



Contribution ID: 45

Type: poster

Influence of deposition angle on fabrication of plasmonic gold nanocones

Gold nanocones can show several plasmonic resonances and can be used to enhance light-matter interactions or for location-specific plasmonic sensing. Their fabrication often utilizes so-called self-shading effect, which occurs during metal film evaporation into circular nanowells. We present a view on the fabrication of ordered arrays of gold nanocones using electron beam lithography and electron beam evaporation. Lateral position of the substrate during the evaporation influences the symmetry of the fabricated nanocones and that off-axis deposition forms asymmetric structures. Our findings help to identify limits for production of wafer-scale arrays and also suggests new fabrication possibilities for more complicated structures such as mutually connected nanocones for electrically addressable chips.

Primary authors: LISKA, Jiri (CEITEC Brno University of Technology); LIGMAJER, Filip (CEITEC BUT); PINHO N., Pedro V. (Institute of Physics “Gleb Wataghin”, University of Campinas); KEJIK, Lukas (CEITEC BUT); KVA-PIL, Michal (CEITEC BUT); DVORAK, Petr (CEITEC BUT); HORKY, Michal (CEITEC BUT); LEITNER, Nikolaus S. (Department of Nanobiotechnology, University of Natural Resources and Life Sciences); REIMHULT, Erik (Department of Nanobiotechnology, University of Natural Resources and Life Sciences); SIKOLA, Tomas (CEITEC BUT)

Presenter: LISKA, Jiri (CEITEC Brno University of Technology)

Session Classification: Posters

Track Classification: Nanophotonics / Plasmonics