

References:

A. Advanced Diffraction Techniques: SAXS, SANS, LEED, RHEED, EXAFS.

1. Diffraction from Materials, L. H. Schwartz and J. B. Cohen, Academic Press, New York (1977)
2. X-ray diffraction Procedures, H. P. Klug and L. E. Alexander, John Wiley, New York (1974)
3. Small Angle X-ray Scattering. O. Glatter and O. Kratky, Academic Press, (1994)
4. Small Angle X-ray scattering of X-rays, A. Guinier, G. Fournet, C. Walker and K. Yudowitch, John Wiley and Sons, Inc., (1955)
5. Low Energy Electron Diffraction, M. A. Van Hove, W. H. Weinberg and C.-M. Chan, Springer
6. Electron Spectroscopy for Surface Analysis, M. Henzler Springer, Berlin, (1977)
7. EXAFS Spectroscopy, techniques and applications, B. K. Teo and D. C. Joy, Platinum, New York (1981)
8. Fundamentals of XAFS, M. New ville, University of Chicago (2004)
9. X-ray Absorption: Principles, Applications, Techniques of EXAFS, SEXAFS and XANES in Chemical Analysis, D. C. Koningsberger and R. Prins, John Wiley & Sons (1988)
10. Application of Neutrons and Synchrotron Radiation in Engineering Material Science, Virtual Institute Photon and Neutrons for Advanced Materials (PNAM)

B. Advanced Surface Characterization Techniques: XPS,AES, SIMS

11. Modern ESCA The Principles and Practice of X-Ray Photoelectron Spectroscopy, Terry L. Barr, CRC press, (1994)
12. Materials Characterization Techniques *Sam Zhang, Lin Li, Ashok Kumar*; CRC press, (2008)
13. **Secondary Ion Mass Spectrometry: An Introduction to Principles and Practices, Paul van der Heide, Wiley, 2014**

C. Advanced Microscopic Techniques: TEM: HR, HAADF, STEM, In-situ; EBSD, AFM, STM, Laser Confocal Microscopy

1. Transmission Electron Microscopy; D.B. Williams and C.B. Carter, Plenum Press (2004)
2. Scanning Electron Microscopy and X-ray Microanalysis *by Joseph Goldstein, Dale E. Newbury, David C. Joy, and Charles E.; Springer Science (2003)*
3. High-Resolution Electron Microscopy, John C. H. Spence, Oxford University Press, 2013
4. Atomic Force Microscopy, Peter Eaton, Paul West, Oxford University Press, 2010
5. Confocal Microscopy: Methods and Protocols, ed. Stephen W. Paddock, Humana Press, 1999

D. Advanced Spectroscopic Techniques: Vis, UV, FTIR, Raman, STEM-EELS

1. Materials Characterization: Introduction to Microscopic and Spectroscopic Methods; **Yang Leng, Wiley, 2009 (ebook)**
2. Infrared and Raman Spectra: Inorganic and Coordination Compounds, K. Nakamoto, Wiley, 2009
3. Physical Methods for Chemistry, R.S. Drago, Saunders College Pub., 1992