

Preface .....	vii
Editors.....	xi
Contributors.....	xiii
Authors.....	xv
<b>Chapter 1</b> Introduction.....	1
<i>John C. Riviere and Sverre Myhra</i>	
<b>Chapter 2</b> Problem Solving: Strategy, Tactics, and Resources.....	7
<i>Sverre Myhra and John C. Riviere</i>	
<b>Chapter 3</b> Photoelectron Spectroscopy (XPS and UPS), Auger Electron Spectroscopy (AES), and Ion Scattering Spectroscopy (ISS).....	19
<i>Vaneica Y. Young and Gar B. Hoflund</i>	
<b>Chapter 4</b> Ion Beam Techniques: Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS).....	65
<i>Birgit Hagenhoff, Reinhard Kersting, and Derk Rading</i>	
<b>Chapter 5</b> Surface and Interface Analysis by Scanning Probe Microscopy.....	97
<i>Sverre Myhra</i>	
<b>Chapter 6</b> Transmission Electron Microscopy: Instrumentation, Imaging Modes, and Analytical Attachments.....	139
<i>John M. Titchmarsh</i>	
<b>Chapter 7</b> Synchrotron-Based Techniques.....	193
<i>Andrea R. Gerson, David J. Cookson, and Kevin C. Prince</i>	
<b>Chapter 8</b> Quantification of Surface and Near-Surface Composition by AES and XPS.....	223
<i>Sven Tougaard</i>	
<b>Chapter 9</b> Structural and Analytical Methods for Surfaces and Interfaces: Transmission Electron Microscopy.....	245
<i>John M. Titchmarsh</i>	
<b>Chapter 10</b> In-Depth Analysis/Profiling.....	281
<i>François Reniers and Craig R. Tewell</i>	

<b>Chapter 11</b> Characterization of Nanostructured Materials.....	<b>319</b>
<i>Matthias Werner, Alison Crossley, and Colin Johnston</i>	
<b>Chapter 12</b> Problem-Solving Methods in Tribology with Surface-Specific Techniques.....	351
<i>Christophe Donnet and Jean-Michel Martin</i>	
<b>Chapter 13</b> Problem-Solving Methods in Metallurgy with Surface Analysis.....	389
<i>R. K. Wild</i>	
<b>Chapter 14</b> Composites.....	421
<i>Peter M. A. Sherwood</i>	
<b>Chapter 15</b> Minerals, Ceramics, and Glasses.....	457
<i>Roger St. C. Smart and Zhaoming Zhang</i>	
<b>Chapter 16</b> Catalyst Characterization.....	501
<i>Wolfgang E. S. Unger and Thomas Gross</i>	
<b>Chapter 17</b> Surface Analysis of Biomaterials.....	529
<i>Marek Jasieniak, Daniel Graham, Peter Kingshott, Lara J. Gamble, and Hans J. Griesser</i>	
<b>Chapter 18</b> Adhesion Science and Technology.....	565
<i>John F. Watts</i>	
<b>Chapter 19</b> Electron Spectroscopy in Corrosion Science.....	603
<i>James E. Castle</i>	
<b>Index.....</b>	<b>635</b>