عنوان مقاله:

Mathematical Modeling of Direct Methanol FuelCells:Comparing two Models

محل انتشار:

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خلاصه مقاله:

A mathematical model for comparing methanol permeation in a direct methanol fuel cell (DMFC) is presented. In these models a DMFC is divided into three compartments namely the anodic diffusion layer, the anodiccatalyst layer, the proton exchange membrane (PEM). The electrochemical reaction rates within both catalystlayers can be quantified by a kinetic Tafel expression. The results are reported as methanol concentration profile in gas diffusion, catalyst and membrane layers. The results show reduction of methanol concentration through the layers zero at the interface of the membrane and catalyst layer. Estimation of models parameters for any modeling suggest that FC modeling is unique to a specified FC.

کلمات کلیدی:

Direct methanol fuel cell (DMFC), Modeling, Comparing