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标题: Review of Moisture and Liquid Detection and Mapping using Terahertz Imaging

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摘要: The relatively high permittivity of liquid water compared to other materials in the Terahertz (THz) range enables a contrast mechanism for the detection and imaging of moisture. In this paper, spatial mapping of moisture and liquid detection by THz imaging is reviewed. Analysis of the moisture content is discussed in terms of a double Debye model for liquid water and effective medium models for the permittivity of the dry and 'wet' materials of interest. Examples from medical applications, forestry products, agriculture/food products, and polymers are reviewed. Extraction of diffusion rates and diffusion maps from THz images are discussed.

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