Useful Books on Surface Analysis

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NOTE: This is not a complete list. Please send us the title etc. of other books that are useful for Surface Science & Analysts. Please also send a brief comment about why the book is useful. We will add new categories as needed. Thank you from all of us.

Equipment to Build Surface Analysis Instruments

Experimental Innovations in Surface Science -
A Guide to Practical Laboratory Methods and Instruments
J. T. Yates, Jr.. Springer Verlag, 1998

Building Scientific Apparatus - A Practical Guide to Design and Construction

Optical Systems for Soft X-rays
A. G. Michette, Plenum Press, 1986

Handbooks of Spectra and Tables of BEs or KEs

Practical Handbook of Spectroscopy (XPS BE Tables from K. Siegbahn)
J. W. Robinson, CRC, 1991

Handbook of X-ray Photoelectron Spectroscopy 1st ed.
Handbook of X-ray Photoelectron Spectroscopy 2nd ed.

Handbook of X-ray Photoelectron Spectroscopy

High Resolution XPS of Organic Polymers - The Scienta ESCA300 Database
G. Beamson and D. Briggs, Wiley Interscience, 1992

VG Scientific XPS Handbook

On-Screen PDF Handbook of Monochromatic XPS Spectra - Vol. 1 - The Elements and Native Oxides
B. V. Crist, XPS International, Inc., 1999

On-Screen PDF Handbook of Monochromatic XPS Spectra - Vol. 2 - Commercially Pure Binary Oxides
B. V. Crist, XPS International, Inc., 2005

Handbook of Auger Electron Spectroscopy

Handbook of Auger Electron Spectroscopy, 3rd edition

VG Scientific Auger Handbook
VG Scientific, 1989 (1st edition)

VG Scientific Auger Handbook
S. Trigwell, VG Scientific, 1993 (2nd edition)

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Introduction to Surface Science

Encyclopedia of Materials Characterization
C. R. Brundle, C. A. Evans, and S. Wilson, Butterworth-Heinemann, 1992

Surface Science - An Introduction
J. B. Hudson, Butterworth-Heinemann, 1992

Characterization of Solid Surfaces

Surface Analytical Techniques (Monographs on the Physics and Chemistry of Materials)

Methods of Surface Analysis
J. M. Walls (editor), Cambridge University Press, 1989

Surfaces and Interfaces of Solids (Springer Series in Surface Sciences - Vol. 15)
H. Lueth, Springer Verlag, 1993

R. Caudano and J. Verbist (editors), Elsevier Scientific Publishing, 1974


http://www.xpsdata.com/useful_books.htm

Real World Applications of Surface Science

Applied Electron Spectroscopy for Chemical Analysis (Chemical Analysis Vol. 63)
H. Windawi and F. F-L. Ho (Editors), Wiley Interscience, 1982

Laser Damage in Optical Materials
R. Wood, Adam Hilger Ltd., 1986

Surface Studies with Lasers (Springer Series in Chemical Physics - Vol.33)
F. R. Aussenegg, A. Leitner, and M. E. Lippitsch (editors), Springer Verlag, 1983

Industrial Adhesion Problems
S. M. Brewis and D. Briggs (editors), Wiley Interscience, 1985

Applied Surface Analysis (ASTM STP 699)
T. L. Barr and L. E. Davis (editors), ASTM, 1980

Industrial Applications of Surface Analysis (ACS Symposium Series Vol 199)
L. A. Casper and C. J. Powell (editors), ACS, 1982

Introduction to Photoelectron Spectroscopy (Chemical Analysis Vol. 67)
P. K. Ghosh, Wiley Interscience, 1983

R. Caudano and J. Verbist (editors), Elsevier Scientific Publishing, 1974


Special Topics

Thin Film Processes

The Physics and Chemistry of Color - The Fifteen Causes of Color
K. Nassau, Wiley Interscience, 1983

X-rays in Atomic and Nuclear Physics

X-ray Spectroscopy (Springer Series in Optical Sciences)
B. K. Agarwal, Springer Verlag, 1991 (2nd ed.)

Materials Handbook

The Elements

Polarized Electrons (Springer Series on Atoms and Plasmas)
J. Kessler, Springer Verlag, 1985 (2nd edition)

Thin Film and Depth Profile Analysis  (Topics in Current Physics Vol. 37)
H. Oechsner (editor), Springer Verlag, 1984

Physical Analysis for Tribology
T. F. J. Quinn, Cambridge University Press, 1991

Surface Studies with Lasers (Springer Series in Chemical Physics - Vol.33)
F. R. Aussenegg, A. Leitner, and M. E. Lippitsch (editors), Springer Verlag, 1983

Systematics in the Electronic Stucture of Poly-Valent Liquid Metals Determined by Electron Spectroscopy
(Ph.D. Dissertation)
G. Indlekofer, University of Basel, Switzerland, 1987

Surface Reactions (Springer Series in Surface Sciences Vol. 34)
R. J. Madix (Editor), Springer Verlag, 1994

Adsorption on Ordered Surfaces of Ionic Solids and Thin Films
(Springer Series in Surface Sciences Vol 33)
H-J. Freund and E. Umbach (editors), Springer Verlag, 1993

Photo-electron Spectra Induced by X-rays of Above 600 Non-Metallic Compounds Containing 77 Elements
C. K. Jorgensen and H. Berthou, Munksgaard Publishers, Denmark, 1972

Spectroscopy in Namur (April 1974)
R. Caudano and J. Verbist (editors), Elsevier Scientific Publishing, 1974

Spectroscopy in Hawaii (July 1989)

Data Fitting in the Chemical Sciences
P. Gans, Wiley Interscience, 1992

Data Analysis for the Chemical Sciences - A Guide to Statistical Technqiues
R. C. Graham, VCH Publishers, 1993

Introduction to Solid State Physics
C. Kittel, Wiley & Sons, 1956 (2nd edition)

Physics at Surfaces
A. Zangwill, Cambridge University Press, 1988

Intermolecular & Surface Forces

Electronic Properties of Surfaces
M. Prutton (editor), Adam Hilger Ltd., 1984
Physical Chemistry of Surfaces
A. W. Adamson, Wiley Intersciences, 1990 (5th edition)

Introduction to Surface Physics
M. Prutton, Oxford Science Publications, 1994

Solids and Surfaces - A Chemist's View of Bonding in Extended Structures
R. Hoffmann, VCH Publishers, 1988

Breakdown of the One-Electron Pictures in Photoelectron Spectra (Structure and Bonding - Vol 45)
G. Wendin, Springer Verlag, 1981

Basic Theory of Surface States (Monographs on the Physics and Chemistry of Materials - Vol. 46)
S. G. Davison and M. Steslicka, Oxford Science Publications, 1992

The Chemical Physics of Surfaces

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Surface Science or Analysis of Various Materials

Encyclopedia of Materials Characterization
C. R. Brundle, C. A. Evans, and S. Wilson, Butterworth-Heinemann, 1992

The Microelectronics Processing - Inorganic Materials Characterization

The Surface Science of Metal Oxides
V. E. Henrich and P. A. Cox, Cambridge University Press, 1994

Physics and Chemistry at Oxide Surfaces
C. Noguera, Cambridge University Press, 1996

Surface and Near-Surface Chemistry of Oxide Materials
(Materials Science Monographs Vol. 47)
J. Nowotny and L-C. DuFour (editors), Elsevier, 1988

Electronic Conduction in Oxides (Springer Series in Solid-State Sciences Vol. 94)

Semiconductor Surfaces and Interfaces (Springer Series in Surface Sciences Vol. 26)
W. Moench, Springer Verlag, 1995 (2nd ed)

The Fundamentals of Corrosion

Laser Damage in Optical Materials
R. Wood, Adam Hilger Ltd., 1986

Spectroscopy in Catalysis
J. W. Niemantsverdriet, VCH Publishers, 1995

Introduction to Surface Chemistry and Catalysis
G. A. Somorjai, Wiley Interscience, 1994

Surface Science of Catalysis (In-situ Probes and Reaction Kinetics)
D. J. Dwyer and D. M. Hoffman (editors), ACS Symposium Series Vol 482, ACS, 1992

Materials Handbook
Lists of Books useful to Surface Science Users

Industrial Adhesion Problems
S. M. Brewis and D. Briggs (editors), Wiley Interscience, 1985

Polymer Surfaces
D. T. Clark and W. J. Feast (editors), Wiley & Sons, 1978

Polymer Degradation - Principles and Practical Applications

Photon, Electron, and Ion Probes of Polymer Structure and Properties (ASC Series 162)
D. W. Dwight, T. J. Fabish, and H. Ronald Thomas, American Chemical Society, 1981

Physical Analysis for Tribology
T. F. J. Quinn, Cambridge University Press, 1991

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Synchrotron As Excitation Source

Introduction to Synchrotron Radiation
G. Margaritondo, Oxford University Press, 1988

Photoelectron Spectroscopy (Springer Series in Solid-State Sciences Vol. 82)
S. Huefner, Springer Verlag, 1995

Atomic Collisions - Electron and Photon Projectiles
E. W. McDaniel, Wiley Interscience, 1989

Electron Spectrometry of Atoms using Synchrotron Radiation
V. Schmidt, Cambridge University Press, 1997

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Teaching

Introduction to Photoelectron Spectroscopy (Chemical Analysis Vol. 67)
P. K. Ghosh, Wiley Interscience, 1983

Auger Electron Spectroscopy - AVS Training Course Book
J. T. Grant, University of Dayton, 1994

X-ray Photoelectron Spectroscopy (XPS/ESCA) - AVS Training Course Book
J. T. Grant, University of Dayton, 1994

Course on ESCA and Auger Spectroscopy - Am. Chem. Soc. Training Course Book
D. M. Hercules, American Chemical Society, ca. 1985

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Training Courses

Auger Electron Spectroscopy - AVS Training Course Book
J. T. Grant, University of Dayton, 1994

X-ray Photoelectron Spectroscopy (XPS/ESCA) - AVS Training Course Book
J. T. Grant, University of Dayton, 1994

Course on ESCA and Auger Spectroscopy - Am. Chem. Soc. Training Course Book
D. M. Hercules, American Chemical Society, ca. 1985

http://www.xpsdata.com/useful_books.htm
**AES**

Practical Surface Analysis - Auger and X-ray Photoelectron Spectroscopy  
D. Briggs and M. P. Seah (Editors), Wiley Interscience, 1990 (2nd ed.)

Handbook of Auger Electron Spectroscopy  
Physical Electronics, 1994

Handbook of Auger Electron Spectroscopy  
Perkin Elmer Corporation, Physical Electronics, 1977

Handbook of Auger Electron Spectroscopy  

Handbook of Auger Electron Spectroscopy  

VG Scientific Auger Handbook  
VG Scientific, 1989 (1st edition)

VG Scientific Auger Handbook  
S. Trigwell, VG Scientific, 1993 (2nd edition)

**UPS / PES**

Photoelectron Spectroscopy  

Photoelectron Spectroscopy (Springer Series in Solid-State Sciences Vol. 82)  
S. Huefner, Springer Verlag, 1995

Introduction to Photoelectron Spectroscopy (Chemical Analysis Vol. 67)  
P. K. Ghosh, Wiley Interscience, 1983

Handbook of He (I) Photoelectron Spectra of Fundamental Organic Molecules  

(Ultra-violet) Photoelectron Spectra of Unstable Molecules  
K. Kimura, Institute of Molecular Science (UVSOR, Okazaki, Japan), 1984

**XPS / ESCA**

Practical Surface Analysis -Auger and X-ray Photoelectron Spectroscopy  
D. Briggs and M. P. Seah (Editors), Wiley Interscience, 1990 (2nd ed.)

Photoelectron Spectroscopy (Springer Series in Solid-State Sciences Vol. 82)  
S. Huefner, Springer Verlag, 1995

Introduction to Photoelectron Spectroscopy (Chemical Analysis Vol. 67)  
P. K. Ghosh, Wiley Interscience, 1983
Handbook of Monochromatic XPS Spectra - Vol. 1 - The Elements and Native Oxides
B. V. Crist, XPS International, Inc., 1999

Handbook of Monochromatic XPS Spectra - Vol. 2 - Commercially Pure Binary Oxides
B. V. Crist, XPS International, Inc., 1999

Handbook of Monochromatic XPS Spectra - Vol. 3 - Semiconductors
B. V. Crist, XPS International, Inc., 1999

Handbook of Monochromatic XPS Spectra - Vol. 4 - Polymers and Polymer Damage
B. V. Crist, XPS International, Inc., 1999

Handbook of Monochromatic XPS Spectra - Vol. 5 - Miscellaneous Materials
B. V. Crist, XPS International, Inc., 1999

On-Screen PDF Handbook of Monochromatic XPS Spectra - Vol. 1 - The Elements and Native Oxides,
B. V. Crist, XPS International, Inc., 1999

Modern ESCA - The Principles and Practice of X-ray Photoelectron Spectroscopy
T. L. Barr, CRC, 1994

G. Indlekofer, University of Basel, Switzerland, 1987

Photo-electron Spectra Induced by X-rays of Above 600 Non-Metallic Compounds Containing 77 Elements
C. K. Jorgensen and H. Berthou, Munksgaard Publishers, Denmark, 1972

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High Resolution XPS of Organic Polymers - The Scienta ESCA300 Database
G. Beamson and D. Briggs, Wiley Interscience, 1992

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J. W. Robinson, CRC, 1991

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