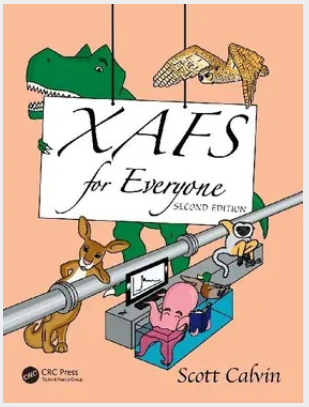
Calvin

XAFS for Everyone



75,50 €
75,50 € (zzgl. MwSt.)

Nicht mehr lieferbar

Artikelnummer: 9780367345679
Medium: Buch
ISBN: 978-0-367-34567-9
Verlag: Taylor & Francis Ltd (Sales)
Erscheinungstermin: 27.08.2026
Sprache(n): Englisch
Auflage: 2. Auflage 2026
Produktform: Kartoniert
Gewicht: 993 g
Seiten: 444
Format (B x H): 210 x 279 mm

XAFS for Everyone provides a practical, thorough guide to x-ray absorption fine structure (XAFS) spectroscopy for both novices and seasoned practitioners from a range of disciplines. It's enhanced with more than 200 figures as well as cartoon characters who offer informative commentary on the different approaches used in XAFS spectroscopy. This second edition now includes chapters on spatial and temporal resolution, alternative measurement modes including resonant inelastic x-ray scattering (RIXS) and high-energy resolution fluorescence detection (HERFD), and an expanded chapter on experimental design. In addition, this edition adds new sections on wavelet transforms, blind source separation, free electron lasers, and theoretical XANES standards, as well as three new case studies. XAFS for Everyone covers sample preparation, data reduction, tips and tricks for data collection, fingerprinting, linear combination analysis, principal component analysis, and modeling using theoretical standards. It describes both near-edge (XANES) and extended (EXAFS) applications in detail. Examples throughout the text are drawn from diverse areas, including materials science, environmental science, structural biology, catalysis, nanoscience, chemistry, art, and archaeology. In addition, eight case studies from the literature demonstrate the use of XAFS principles and analysis in practice. The text includes derivations and sample calculations to foster a deeper comprehension of the results. Whether you are encountering this technique for the first time or looking to hone your craft, this innovative and engaging book gives you insight on implementing XAFS spectroscopy and interpreting XAFS experiments and results. It helps you understand real-world trade-offs and the reasons behind common rules of thumb. Key Points: - New cases studies will be added to the end of the book - Multiple sections are being refreshed or almost completely re-written to reflect the changes in the field since the first edition. For example: important new synchrotron light sources have come in to operation across the world, including NSLS-II in North America, MAX IV and Solaris in Europe, the Taiwan Photon Source in eastern Asia, and SESAME in the Middle East. New analysis software has been developed, while other software has fallen in to disuse. - Discussions of wavelength dispersive detectors will be added throughout the book, as well as wavelet transforms

XAFS for Everyone provides a practical, thorough guide to x-ray absorption fine structure (XAFS) spectroscopy for both novices and seasoned practitioners from a range of disciplines. It's enhanced with more than 200 figures as well as cartoon characters who offer informative commentary on the different approaches used in XAFS spectroscopy.This second edition now includes chapters on spatial and temporal resolution, alternative measurement modes including resonant inelastic x-ray scattering (RIXS) and high-energy resolution fluorescence detection (HERFD), and an expanded chapter on experimental design. In addition, this edition adds new sections on wavelet transforms, blind source separation, free electron lasers, and theoretical XANES standards, as well as three new case studies.XAFS for Everyone covers sample preparation, data reduction, tips and tricks for data collection, fingerprinting, linear combination analysis, principal component analysis, and modeling using theoretical standards. It describes both near-edge (XANES) and extended (EXAFS) applications in detail. Examples throughout the text are drawn from diverse areas, including materials science, environmental science, structural biology, catalysis, nanoscience, chemistry, art, and archaeology. In addition, eight case studies from the literature demonstrate the use of XAFS principles and analysis in practice.The text includes derivations and sample calculations to foster a deeper comprehension of the results. Whether you are encountering this technique for the first time or looking to hone your craft, this innovative and engaging book gives you insight on implementing XAFS spectroscopy and interpreting XAFS experiments and results. It helps you understand real-world trade-offs and the reasons behind common rules of thumb.Key Points: - New cases studies will be added to the end of the book - Multiple sections are being refreshed or almost completely re-written to reflect the changes in the field since the first edition. For example: important

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)