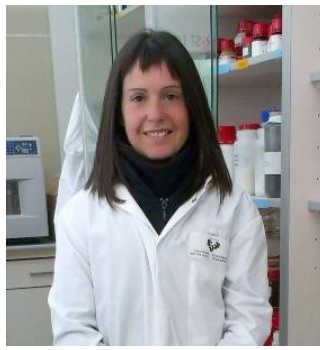


# IMPROVED FUEL CELLS

*Posted on 16/07/2014 by Naider*





Dr. Karmele Vidal,  
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The group [IMaCris/MaKrisl](#) from the UPV/EHU has presented its research on oxide fuel cells ([SOFCs](#)) operating at high temperatures. Unlike conventional fuel cells, SOFCs have a solid ion pipeline, which has several advantages, as researcher Karmele Vidal points out: "The materials are relatively cheap, their sensitivity to impurities in the fuel is low, and high efficiency and power. Also, since the components are solid, their configuration is much more versatile, since they can be manipulated." As a counterpoint to these advantages, the researcher points out that "when working at high temperatures, more expensive materials are used."

Regarding the material used for manufacturing, this research group has worked with perovskites to design certain fuel cell components, such as the cathode and the contact layer, since they have observed that perovskite-type materials are good conductors, both electronic and ionic, therefore appropriate for the design of the contact layer and the cathode, respectively.

In relation to synthesis, the perovskite preparation system that has given the best results is combustion, which basically consists of a reaction between nitrates -oxidant- and glycine -fuel-. This reaction causes self-combustion, in which the flame reaches high temperatures and the material is formed.

An option that presents a greater economic profitability than traditional fuel cells and that could be a good option when the current system becomes more expensive as a result of the increase in the price of oil.

**There are no comments yet.**