

Awarding the **Alfred Saupe Medal 2018**
<http://www.liquidcr.ovgu.de/honours.html>
to
Prof. **Wim deJeu**



Wim H. de Jeu

wimdejeu.nl



Welcome to my website

The site serves several purposes.

1. It gives some inside into my education, professional life and scientific interest.
2. It provides full information on the papers I (co-)authored.
3. It provides pdf's of power point presentations of some of my key research subjects.

Born 1943 in Leersum, NL

Studied: Applied Physics, Delft; 1969 PhD

Entered Philips in 1970, NatLab

**Low Molar Mass Liquid Crystals: Displays
Switching (dielectric constants, viscosity)**

Physical Properties of Liquid Crystalline Materials

1978 Assoc. Prof. University Groningen

1984 – 94: Open University of the Netherlands

Established Science Department

Full Professor, Dean of Faculty, Rector

start of relation to FOM Amolf

X-ray work on Liquid Crystals

Phase transitions, Critical Phenomena

Smectics

Order and Correlation length in smectic polymers



1980 Garmisch-Partenkirchen



Kyoto 1980



Rector at Open University

Since 1994 part time at FOM, Amolf

1997 Full time at FOM

Order and Correlation length in smectic polymers

Smectic elastomers

Polymer Physics: Blockcopolymers

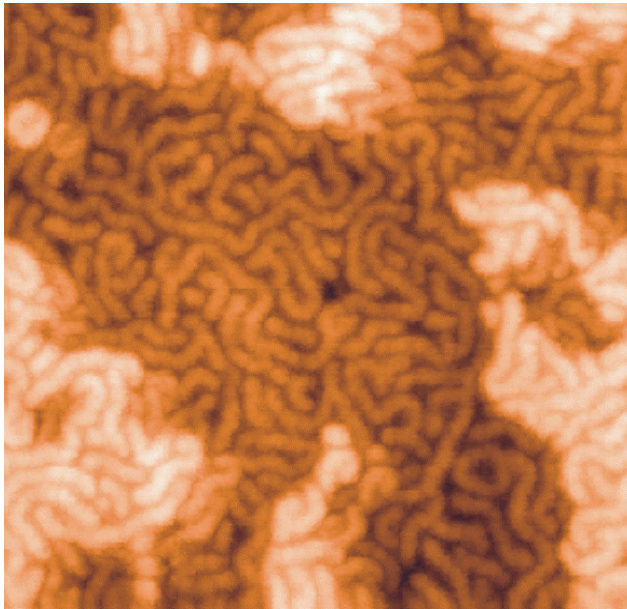
Blockcopolymers with one smectic block

Cooperation with Germany: Halle (Fischer), Freiburg (Finkelmann), Mainz (Zentel)

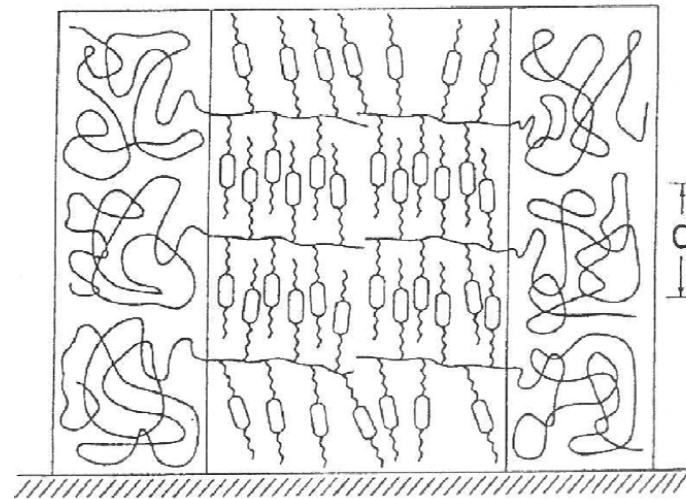
2007 University of Massachusetts, Amherst, Mass. USA

2011 -18 DWI Leibniz Institute Aachen

AFM and model of thin films

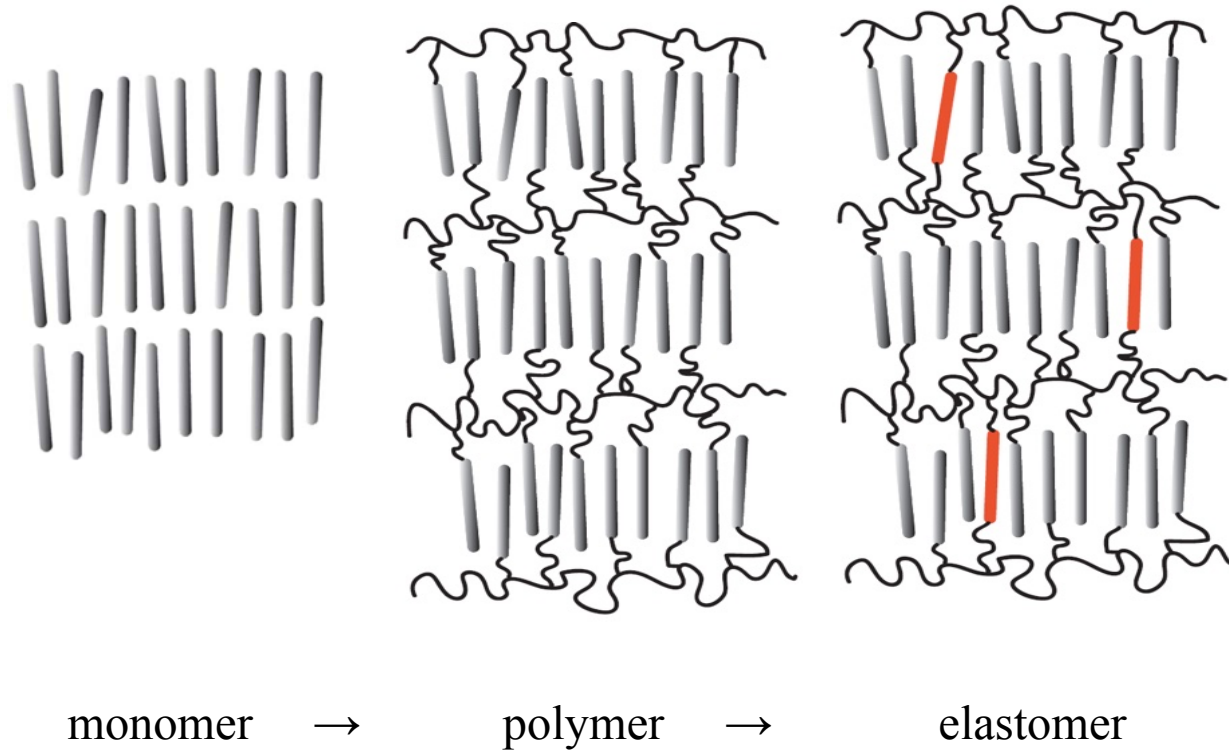


$1 \times 1 \mu\text{m}^2$



Wong, Commandeur, Fischer, de Jeu, Phys. Rev. Lett. **77**, 5221 (1996)

Smectic systems



Order and disorder by crosslinking

Coupling of Sm-A elastic field to
the random rubbery network



Suppression of thermal fluctuations

by pinning of smectic
layers by crosslinks.

→

Long-range order restored?
Order improvement.

Terentjev, Warner, Lubensky,
Europhys. Lett. **30**, 343 (1995)

Disorder by a random field.

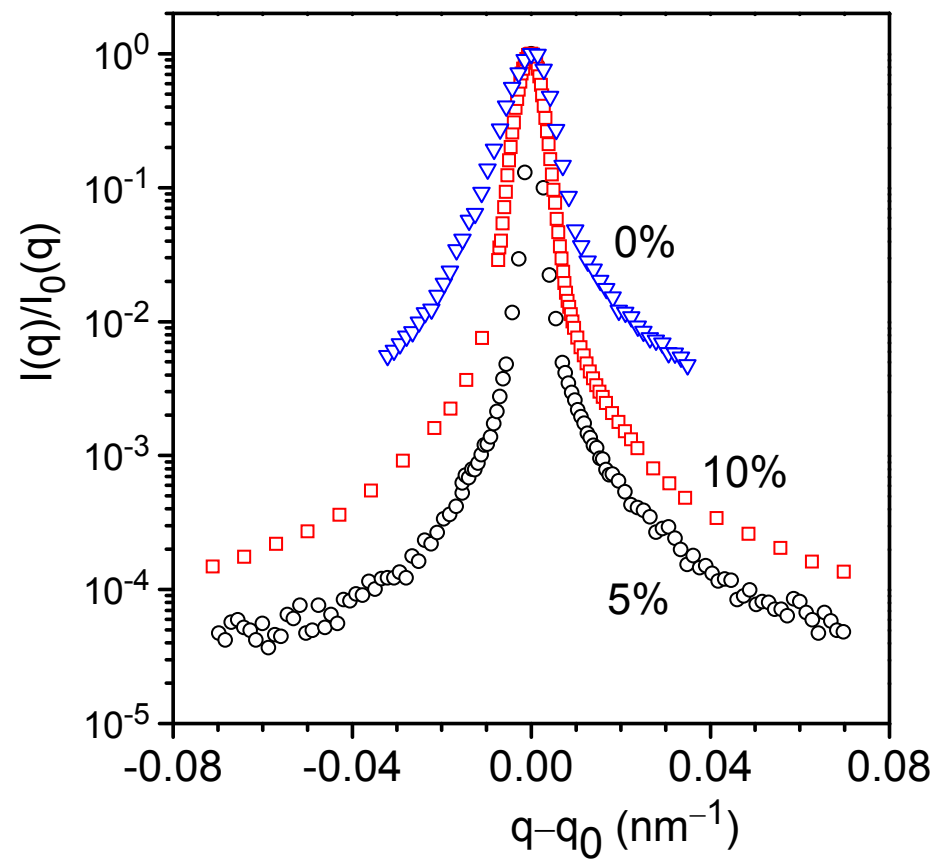
At large enough length scales
even *weak disorder* can destroy
translational order.

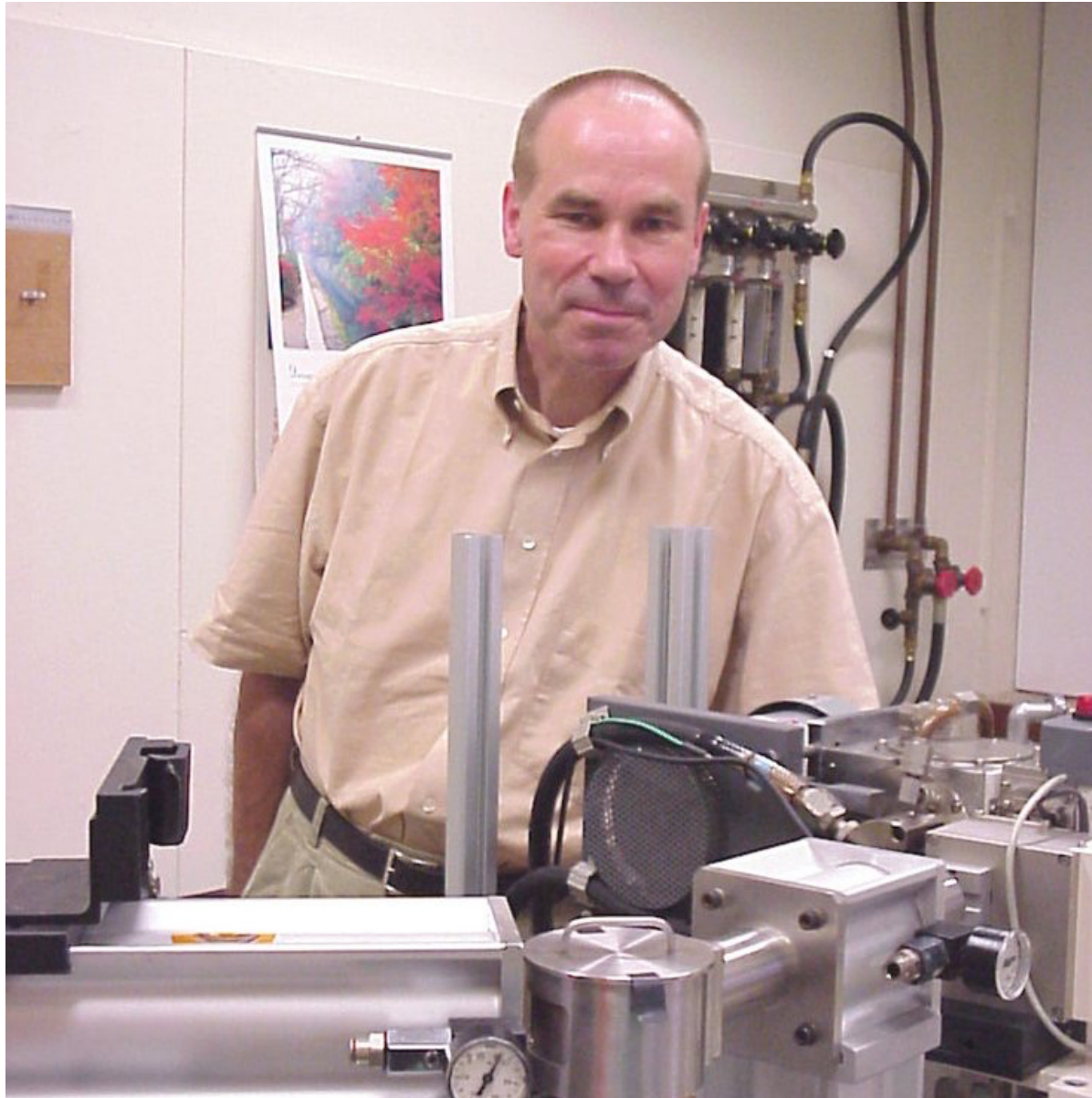
→

Exponentially decaying
positional correlations survive.

Olmsted, Terentjev,
PRE **53**, 2444 (1996)

Different crosslink densities (1)





Wim deJeu
at FOM

1997 Full time at FOM

Order and Correlation length in smectic polymers
Polymer Physics: Blockcopolymers

2007 University of Massachusetts, Amherst, Mass. USA

2011 -18 DWI Leibniz Institute Aachen

Impressive collection of books:

Physical Properties of Liquid Crystalline Materials

[Liquid Crystal Elastomers: Materials and Applications](#)

Basic X-Ray Scattering for Soft Matter



Alfred Saupe Medal 2018