



ISTITUTO ITALIANO
DI TECNOLOGIA

TITLE

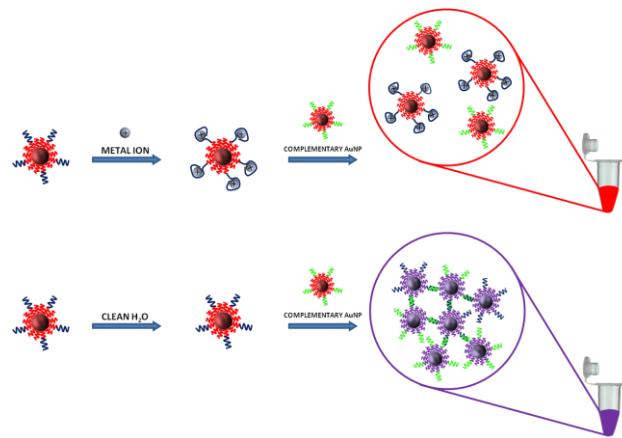
Gold nanoparticle-based sensors for detection of metal ions

INVENTORS

Pier Paolo Pompa, Paola Valentini

DESCRIPTION

The invention relates to a system for the detection of metal ion which is based on gold nanoparticles (AuNP) functionalized with nucleic acid aptamers. The system combines a biological sensor element (nucleic acid aptamers) with an inorganic signal transduction element (nanoclusters of spherical gold nanoparticles), to generate a very sensitive and low-cost sensor for the instrument-free detection of heavy metal ions (i.e., lead, cadmium, mercury, etc.). The low-cost, time-saving, easy of fabrication, make it an ideal candidate for on-field monitoring applications.



APPLICATIONS

Biological sensors, instrument-free detection

KEYWORDS

Gold nanoparticles, low- cost, sensors, monitoring

BIBLIOGRAPHIC DATA

Gold nanoparticle-based sensors for detection of metal ions

Application Number IT102014902316742

Priority Date 15/12/2014

Applicants Fondazione Istituto Italiano di Tecnologia

CONTACTS

Technology Transfer Office

Augusta Galano

augusta.galano@iit.it

+39 010 71781 568