Development of ammonia fueled SOFCs - from catalyst to system level

Arash Nemati, Anders Bogh Jacobsen, Henrik Lund Frandsen
(Department of Energy Conversion and Storage, Technical University of Denmark;
Tel.: +45-46-77-58-00
arnem@dtu.dk

Abstract (4-6 lines, 500-700 letters incl. spaces)

To design an efficient and durable ammonia-fueled SOFC system, it is crucial to consider all of the underlying physics and details. Therefore, DTU performed different activities during the AMON project to make this possible. The ammonia cracking is tested and simulated on different catalysts. The developed model for ammonia cracking is transferred to simulate the SOFC cell and stack. Finally, a novel multiscale multiphysics modeling approach is used to design the final system. In a parallel path of the investigations, SOFC cell and different cells are exposed to the ammonia environment, and the durability of these components is examined in different setups. The next step is to find solutions to avoid nitriding in the interconnects in the SOFC stacks.

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