



## Advanced course on rheology

**Prof. Dr. Manfred Wilhelm**  
**Institut für Technische und Polymerchemie**  
**KIT, Karlsruhe, Germany**

12-13 April 2023

8 hours, different times and rooms (see details below)

Dipartimento di Scienze Chimiche

The objective of course is to teach a class on rheology (Science of flow) with a focus on polymer science.

Content of the teaching programme:

Definition of rheology, main parameters, simple models, equipment used to determine the interplay between molecular structure and rheological properties:

- Motivation, Literature, Journals
- First principles
- Simple rheological models: Maxwell, Voigt, Burger, Carreau, Ostwald - de Waele
- Glossary
- Rheological hardware
- Case study: Polymer melts

**Timetable:**

Wednesday 12 April 2023

11.30-13.00 AULA H

14.00-15.00 AULA M

Thursday 13 April 2023

10.00-11.30 AULA H

14.00-15.30 AULA H

**A certificate will be provided upon 75% of attendance (signatures collected)**

**Short CV of the speaker**

Prof. M. Wilhelm studied chemistry at the University Mainz (Germany) and Toronto (Canada). He continued a Ph.D. (1995) on solid state NMR on Polymers at the Max-Planck Institute in Mainz and Santa Barbara. His postdoc was at the Weizmann Institute in Rehovot (Israel) on molecular tribology. He continued a habilitation at the Max-Planck in Mainz on non-linear rheology. His first professorship was in Darmstadt (2004) and he now holds a chair at KIT, Karlsruhe (2006) on polymers materials. Focus is on method development in rheology and chromatography.

Prof.ssa Silvia Gross