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Title: THz techniques using metal mesh sensor for human skin measurement.
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Abstract: Metal meshes work as band-pass filters in the terahertz (THz) region with their transmission spectra acutely being affected by the refractive index of the material inside and above the metal mesh openings. We used a metal mesh for high-sensitivity observations by focusing on the “dip”, i. e. a sudden change in transmittance that only appeared when the THz wave was obliquely incident onto the metal mesh. Here we report a measurement of stratum corneum to inspect the feasibility of applying the metal mesh sensor to observations of human skin.
Keywords: Terahertz wave, Metal mesh sensor, Stratum corneum, Transmission spectra