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Title:One-dimensional terahertz imaging of surfactant-stabilized dodecane-brine emulsions

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Abstract:Terahertz line-images of surfactant-stabilized dodecane (C<sub>12</sub>H<sub>26</sub>) -brine emulsions are obtained by translating the emulsified region through the focus of a terahertz time-domain spectrometer. From these images, dodecane content, emulsion size, and stability can be extracted to evaluate the efficacy of the surfactant in solubilizing the dodecane. In addition, the images provide insight into the dynamics of concentrated emulsions after mixing.

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