

Patent Number(s): WO2012094162-A2

Title: Metamaterial for supporting propagation of electromagnetic wave e.g. terahertz, far-infrared and millimeter wave, has meta material unit cell that is provided with metallic structure

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Abstract: NOVELTY - The metamaterial (10) has stack of thin film layers (14) made of parylene. An array (14) of meta material unit cells (16) is patterned on the thin film layers. The meta material unit cell is provided with metallic structure. The stack of thin film layers has poly para xylene layer, parylene layer, parylene-C type layer, parylene-N layer and parylene-D type layer.

USE - Metamaterial for supporting propagation of electromagnetic wave e.g. terahertz, far-infrared and millimeter wave used for sub epithelial implantation for detection of skin cancer (all claimed). Can also be used for detecting concealed weapons.

ADVANTAGE - The metamaterial can be safely implanted in human and safety of the human is improved. The skin cancer can be detected easily using the metamaterial.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) method of making metamaterial for propagation of terahertz and millimeter waves; and
- (2) apparatus for sub epithelial implantation for detection of skin cancer.

DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of the multi-layer parylene-based meta-material.

Metamaterial (10)

Thin film layer (12)

Array (14)

Meta material unit cell (16)

Derwent Class Code(s): A89 (Photographic, laboratory equipment, optical); A85 (Electrical applications); S01 (Electrical Instruments including e.g. instrument panels); S03 (Scientific Instrumentation, photometry, calorimetry); S05 (Electrical Medical Equipment)

Derwent Manual Code(s): A05-J; A11-B05; A11-C04B1; A12-E01; A12-V03C2; S01-H09; S03-C02X; S03-C06; S05-D02

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