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

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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

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