The Effect of a CGO Barrier Layer on the Performance of LSM/YSZ SOFC Cathodes - DTU Orbit (27/12/2018)

**The Effect of a CGO Barrier Layer on the Performance of LSM/YSZ SOFC Cathodes**

LSM/YSZ (Strontium substituted Lanthanum Manganite/Yttria Stabilised Zirconia) SOFC (Solid Oxide Fuel Cell) composite electrodes were fabricated with slurry spraying on both sides on either pure YSZ electrolyte foils or YSZ electrolyte foils with a CGO (Cerium-Gadolinium Oxide) barrier layer made by spin coating. Electrochemical impedance spectroscopy (EIS) was used to evaluate the performance of the LSM/YSZ composite electrodes. It was shown that the CGO barrier layer affects both the performance of the LSM/YSZ composite electrodes and the series resistance of the cells. This indicates that the cathode-electrolyte interface and the barrier layer-electrolyte interface have a large influence on the performance of LSM/YSZ composite electrodes.

**General information**

State: Published  
Organisations: Electrochemistry, Fuel Cells and Solid State Chemistry Division, Risø National Laboratory for Sustainable Energy, Ceramic processing, Electroceramics  
Contributors: Kammer Hansen, K., Menon, M., Knudsen, J., Bonanos, N., Mogensen, M. B.  
Pages: B309-B313  
Publication date: 2010  
Peer-reviewed: Yes

**Publication information**

Journal: Journal of The Electrochemical Society  
Volume: 157  
Issue number: 3  
ISSN (Print): 0013-4651  
Ratings:  
BFI (2018): BFI-level 1  
Web of Science (2018): Indexed yes  
BFI (2017): BFI-level 1  
Scopus rating (2017): CiteScore 3.48 SJR 1.267 SNIP 1.009  
Web of Science (2017): Impact factor 3.662  
Web of Science (2017): Indexed yes  
BFI (2016): BFI-level 1  
Scopus rating (2016): CiteScore 2.97 SJR 1.222 SNIP 0.963  
Web of Science (2016): Impact factor 3.259  
Web of Science (2016): Indexed yes  
BFI (2015): BFI-level 1  
Scopus rating (2015): CiteScore 3.17 SJR 1.115 SNIP 1.066  
Web of Science (2015): Impact factor 3.014  
Web of Science (2015): Indexed yes  
BFI (2014): BFI-level 1  
Scopus rating (2014): CiteScore 3.36 SJR 1.213 SNIP 1.25  
Web of Science (2014): Impact factor 3.266  
Web of Science (2014): Indexed yes  
BFI (2013): BFI-level 1  
Scopus rating (2013): CiteScore 2.92 SJR 1.169 SNIP 1.309  
Web of Science (2013): Impact factor 2.859  
ISI indexed (2013): ISI indexed yes  
Web of Science (2013): Indexed yes  
BFI (2012): BFI-level 1  
Scopus rating (2012): CiteScore 2.61 SJR 1.329 SNIP 1.281  
Web of Science (2012): Impact factor 2.588  
ISI indexed (2012): ISI indexed yes  
Web of Science (2012): Indexed yes  
BFI (2011): BFI-level 1  
Scopus rating (2011): CiteScore 2.74 SJR 1.331 SNIP 1.335  
Web of Science (2011): Impact factor 2.59