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Title:Progress on reflective terahertz imaging for identification of water in flow channels of PEM fuel cells
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Abstract:This work reports an application of reflective terahertz (THz) imaging for identification of water distribution in the proton exchange membrane (PEM) fuel cell. The THz radiation generated from relativistic femtosecond electron bunches is employed as a high intensity source. The PEM fuel cell is designed specifically for the measurement allowing THz radiation to access the flow field region. The THz image is constructed from reflected radiation revealing absorptive area of water presence. The technique is proved to be a promising tool for studying water management in the PEM fuel cell. Detailed experimental setup and results will be described.
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Inspec controlled terms:channel flow - particle beam bunching - proton exchange membrane fuel cells - terahertz wave imaging - water
Uncontrolled terms:reflective terahertz imaging - flow channels - PEM fuel cells - proton exchange membrane fuel cell - relativistic femtosecond electron bunches - high intensity source
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