

New Synthesis of Gold- and Silver-Based Nano-Tetracycline Composites



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Invited for this month's cover are collaborators from the University NOVA of Lisbon/FCT, The University of Trás-os-Montes e Alto Douro (both in Portugal), and the University of La Rioja (Spain). The cover picture is devoted to the nano-tetracycline composites based on gold and silver nanoparticles that are able to detect aluminium (III) in water and can be used as anti-bacterial delivery tools. For more details, read the full text of the article at [10.1002/open.201600016](https://doi.org/10.1002/open.201600016).

How did the collaboration on this project start?

Our collaboration was established many years ago to exploit the expertise of the FCT-Caparica group in the synthesis and functionalization of nanoparticles and proteomics, and the UTAD and La Rioja groups with expertise in genetics, biotechnology, and microbiology studies.

What is the most significant result of this study?

The interesting ability of these new nanocomposites to be able to selectively detect aluminum (III) in water via a colorimetric response, and that they can be used as potential tools in antibacterial studies against tetracycline-resistant bacteria.

What prompted you to investigate this topic?

The need to create new efficient, smart, and selective nanocomposites for biomedical and environmental applications.

What other topics are you working on at the moment?

Our three groups are interested in the development of highly emissive nanostructured materials based on polymer-, silica- and metal-based nanoparticles, functionalized with drugs and dyes for applications as nanosensors, new optical devices, scavengers for proteomics, and their studies as selective drug-delivery systems.

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