

## Exchange Grant Report

**Prof. Stefan Maier, Imperial College London**

Institute to be visited: University of Iceland, Reykjavik, Iceland

Collaborator: Prof. Kristjan Leosson, Vice Chair, Department of Physics

### Previous interactions:

I know Dr. Leosson for about 2 years, and an initial visit to explore collaborations took place in spring 2010 at Imperial College London. In the meantime both laboratories have put the necessary infrastructure in place for a collaboration on *integrated plasmonic nanosensors*.

### Scientific report of the proposed visit:

Goal of this visit was to start a new collaboration on integrated plasmonic nanosensors, making use of complementary expertise at the two laboratories, namely:

- i) Iceland: waveguide systems for biodetection and TIRF microscopy
- ii) London: nanoscale plasmonic sensing cavities

In particular, during the visit it was discussed how to set up a pair of students to work towards the following goal

- Investigation of sensing cavities based on ultrathin Au nanostructures. The Iceland team has in this regard developed a pioneering fabrication technique for smooth, ultrathin Au films. Nanostructures will now be modeled at Imperial, fabricated in Iceland, for sub-sequent spectroscopic investigation at Imperial

Additionally, I gave a seminar at the University, and we discussed the possibility of holding a network meeting in the congress centre of Reykjavic.