

JORCEP Workshop, Zhejiang University, Hangzhou, November 12, 2011

As every year JORCEP (The Joint Research Center of Photonics of the Royal Institute of Technology, Zhejiang University and Lund University) organized a workshop to report and discuss the results of on-going research in the cooperation projects as well as to explore new areas of collaboration and propose new collaboration projects. This year the workshop was partly sponsored by ADOPT center and new researchers from the broad field of photonics from all three universities were invited to participate to broaden the JORCEP center activities. List of participants and the workshop program can be found in another document.

Sailing He, Director of JORCEP opened a plenary session with a brief presentation of COER (Centre for Optical and Electromagnetic Research of Zhejiang University) with a broad spectrum of activities in Si photonics, fibers, fiber gratings and sensors, high speed transmission, networking and biosensors. In following Lech Wosinski presented activities at the Laboratory of Photonics and Microwave Engineering at KTH, mainly silicon photonics, silicon integration and plasmonics. He presented also a JORCEP plasmonic cooperation project. Third speaker of the plenary session, Daoxin Dai from COER, continued about the JORCEP plasmonic cooperation project, in which he actively participates and also presented more details about other ZJU nanophotonics integration activities. The last speaker of the plenary session, Sune Svanberg show research activities at Lund Laser Center that extend from material science to biomedical diagnostics including among others atomic spectroscopy, combustion diagnostic, terawatt laser, attosecond physics, femtosecond chemistry, free electron laser, lidar in ecology and biophotonics.

After a coffee break in two parallel sessions other activities were presented. In the Photonics materials and devices session Alex Grishin presented a concept of a magneto-optic laser, Yungui Ma talked about different metamaterial absorbers, Lei Wang showed single electrode wavelength switch, Lena Wosinska and Biao Chen presented optical network activities in Stockholm and Hangzhou, respectively, as well as their common research work and finally Shiming Gao show simulations as well as some experimental results for wavelength conversion using four-wave mixing. In the Optical sensors and biophotonics session the only speaker from KTH was Patrik Rugeland who presented activities at Laser Physics Group, Microsystem Technology Lab as well as at Theoretical Chemistry and Biology Group.

The sessions were followed by lab visit at Zijingang Campus. In the clean room the most important tools were PECVD and ICP for silicon processing as well as E-beam lithography. In the processing and characterization labs the most interesting were UV printing of fiber gratings, laser generated ultrasound pulses for non-destructive testing, high speed transmission lab and Si photonics characterization lab.

The last activity in the workshop agenda was a trip to Yuquan campus of Zhejiang University, where Min Qui, Jianjun He and Limin Tong presented their labs and activities. Min show his half-equipped fresh lab in which different research will be conducted, such as quantum dots-based metamaterials (including synthesis of QDs), nanowire waveguides and other nanophotonics components. JJ He presented his activities in etched diffractive gratings for different applications as well as multiwavelength laser sources. Finally Limin Tong gave a presentation about his experiments with different nanowires, metallic, semiconductor, glass and polymer-based, their fabrication and characterization.

In conclusion: very interesting workshop and visits.

Noted by Lech Wosinski