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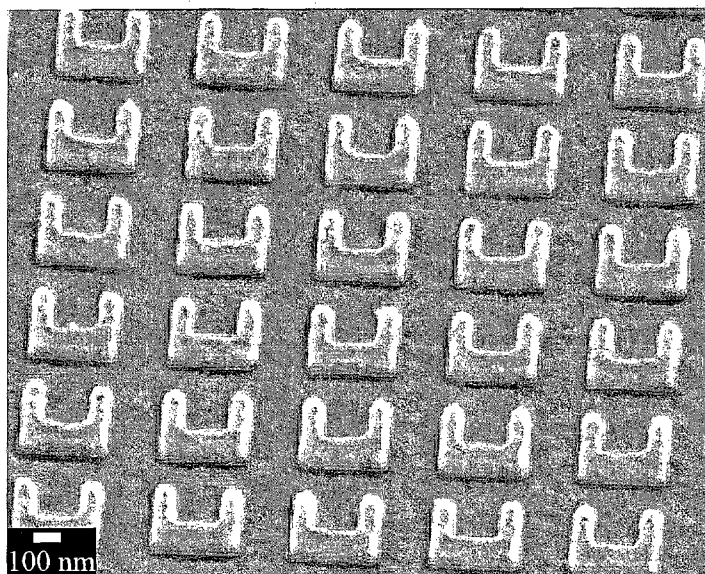
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(54) Title: METHOD OF GENERATING A METAMATERIAL, AND A METAMATERIAL GENERATED THEREOF

FIG. 1 (CONT.)

(D)



(57) Abstract: A method of generating a metamaterial operable in the visible-infrared range is provided. The method comprises a) depositing a layer of a conductive material on a substrate; b) forming a layer of electron beam resist on the layer of conductive material; c) patterning the layer of electron beam resist using electron beam lithography to form a patterned substrate; d) depositing a layer of a noble metal on the patterned substrate; and e) removing the resist. A metamaterial operable in the visible-infrared range comprising split-ring resonators having a least line width of about 20 nm to about 40 nm on a substrate is provided. A transparent photonic device or a sensor for chemical or biological sensing comprising the metamaterial is also provided.



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