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Patent Number(s): US2012092223-A1

Title: Antenna arrangement for generating and receiving terahertz radiation in e.g. food inspection field, has protrusions directed towards neighboring protrusion such that end edges neighboring protrusions faces one another

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Abstract: NOVELTY - The arrangement (40) has substrate (31) comprising photoconductive material. A pair electrodes (32,33), each including multiple elongate fingers (321,331) spaced apart from each other, is arranged in a parallel relation, defining finger gaps. Each protrusion (322,332) is slanted at predetermined angle with respect to direction finger, and directed towards neighboring protrusion extending from neighboring finger such that end edges neighboring protrusions faces one another and defines a protrusion gap (35) between end edges facing protrusions.

USE - Antenna arrangement for generating and receiving terahertz radiation. Uses include but are not limited to fields industrial process control, food inspection, biology and medicine.

ADVANTAGE - The radiation efficiency the antenna can be enhanced. The antenna arrangement can be more advantageous, because the inter-digital arrangements in which directions an entire electric current between a certain finger and its neighbor from one side is opposite to the entire electric current direction between the finger and its neighbor from the other side. The problem associated with coherent signal cancellation can be avoided. The destructive interference the THz antenna can be prevented. The cost manufacture the antenna can be reduced.

DESCRIPTION DRAWING(S) - The drawing shows a perspective view antenna arrangement.
Substrate (31)

Pair electrodes (32,33)

Protrusion gap (35)

Fingers (321,331)

Protrusions (322,332)

Drawing:

Derwent Class Code(s): W02 (Broadcasting, Radio and Line Transmission Systems)

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