

XXII Meeting of Physics 2022



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Silica embedded Gold nanospheres (Au@SiO₂) for photothermal annihilation of breast cancer cells: advantages over chemotherapy.

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Chemotherapy is the gold standard neoadjuvant treatment in breast cancer tumours. Nevertheless, the non-specific cytotoxicity associated to this treatment causes severe side effects, affecting the quality of life of patients.

The plasmonic photothermal therapy (PPTT) consists of localized heating induced by metallic nanoparticles irradiated remotely to kill cancer cells.

In this talk, silica-embedded Gold nanospheres (Au@SiO₂) synthesized as nanoheaters for PPTT will be presented. Additionally, the advantages of the PPTT in comparison with conventional chemotherapy schemes for the treatment of cancer breast will be discussed.

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