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**Plasmonic Imaging and BioMedical Applications**

Plasmonic imaging allows characterization of surface evolution with sub-nanometric sensitivity. Using dedicated biochips, it can therefore be applied to real time label free monitoring of surface biomolecular interactions with many biomedical applications - main example will concern DNA-DNA interactions and genotyping of point mutations. Initial work focused on the use of propagating plasmon on homogeneous thin gold films, current research is now dedicated to the use of structured substrate and localized plasmons as well as increasing the multimodality of the plasmonic imaging systems.