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## Mg-doped LaCrO<sub>3</sub> as a support material for the oxygen electrode in PEM electrolyzer

**Kent Kammer Hansen**

Technical University of Denmark - DTU, Denmark

Electrolysis of water is a convenient way to store energy as hydrogen. The PEM Electrolysis Cell (PEMEC) has many advantages; Compactness, operation in a wide power range, and the possibility of deliver high purity H<sub>2</sub>. However, the use of expensive iridium on the anode side (oxygen electrode), makes large scale operation of the PEMEC too costly. In order to reduce the cost it is necessary to either replace or at least lower the use of iridium. Here we for the first time report the use of Mg-doped LaCrO<sub>3</sub> as a possible support material for the PEMEC oxygen electrode. The chromates are synthesized using aqueous solutions of metal-nitrates, evaluated by powder XRD, tested for corrosion stability in acid and finally the total conductivity is measured. The compounds show good corrosion stability and sufficient conductivity.

### Biography

Kent Kammer Hansen has completed his PhD at the age of 31 years from the Technical University of Denmark. He is a senior researcher at the Technical University of Denmark. He has published more than 100 papers in reputed journals and has been serving as an reviewer for several journals.

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