

27. Title: Investigation of water distribution in proton exchange membrane fuel cells via Terahertz imaging

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Abstract: Coherent transition radiation in a THz regime generated from a femtosecond electron bunch is explored for its potential use in imaging applications. Due to water sensitivity, the THz imaging experiment is performed on a proton exchange membrane fuel cell (PEMFC) to assess the ability to quantify water in the flow field of the cell. In this investigation, the PEMFC design and the experimental setup for the THz imaging is described. The results of the THz images in the flow field are also discussed.