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Title

CMOS detectors: terahertz imaging achieved with low-cost CMOS detectors

Source

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Abstract

Subwavelength antennas in the metal interconnection layer of an inexpensive CMOS chip couple terahertz radiation to the chip's electronics, enables the creation of inexpensive, compact imagers. Sensing techniques for the lower terahertz frequencies exploit the transparency of air and thin objects together with the high absorption coefficient of water. Imaging of items with high water content, such as people, animals, or plants, produces high contrast even through dry structures like clothes or paper. So it is possible to detect metallic (reflective) objects concealed under clothes. Many of these developments are strongly related to security concerns today, but a large future market is also emerging in industrial quality and food control. (3 References).