1. Application of surface-enhanced Raman in skin cancer by plasma

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Abstract: We have developed a mouse squamous cell carcinomas (SCC) model by diniethylbenzanthracene (DMBA) and ultraviolet (UVB). A silver colloid as SERS-active substrates is used for detecting the blood plasma of mouse. The relative intensity of the band at 942 and 1499 cm-1 is higher in SCC model than in healthy one. Therefore, it can be used as an important "fingerprint" in order to diagnose these diseases. Results show us how to get high signal-to-noise ratio of biological macromolecules surface-enhanced Raman scattering spectra in blood plasma. And also offer useful help for understanding the rich molecular structure information in biological tissues. It provides a molecular spectroscopy way for early detection of disease in blood plasma. © Pleiades Publishing, Ltd., 2012. (39 refs)
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