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Terahertz Spectroscopy of Water for Combustion Monitoring ROSS BOBB, DOUGLAS T. PETKIE, Wright State University — The THz spectral features of water are sensitive to both temperature and pressure and the observed intensity ratio between selected transitions can provide a measurement of temperature. This coupled with the THz transmissive properties of soot and fuel make THz spectroscopy a candidate for monitoring combustion processes. We will discuss system designs for such an application and present spectral simulations and measurements of several water transitions.

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