Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Preventing biosensor non-specific adsorption: Static to dynamic interfaces LUCY HARWOOD, NEAL HOPKINS, Dstl — Biosensors are currently being developed for the detection of a wide range of analytes in a variety of scenarios. One such area is that of environmental monitoring for the presence of biological threats, from toxins through to viruses and bacteria. Environmental samples will contain a wide variety of contaminants, dependent on the location and prevalent environmental conditions. The sensing surfaces employed by biosensor instruments must be capable of resisting non-specific adsorption (NSA) of the contaminants whilst specifically capturing targets of interest. The ability to do so reduces the incidence of false positives and negatives increasing confidence in the system. We have assessed a range of biosensor surface chemistries of both two and three dimensional topography using a commercial BIAcore^{TM} platform, for ability to prevent NSA of soluble materials of medical and military significance. This has highlighted that future solutions may benefit from dynamic interfaces as opposed to the conventional static interface often employed.

Nicola Cant
Institute of Physics

Date submitted: 11 Nov 2011 Electronic form version 1.4