

A PHOTOEMISSION STUDY OF THE ELECTRONIC PROPERTIES OF DOPED  
LiCoO<sub>2</sub>.

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Ternary transition metal oxides are investigated as possible cathode materials for molten carbonate fuel cells (MCFC). Technological interest reside on the electrochemical properties of these materials, which can be further enhanced under doping with alkaline earth metals.

It is expected that functional properties may be related to the electronic properties of these materials, which also represent an intriguing fundamental research subject.

In this work photoemission spectra of LiCoO<sub>2</sub> undoped and Mg-doped, prepared by solid state reaction, have been measured to probe their electronic structure. Changes in core and valence levels features are observed, that could be related to changes in the local arrangement and density of states induced by the doping. Surface segregation of alkali metal oxide species is also discussed.