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Probing spatial heterogeneity in supercooled glycerol and temporal heterogeneity with single-molecule FRET in polyprolines

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Citation

Xia, T. (2010, March 25). *Probing spatial heterogeneity in supercooled glycerol and temporal heterogeneity with single-molecule FRET in polyprolines*. Casimir PhD Series. Retrieved from <https://hdl.handle.net/1887/15122>

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Note: To cite this publication please use the final published version (if applicable).

List of Publications

- M. E. Möbius, T. Xia, W. van Saarloos, M. Orrit, and M. van Hecke “Aging and solidification of supercooled glycerol”, *submitted to J. Phys. Chem. B*.
- F. Kulzer, T. Xia, and M. Orrit, “Single molecules as optical nanoprobe for soft and complex matter”, *Angew. Chem. Int. Ed.* **49** (2010) 854–866.
- T. Xia, L. Xiao, and M. Orrit, “Micro-sized structure in a thin glycerol film revealed by fluorescent probes”, *J. Phys. Chem. B* **113** (2009) 15724–15729.
- T. Xia, M. Orrit, C. Storm, and W. van Saarloos, “Verrassend gedrag van onderkoeld glycerol boven de glasovergang”, *Nederlands Tijdschrift voor Natuurkunde* **74-10** (2008) 340.
- R. Zondervan, T. Xia, H. van der Meer, C. Storm, F. Kulzer, W. van Saarloos, and M. Orrit, “Soft glassy rheology of supercooled molecular liquids”, *Proc. Natl. Acad. Sci. USA* **13** (2008) 4993–4998.

Curriculum Vitae

Ted (Tie) Xia, born in Dalian (Liaoning, China) on 25th June, 1977.

Ted Xia completed his BSc degree in medicine at Beijing College of Acupuncture and Orthopedics (now Beijing University of Chinese Medicine since August 2000) from September 1995 to July 2000. He then worked as a technical support, first in Beijing PUSRY Biological Technology Ltd from December 2000 to November 2001 and then in Pel-Freez Biotechnology (Beijing) Ltd (now Invitrogen Beijing Office since 2005) from December 2001 to September 2003. During these periods he was mainly responsible for HLA (human leukocyte antigen) genotyping kits based on sequence-based typing (SBT) and reference strand conformational analysis (RSCA). In September 2003, he came to The Netherlands and started his Master study (Biomolecular Sciences) at Utrecht University and got his MSc degree in Chemistry in August 2005. During this period, he conducted two Master projects at Utrecht University. The major one entitled “Identification of plasma membrane associated gene products upregulated at infection sites in *Arabidopsis thaliana* by *Hyaloperonospora parasitica*” was carried out in the Molecular Genetics Group led by Dr. Guido Van den Ackerveken. The minor one on “Study *Drosophila melanogaster* polybromo with NMR spectroscopy” was performed in the Department of NMR spectroscopy and was supervised by Prof. Rolf Boelens.

He joined the Institute of Physics at Leiden University as a PhD candidate in September 2005 under the supervision of Prof. Michel Orrit. He worked on probing heterogeneity in supercooled liquids and temperature-cycle microscopy of single-molecule FRET in polyprolines. The results of this work are presented in this thesis. During his PhD period, he assisted the second-year Bachelor practical course on “Michelson interferometer” and supervised two Master projects. In May 2010, he will start a postdoctoral appointment in the group of Prof. Fang Xiaohong in the Key Laboratory of Molecular Nanostructure and Nanotechnology, Institute of Chemistry, The Chinese Academy of Sciences (CAS).

Nawoord

At the end of this thesis, I would like to acknowledge the people involved in my scientific and nonscientific lives during my stay in Leiden. Without them, this work would not be possible.

I am very grateful to Michel Orrit for offering me the possibility to make the transition from molecular biology to molecular physics and for his guidance, experience, and patience. Rob Zondervan and Florian Kulzer, two important people in the beginning of my PhD period, taught me how to work with optics and electronics in the lab. Although they left one after another, their support has never stopped; especially Florian, who always answered my questions in great detail. My thanks also go to other former members: Clemens Hofmann, Meindert van Dijk, and Alexander Wirtz were always ready to help me. Aurélien Nicolet, who rejoined the group as a Postdoc, helped me solve a lot of L^AT_EX-related problems during the preparation of this thesis. In the last two years, I shared an office with Alexander Gaiduk and Paul Ruijgrok. I very much enjoyed the cosy and pleasant atmosphere they created. Alexander, an expert in Labview programming, helped me improve the control software for my experiments. Paul, a very good English-to-Dutch translator, did an excellent job with the *Samenvatting* of this thesis. I am very thankful for the endless amounts of the advice and help that I received from these two roommates. I am also deeply indebted to Haifeng Yuan, a talented Master student (now a PhD candidate in the group since September 2009), who contributed a lot to the snapshot project. Without his presence, this thesis would not have been finished on time. I want to thank Liantuan Xiao, a visiting professor from Shanxi University (China), for his contribution to the work presented in Chapter 4 and for the helpful discussions we had during his stay about the field of single-molecule optics in China.

It is difficult to forget the other members of the group: Harmen van der Meer and Jos Disselhorst, two dedicated technicians, whose work is always effective and professional, Peter Gast, who often keeps me posted about what has happened in China during the lunch break, Robin Purchase, who taught me how to use English in an English way, Silvia Sottini, for organizing soccer games on Thursday afternoon in the past (I miss those games), Henriëtte van Leeuwen, who makes sure that we can focus on scientific work without

nonscientific distractions, Edgar Groenen, Silvia Völker, and Martina Huber for their help to improve my thesis.

I want to thank Arno van Amersfoort for rescuing my computer many times, Matthias Möbius for sharing satisfying moments in “torturing” glycerol on the seventh floor, and Fan-Tso Chien for many enjoyable discussions about sciences and personal life.

I am thankful to Mrs. Somer, my landlady, for her hospitality and kindness during my stay in Wassenaar. I am also grateful to the Tang family for wonderful Chinese meals every Tuesday evening and the joyful time I had at their place and Kamlung Cheng for being my closest friend during the last six years. Finally, I would like to thank my mom for her encourage and unconditional support and my wife for her love and understanding through the years.