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TITLE

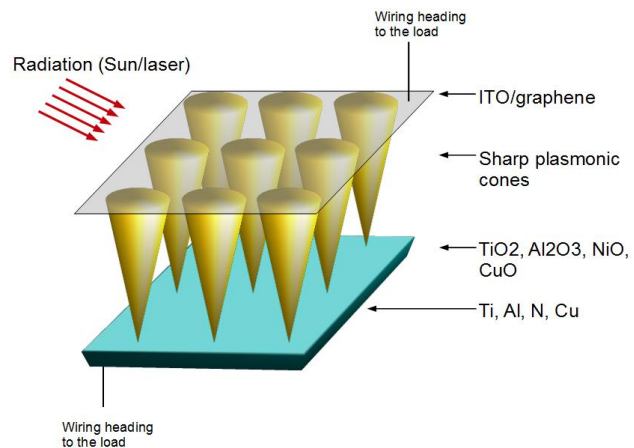
Cella di nanorectenna plasmonica a molte punte

INVENTORS

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DESCRIPTION

The invention relates to a NIR-visible radiation rectification device. The base element of the device consists of: a conical nano-sized metallic structure coated with a plasmon layer, which acts both as antenna and as part of a Metal-Insulator-Metal rectifier system; a thin insulating layer; a layer of conductive metal. The top-down fabrication process allows to construct arrays of precisely aligned nanocones and to easily customize their aspect ratio for broadband rectification purposes, allowing operation up to hundreds of THz and efficiency values up to 10 times the current state of the art.



APPLICATIONS

Rectifying antenna, rectification of electromagnetic radiation

KEYWORDS

Rectenna, energy harvesting, metal-insulator-metal, nanotechnology

BIBLIOGRAPHIC DATA

A plasmonic multi-tip nano-rectenna cell

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