

## **Micro- and nanostructure analysis of PEM fuel cell components: from 2D to 3D imaging**

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Proton exchange membrane (PEM) fuel cells can already fulfil the performance requirements for automotive applications, while cost and durability are still very relevant issues. In this context, structure analysis can play an important role in understanding degradation mechanisms and in improving component design.

Micro- and nanostructure analysis of PEM fuel cell components using selected analysis techniques – including transmission electron microscopy (TEM) and x-ray computed tomography – will be discussed. The presentation will focus on the analysis of the catalyst nanoparticles by TEM as well as the 3D visualization of gas diffusion layers and membrane electrode assemblies by x-ray computed tomography.