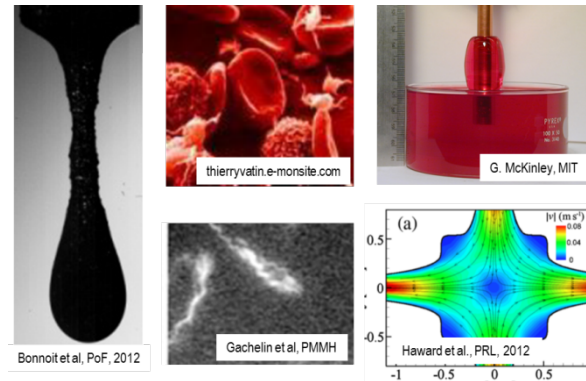


Rheology of complex fluids

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Complex fluids are ubiquitous in nature and industrial applications, ranging from food processing, to biofluid flow or landslides. The complex macroscopic properties result from the non-linear interaction between the microscopic structure of the fluids and the applied flow.



In this course we will introduce the most important non-Newtonian properties and discuss classical and more recent rheological methods (as microfluidics etc.) to experimentally access those properties. Specific examples of complex fluids, as polymer solutions, surfactants or emulsions are discussed in detail and their applications introduced. Simple non-Brownian as well as complex or even active suspension properties are introduced.