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Title:	A Cationic Surfactant-decorated liquid crystal-based aptasensor for the label-free detection of ochratoxin
Authors:	Kavyasree, A
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Abstract:	In this project, we attempt to use liquid crystals (LC) as a tool for the label-free detection of Ochratoxin A (OTA), a mycotoxin. OTA is one of the most widespread food contaminants found in grains, dried fruits, wine, etc. Exploiting the interaction of OTA with an OTA-specific aptamer at a cationic surfactant decorated LC-aqueous interface, we detect the presence of OTA based on the ordering transition of LC. Using LC as a probe gives us the benefit of an easy optical readout of the events occurring at the interface over time. This can thus serve as a basis for a possible on-site qualitative detection of OTA. Techniques like Thioflavin-T assay (ThT) and Circular Dichroism (CD) spectroscopy are used to confirm the molecular interactions on surfactant-laden LC interfaces.
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