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Nota di contenuto	List of Contributors; Preface; Tribute to Professor Boris Luk'yanchuk: To Mark his Contributions to Xlll Physics on the Occasion of his 60th Birthday; Acknowledgements; CONTENTS; Chapter 1 Laser Cleaning and Surface Modifications: Applications in Nano- and Biotechnology D. Bauerle, T. Gumpenberger, D. Brodoceanu, G . Langer, J. Kofler, J. Heitz and K. Piglmayer; Chapter 2 An Overview of Experimental Research into the Laser Cleaning of Contaminants from Surfaces A. J. Fernandes and D. M. Kane Chapter 3 Particle on a Surface: About Possible Acoustic and Plasmonics Effects in Dry Laser Cleaning B. S. Luk'yanchuk, Z. B. Wang, Y. Zhou, M. H. Hong, W. D. Song and T. C. ChongChapter 4 Axially Symmetric Focusing of Light in Dry Laser Cleaning and Nanopatterning J. Kofler and N. Arnold; Chapter 5 Liquid-Assisted Laser Shock Cleaning for Nanoscale Particle Removal D. Jang, B. Oh and D. Kim; Chapter 6 UV Laser-Induced Dehydroxylation of UV Fused Silica Surfaces A. J. Fernandes, D. M. Kane, B. Gong and R. N. Lamb Chapter 7 Removal of Silica Microspheres from Glass and Silica Substrates by Dry Laser Cleaning S. Pleasants and D. M. KaneChapter 8 The Effect of Pulse Shape on 3D Modeling of Laser Cleaning Fluences S.

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Chapter 10 Femtosecond Laser Cleaning of Metallic Antique Artworks - Advantages, Limits and Economic Aspects S. Barcikowski, N. Barsch, T. Burmester, J. Bunte, J. Ulrich, A. Gervais and M. MeierChapter 11 Ultrafast Laser Cleaning of Museum Artifacts A. V. Rode, N. R. Madsen, E. G. Gamaly, B. Luther-Davies, K. G. H. Baldwin, D. Hallam, A. Wain and J. Hughes; Chapter 12 Laser Cleaning of Entrance Window During Ultra-Fast Pulsed Laser Deposition N. R. Madsen, A. V. Rode, D. Freeman, V. Z. Kolev and B. Luther-Davies
Chapter 13 Surface Cleaning of Optical Materials Using Novel VUV Sources D. M. Kane, D. Hirschausen, B. K. Ward, R. P. Mildren and R. J. CarmanChapter 14 Micro- and Nano-Machining with Ultrashort Laser Pulses: From Basic Science to The Real World P. Balling; Chapter 15 Optical Surface Profilomctry of Low Reflectance Materials - Evaluation as a Laser Processing Diagnostic D. M. Kane, A. M. Joyce and R. J. Chater

Sommario/riassunto

Laser Cleaning II is the second of a series of books reporting research on the use of lasers for cleaning material surfaces and related micro-scale and nano-scale laser processing. It follows Laser Cleaning, edited by Boris Luk'yanchuk, published in 2002. The primary focus is on contaminant particle removal, nano-scale sized particles in particular, which represents a major cleaning challenge in industrial contexts and poses a broad range of research questions. The contributions provide stimulating answers to these questions, spanning the essential areas: the fundamental theoretical and experi