

Zeergeleerde Dr. Kuttge, dear Martin.

Congratulations with the doctorate that you have just received. It is the crown on your work in the past four years, that lead to a beautiful thesis that you have defended very well. Your degree is well deserved!

Four years ago you came from Aachen to Amsterdam, to start a Ph.D. project in nanophotonics. It was a true adventure, to make the step to start an international career. The title of your research project was "How small can a photon be shrunk", and the idea was to use optical techniques and specially designed samples, made in our cleanroom, to answer this question.

Along your project, it became clear that by using an electron beam, rather than a laser, you would have even higher resolution to measure the effects you were after, and as a result you became one of the group's experts in nano-optics using electron beams. Your thesis title also reflects that you are one of the pioneers in this field: "Cathodoluminescence plasmon microscopy": it is a new technique, of which you demonstrated what great potential it has. The extensive theoretical chapter in your thesis and your introduction on the technique will serve as a reference for many that will follow.

While working on electron beams and plasmon optics, we got acquainted with Javier García de Abajo in Spain, and we set up a very fruitful collaboration for your project. I am standing here also on his behalf, to congratulate you on exploring this Spanish-Dutch collaboration to the maximum possible extent. You have mastered the theory and numerical codes that Javier has developed, and modified them for your work, showing that you also had full control over the theoretical aspects of your project.

You were always practical and efficient in planning your experiments. Sometimes quiet, and fully on your own. But then suddenly, in our weekly meetings, you would come up with new measurements on samples that you had made on your own initiative. It is this practical attitude that you have developed, that you should be proud of, and has made your project a success. The success is of course also reflected in the fact that your thesis has already lead to 3 scientific publications and three more

are underway. Also, you have presented your work at several conferences, which is a very good achievement.

One of the problems of being a foreigner at AMOLF is that everybody will speak English to you. And that while you had started learning Dutch already very early, an easy thing to do for a German, of course. Unfortunately, we never got to hear your skills in Dutch, and English was always the language we kept speaking. Interestingly, once you had fully assimilated to the Dutch culture, your private life became even more international, when you met Elena.

It is now time to move on to a next position. You are following Elena to a country to be determined, but likely far away. I am sure that, with your creativity and good planning, you will be able to find yourself a new challenge as well.

I want to thank you for everything that you have done for our research group and wish you and Elena all the best in your next steps. And once again, congratulations with your Ph.D!

Albert Polman

March 25, 2009