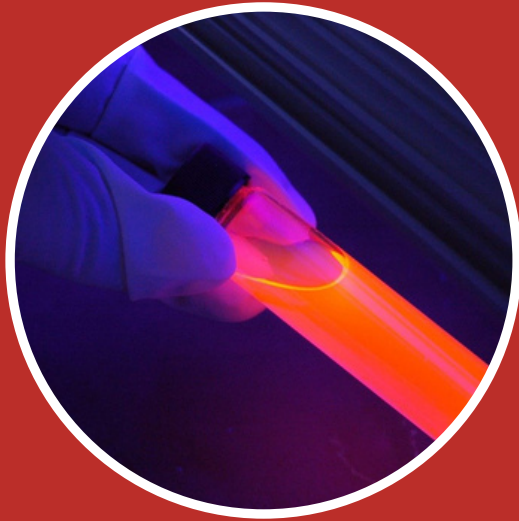


NANOPARTICLES TO IMPROVE ANALYTICAL SIGNAL

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The present invention deals with a new family of Dye Doped Silica Nanoparticles (DDSNPs), showing distinctive improvements in terms of stability of the electrochemiluminescence analytical signal, with respect to available electroluminescent markers.

Protection: International (PCT)

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INVENTION

The quantification of diagnostic markers, or biomarkers, has an enormous impact in the early diagnosis, from basic research to clinical applications. In this context, electrochemiluminescence (ECL) appears to be a leading transduction technique for the detection of very low amounts of these molecules. Chasing an ever-increasing sensitivity, many researchers tried to combine ECL with nanomaterials, such as nanoparticles, using them as dyes or co-reactants.

The present invention deals with a new family of Dye Doped Silica Nanoparticles (DDSNPs), showing distinctive improvements when involved in electrochemiluminescent-based analysis.

ADVANTAGES

- Enhancement of signal intensity,
- Simple and versatile synthetic schemes for the preparation,
- Enhancement of stability.

APPLICATIONS

Immunoassay-based detection systems.

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