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Nanometric markers: High-efficacy and fast molecular finding

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Description

UVIGO and CSIC have jointly developed nanometric particles especially tagged to identify drugs, pathological agents, cells or whatever objects –that previously has been in physical contact with these particles- in a fast, reliable, selective and very flexible way that allows the use of several detection techniques. The present technology improves the compounds research state-of-the-art providing coded particles than widen the detection methodologies and enables instant analysis. Moreover, they are described both the way of producing the coded particles and the way of use.

Innovative aspects and advantages

In comparison with current methods of multiplex detection:

- Very flexible; detection of the coded particles is possible through all spectroscopic methodologies (particularly Surface Enhanced Raman Spectroscopy SERS).
- Very high number of applications: Finding out of drugs, pathogenic compounds detection, even elements which have been in physical contact with the particles such as documents, bank notes, etc.
- Simple analysis thanks to the attached biomolecule which provides a full mechanism of the reactions.
- 2,000 Times more sensitive in pathogenic compounds detection than traditional fluorescent spectrocopy. The detection limit is on a femtomolar-order.
- Design highly versatile. The elements of the particles are chosen from a wide range of compounds, so almost every detection problem can be tackled.

Commercial applications and Potential users

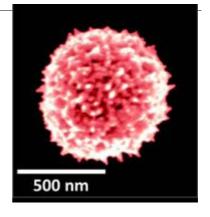
Industrial partners of markers or traceability sectors are being sought to collaborate through a patent license agreement.

Patent status

PCT aplication

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