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One of the major concerns of the gas diffusion layer (GDL) inside a proton exchange membrane fuel cell (PEMFC) is water management. Treatment of the pores of the GDL can affect the PEMFC performance due to the degree of water flooding inside the GDL. In this work, GDL flooding was investigated using a simplified approach in an established numerical model. The predictions are compared with experimental data of GDLs with different treatments. Local distributions inside the cell are given and the effect of homogenous GDL flooding on these is discussed.

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