

# Nanodecoration of single crystals of 5,11,17,23-tetra-tert-butyl-25,27-bis(cyanomethoxy)-26,28-dihydroxycalix[4]arene

Moris, S.

Silva, N.

Saitz, C.

Jara, P.

Chornik, B.

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1,3-bis(cyanomethoxy)calix[4]arene (1) were grown from Chloroform/Methanol mixture and these were nanodecorated with colloidal gold nanoparticles (AuNps). The single crystals were then

characterized by single-crystal X-ray diffraction (XRD) and Scanning Electronic Microscopy (SEM).

The nanodecorated crystals were characterized by UV-Visible Absorption Spectroscopy,

Transmission Electronic Microscopy (TEM) and X-ray Photoelectron Spectroscopy (XPS). In this

work, it is shown that the stabilization of the nanoparticles occurs through of the interactions of these with the nitrile group, maintaining their shape and size.