

Preface

The second edition of “Fundamentals of Friction and Wear on the Nanoscale” has been motivated by the significant progress made by nano tribology in the last seven years. New chapters on triboluminescence, friction in liquids, nonlinear mechanisms of friction, fractal surfaces, multiscale modeling of contacts, capillary condensation, nano manipulation in SEM, colloidal systems, graphene, nanowear of polymers, Casimir forces, and cell motility have been added. Other key chapters, such as those on atomic-scale friction in ultra-high vacuum and nano manipulation have been completely revised. On the other side, we have omitted some chapters dealing with side aspects of nano tribology which did not undergo significant changes in the last few years. We hope that this new edition will attract the interest of a broad readership of scientists and engineers, and stimulate new experiments and theoretical models in this exciting multidisciplinary research field.

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