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| Title | Detection of DNA hybridization using electrochemical impedance spectroscopy and surface enhanced Raman scattering |
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| Abstract | The formation of double-stranded DNA (dsDNA) at gold electrodes decorated with a monolayer of gold nanoparticles bound through a self-assembled dithiol monolayer is detected via specific intercalation of proflavine. Hybridization as well as sequential built-up of the electrode architecture is monitored using Faradaic electrochemical impedance spectroscopy (EIS) as well as surface enhanced Raman scattering (SERS). The adsorption of secondary gold nanoparticles allow for amplified detection of the dsDNA integrated intercalator in a vertical gap mode configuration. The experimental design thus allows probing presence of the intercalator inside the dsDNA. |
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