

**Block Copolymer Nanofibrillar Micelles  
gelation, manipulation and applications**

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# Propositions

Belonging to the thesis

*Block Copolymer Nanofibrillar Micelles: gelation, manipulation and applications*

by Kai Zhang

1. Tiny end-groups present significant effects on the macroscopic self-assembly behaviour of block copolymers.

*Angew. Chem. Int. Ed.* **2006**, 45, 2232-2235

*Adv. Mater.* **2000**, 12, 874-878

Chapter 2 of this thesis

2. Combining “top-down” approaches with the assemblies generated from “bottom-up” strategies will bridge the length scale in the construction of complex devices.

Chapter 3, 4 and 5 of this thesis

3. Using two-dimensional images from microscopy to describe 3D objects is critical as you have no idea what is waiting for you on the next layer.

Chapter 5 of this thesis

4. Although the potential toxicity of nanoparticles doesn't limit the researchers' imagination to use them as antiviral drugs, the real applications are always questionable due to the missed long term investigations.

*Nat. Mater.* **2017**, 17, 195-203

*Nanotoday* **2011**, 6, 446-465

5. Regarding the random coil conformation and long length of polymer chains, polymer crystallization during flow cannot be simply explained by the coil-stretch theory.

*Science* **2007**, 316, 1014-1017

6. Changing the research direction is a simple and fast way to avoid detours when you get lost on one road.

7. Besides in sport exercise, warm up period also exists in precise laboratory experimentation.

8. A good scientist is also a professional writer and salesman who can always sell his/her research products in an attractive way.

9. If you cannot advance knowledge by filling a gap with your research, you can still do so by drilling a hole on the knowledge boundary.

10. In emotional arithmetic, instead of making a positive, two negatives only give you more pain.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor prof. dr. J.H. van Esch and copromotor dr. hab. E. Mendes.