

SEMINARIOS JÓVENES INVESTIGADORES

30 octubre 2019, 12:00 h

Sala de conferencias, Edificio de I+D, Campus Río Ebro

Miriam Abad

PREPARATION OF HYBRID PALLADIUM-POLYMERIC NANOPARTICLES BY MICROFLUIDICS FOR BIOMEDICAL APPLICATIONS

Block copolymers (BCs) are able to self-organize at the nanoscale either in bulk or water, which is the origin of nanotechnological applications described for these materials, highlighted among them drug delivery. Moreover, when stimuli responsive moieties are introduced in BCs, such as temperature, pH or light-sensitive units, a controlled release of encapsulated cargoes can be achieved. Near-infrared (NIR) radiation is a stimulus of great interest in the biomedical field because NIR responsive nanoparticles can act as antennas for photothermal therapy and also as triggers for on-demand drug delivery, minimizing systemic adverse effects by taking control of where and when the therapeutic intervention takes place.

In previous work, nano-objects from BCs were prepared using a co-solvent method, but this method is time-demanding. So in this work, microfluidics has been employed in an attempt to prepare polymeric nanoparticles in an easy, fast and reproducible manner.