

Contents

1	Synchrotron X-Ray Phase Nanotomography for Bone Tissue Characterization	1
	Peter Varga, Loriane Weber, Bernhard Hesse, and Max Langer	
2	3D Chemical Imaging of Nanoscale Biological, Environmental, and Synthetic Materials by Soft X-Ray STXM Spectrotomography	43
	Gregor Schmid, Martin Obst, Juan Wu, and Adam Hitchcock	
3	X-Ray Photon Correlation Spectroscopy for the Characterization of Soft and Hard Condensed Matter	95
	Oier Bikondoa	
4	XAFS for Characterization of Nanomaterials	157
	Maria Katsikini and Eleni C. Paloura	
5	The Characterization of Atomically Precise Nanoclusters Using X-Ray Absorption Spectroscopy	247
	Lisa Bovenkamp-Langlois and Martha W. Schaefer	
6	X-Ray Absorption Spectroscopic Characterization of Nanomaterial Catalysts in Electrochemistry and Fuel Cells	315
	Kotaro Sasaki and Nebojsa Marinkovic	
7	In Situ SXS and XAFS Measurements of Electrochemical Interface	367
	Toshihiro Kondo, Takuya Masuda, and Kohei Uosaki	
8	Gas-Phase Near-Edge X-Ray Absorption Fine Structure (NEXAFS) Spectroscopy of Nanoparticles, Biopolymers, and Ionic Species	451
	Aleksandar R. Milosavljević, Alexandre Giuliani, and Christophe Nicolas	

9	In Situ X-Ray Reciprocal Space Mapping for Characterization of Nanomaterials	507
	Peter Siffalovic, Karol Vegso, Martin Hodas, Matej Jergel, Yuriy Halahovets, Marco Pelletta, Dusan Korytar, Zdeno Zaprazny, and Eva Majkova	
10	X-Ray Powder Diffraction Characterization of Nanomaterials ...	545
	Antonio Cervellino, Ruggero Frison, Norberto Masciocchi, and Antonietta Guagliardi	
11	X-Ray Absorption Fine Structure Analysis of Catalytic Nanomaterials	609
	Wang-Jae Chun, Satoru Takakusagi, Yohei Uemura, Kyoko Bando, and Kiyotaka Asakura	
12	Contribution of Small-Angle X-Ray and Neutron Scattering (SAXS and SANS) to the Characterization of Natural Nanomaterials	665
	Loïc Barré	
13	Synchrotron Small-Angle X-Ray Scattering and Small-Angle Neutron Scattering Studies of Nanomaterials	717
	Hiroyuki Takeno	
14	Quasielastic Neutron Scattering: An Advanced Technique for Studying the Relaxation Processes in Condensed Matter	761
	Madhusudan Tyagi and Suresh M. Chathoth	
	Index	815