulate the exceeding energy. In fuel cell mode the reversible reactions occur, and hydrochloric acid is regenerated [2]. Integration of the both modes of operation into the same cell is an important handicap which has been faced in this work, using different Mixed Metal Oxides anodes in order to determine the most efficient formulation, different proton exchange membranes and operation conditions [3]. This work reports some of the most interesting results obtained in this promising technology.

**References**

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