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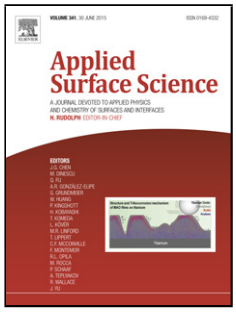

Title: Potential drug – nanosensor conjugates: raman, infrared absorption, surface – enhanced raman, and density functional theory investigations of indolic molecules

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Highlights

Molecular fragments involved in the adsorption process were determined.

Formation of hydrogen bonds with the negatively charged gold substrates was observed.

Indole moiety strongly interacts with gold nanosensors.

The synthesized sensors are characterized by high stability and reproducibility.

Chemical mechanism plays a crucial role in the enhancement of the Raman signal.