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COMPARISON OF VISCOELASTIC AND DIELECTRIC PROPERTIES OF TYPE-A CHAIN: EXPERIMENTAL ATTEMPT FOR DEEPER UNDERSTANDING OF POLYMER RHEOLOGY

Wednesday 17 May 2023 09:00 (1 hour)

Abstract:

Viscoelastic and dielectric properties of type-A chains differently average the same chain dynamics, so that comparison of those properties resolves some details of this dynamics in a purely experimental way. Some examples of this comparison are presented in the talk.

Bio:

Hiroshi Watanabe started his academic career as Assistant Professor in 1983 in Osaka University, Japan. He moved to Institute for Chemical Research, Kyoto University, Japan, as Associate Professor in 1994, and was promoted to Professor in 2003. In 2022, he retired from Kyoto University but is still active as Emeritus Professor of Kyoto University and Visiting Professor of Changchun Institute of Applied Chemistry, Chinese Academy of Sciences. His research interest has been placed on dynamics and rheology of various softmatters that include polymers, suspensions, and emulsions. He combined several experimental methods, for example, rheological, dielectric, and small angle scattering methods, to reveal physical factors underlying the dynamic behavior of softmatters, for example, the entanglement loosening process of polymers wherein the length and time scales can be consistently coarse-grained. Professor Watanabe has received many awards for his outstanding contributions to the science of Rheology including the Bingham medal of the Society of Rheology in 2015.

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