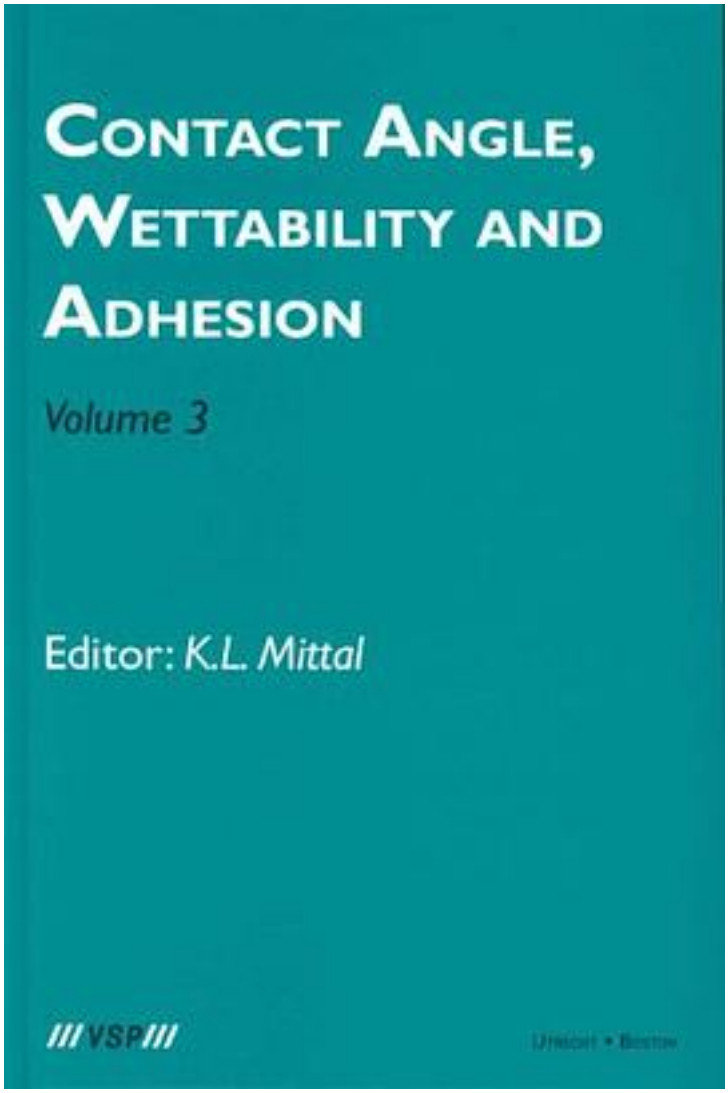
Contact Angle, Wettability and Adhesion



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This volume chronicles the proceedings of the Third International Symposium on Contact Angle, Wettability and Adhesion held in Providence, Rhode Island, May 20-23, 2002. This symposium was held to provide a forum to update and consolidate the research activity on this topic. The world of wettability is very wide as it plays an extremely important role in a legion of technological areas. This volume contains a total of 25 papers covering myriad aspects of contact angle and wettability. All manuscripts were rigorously peer-reviewed and all were revised and properly edited before inclusion in this volume. This book is divided into three parts: General Papers; Contact Angle Measurements/Determination and Solid Surface Free Energy; and Wetting and Spreading: Fundamental and Applied Aspects. The topics covered include: fundamental aspects of contact line region; effect of adsorbed vapor on liquid-solid adhesion; molecular origin of contact angles; various factors influencing contact angle measurements; different kinds of contact angles; various ways to measure contact angles; contact angle hysteresis; determination of solid surface free energies via contact angles; contact angle measurements on various materials (smooth, rough, porous, heterogeneous); factors influencing/dictating wetting and spreading phenomena; ultrahydrophobic polymer surfaces; switchable wettability; reactive wetting; wetting by nanocrystallites; dewetting; wetting of self-assembled monolayers; reversible wetting of structured surfaces; wetting in granular and porous media; relationship between wetting and adhesion; relevance/importance of wetting and surface energetics in technological applications, including foodindustry. This volume and its predecessors containing bountiful information will be of great interest and value to everyone interested in the contemporary R&D activity in the fascinating world of contact angles and wettability. The information garnered in these volumes will hopefully serve as a fountainhead for new research ideas and applications.

作者介绍:

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