



Nanoparticle-based Sensors for Molecular Imaging

Guest Editor:

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Message from the Guest Editor

Nanoparticle-based sensors for imaging might be defined as chemical devices composed of a nanostructured component, providing the signal, and at least one vector, providing the biological specificity. These sensors give non-invasive real-time information about the presence of one or several biomarkers of interest. Depending on the imaging technique, the information can also be quantitative. Examples of this approach have been reported with all kinds of nanoparticles, from iron oxide nanoparticles to quantum dots, liposomes, and polymeric nanoparticles, to name but a few. These examples cover all molecular imaging techniques: positron emission tomography, magnetic resonance imaging, optical imaging, optoacoustic imaging, magnetic particle imaging, etc. A key characteristic of these sensors is their nanostructure. Their nanoscale gives a particular feature that is not possible to obtain with traditional molecular examples.

This Special Issue is devoted to the synthesis and application of any type of nanoparticle capable of acting as an in vivo sensor in molecular imaging.





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