

Scientific report – short visit Yannick Sonnefraud in Rainer Hillenbrand's group

The short visit took place between the 1st and 7th Sept. 2012 in San Sebastian (Spain), at the NanoGUNE centre.

This aimed to visit the laboratories of Prof. Hillenbrand, and discuss technical details on the operation of the Scanning Near-field Optical Microscopes which have been developed in his group. A similar instrument exists at Imperial College London, in Chris Phillips' group, and we are now using it to observe Fano type of plasmonic modes in gold nanostructures ("Dolmen" structures, fabricated at IMEC in Belgium), as well as using the microscope for measurement on living tissues.

Meetings with Florian Huth and the rest of the team allowed for an in-depth discussion on how to operate the instrument to achieve our goals and overcome the technical problems we are currently facing. Collaborations were discussed where the Hillenbrand group could help with their expertise on the microscope. The ICL groups will provide some samples of tissues to be observed with the new spectroscopic methods now under control at NanoGUNE.

If the imaging of the Dolmen structures is successful, the results will be published and ESF acknowledged.

An added benefit has been that it allowed me to take part in the ESF conference day Friday the 7th September.

Comments concerning the receipts:

- some original receipts I will send to ESF will be valid for a group of person (mainly taxi receipts). I am claiming only my part of the total price, and they will independently claim their own part, sending copies of the receipts.