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Title:Review of near-field Terahertz measurement methods and their applications: How to achieve sub-wavelength resolution at THz frequencies

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Abstract:In the last decades, many research teams working at Terahertz frequencies focused their efforts on surpassing the diffraction limit. Numerous techniques have been investigated, combining methods existing at optic wavelength with THz system such as Time Domain Spectroscopy. The actual development led on one side to a resolution as high as $\lambda/3000$ and on the other side to a video-rate recording. The purpose of this paper is to give an overview of the history of the field, to describe the different approaches, to give examples of existing applications and to draw the perspective for this research area.

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