

Foreword

“Nanoscience: Friction and Rheology on the Nanometer Scale” is intended to give an introduction for students and to give an overview of previous work for beginners in the field. It may also help to distribute knowledge among experienced researchers. Friction and rheology are multidisciplinary research topics. The journals, where these subjects are covered, are related to physics, chemistry, mechanical and electrical engineering and others. An introduction to the topics will be given in Chapter I and subsequent chapters will treat subjects, such as the description of instruments (Chapter II), the understanding of normal (Chapter III) and lateral forces (Chapter IV) and various application examples and instrumental aspects of friction force microscopy (Chapter VIII and Appendix). Chapter VI gives an overview of rheology on the nanometer-scale. Chapter VII gives insights into the relationship between ultrasonics and friction. Chapters I, IV and V were written by Tibor Gyalog and E.M. Chapter VI was written by René Overney and Chapter VII by Klaus Dransfeld. Chapters II, III, VIII and the Appendix by E.M. The book was written during the years 1995–1998.

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