

In this study, we described the development of new-developed chemical sensors to detect ultra-trace level of gold (Au(III)) ions in waste electric samples. The structured sensors were constructed using highly porous nanosphere as a carrier afterwards the decorating in the effective way with organic ligand particles of 2,5 dimercapto-1,3,4 thiadiazole (DMcT) to produce DMcT sensor and with 2-amino-5-mercapto-1,3,4-thiadiazole (AMTD) to fabricate AMDT sensor. The sensors were tested for detection of Au(III) ions in electronic waste samples.