Contents

Editorial Preface vii
Trends for Electron Beam Accelerator Applications in Industry Sueo Machi
Ion Implantation for Semiconductor Doping and Materials Modification Lawrence A. Larson, Justin M. Williams and Michael I. Current
Ion Beam Analysis: A Century of Exploiting the Electronic and Nuclear Structure of the Atom for Materials Characterisation Chris Jeynes, Roger P. Webb and Annika Lohstroh
Neutrons and Photons in Nondestructive Detection J. F. Harmon, D. P. Wells and A. W. Hunt
Review of Cyclotrons for the Production of Radioactive Isotopes for Medical and Industrial Applications Paul Schmor
Development of Accelerator Mass Spectrometry and Its Applications Jiaer Chen, Zhiyu Guo, Kexin Liu and Liping Zhou
Electron Accelerators for Environmental Protection Andrzej G. Chmielewski
Studying Radiation Damage in Structural Materials by Using Ion Accelerators Peter Hosemann
Direct Current Accelerators for Industrial Applications *Ragnar Hellborg and Harry J. Whitlow
Radio-Frequency Electron Accelerators for Industrial Applications Marshall R. Cleland
Accelerators for Neutron Generation and Their Applications Guenter Mank, Guenter Bauer and Françoise Mulhauser
Prospects for Accelerator Technology Alan Todd
CERN: From Birth to Success Herwig Schopper
Simon van der Meer (1925–2011): A Modest Genius of Accelerator Science Vinod C. Chohan