

Ag DECORATED 3D NANOCONES FOR APPLICATION IN SERS

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Special 3D structures were decorated by 2D periodic structures using laser lithography techniques. As 3D structures, two types of nanocones were used: i) GaP nanocones grown by metal organic vapor phase epitaxy (Fig. 1a) and ii) IP-Dip photoresist nanocones prepared by Nanoscribe Photonic Professional 3D lithography system (Fig. 1b). Further Ag decoration leads to Ag island patterning on nanocone sides in periodical arrangement. These structures show detectable enhancement in Raman signal for Rhodamine 6G adsorbed on prepared samples and they are promising for surface-enhanced Raman spectroscopy.

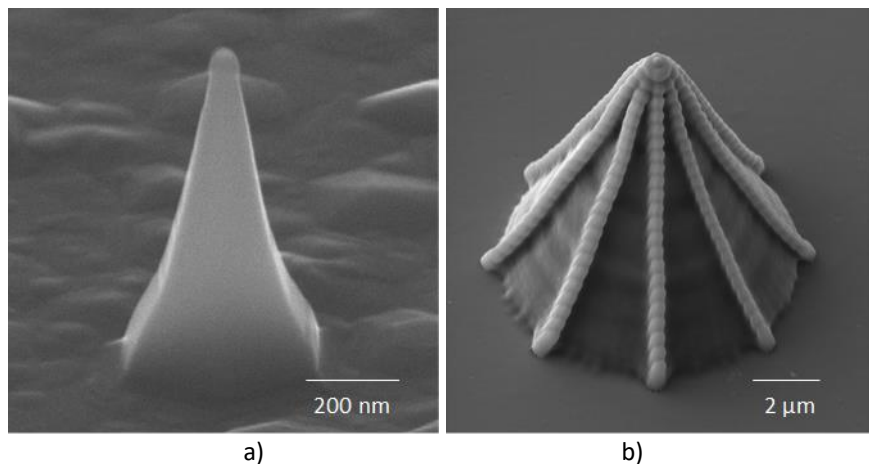


Fig. 1 SEM images of 3D nanocones for Ag island decoration: a) GaP nanocone grown by metal organic vapor phase epitaxy and b) IP-Dip photoresist nanocone prepared by 3D laser lithography

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