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Title:Efficient terahertz en-face imaging
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Abstract:In this work, we develop a pulsed terahertz imaging system in reflection geometry, where due to scanning of the terahertz beam neither the sample nor the emitter and detector have to be moved. We use a two mirror galvanoscanner for deflecting the beam, in combination with a single rotationally symmetric focusing lens. In order to efficiently image planar structures, we develop an advanced scanning routine that resolves all bending effects of the imaging plane already during measurement. Thus, the measurement time is reduced, and efficient imaging of surfaces and interfaces becomes possible. We demonstrate the potential of this method in particular for a plastic-metal composite sample, for which non-destructive evaluation of an interface is performed.
Number of references:43