1. Record Nr. UNISA996418440303316

Autore	Salditt Tim
Titolo	Nanoscale Photonic Imaging [[electronic resource] /] / edited by Tim Salditt, Alexander Egner, D. Russell Luke
Pubbl/distr/stampa	Springer Nature, 2020 Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-34413-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XXII, 634 p. 241 illus., 209 illus. in color.)
Collana	Topics in Applied Physics, , 0303-4216 ; ; 134
Disciplina	621.36
Soggetti	Spectroscopy Microscopy Lasers Photonics Optical data processing Nanoscale science Nanoscience Nanostructures Materials science Spectroscopy and Microscopy Biological Microscopy Optics, Lasers, Photonics, Optical Devices Computer Imaging, Vision, Pattern Recognition and Graphics Nanoscale Science and Technology Characterization and Evaluation of Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Fundamentals and Tutorials -- Basic Knowledge in STED Nanoscopy (A. Egner, C. Geisler, and R. Siegmund) -- Basic Knowledge in Coherent X-ray Imaging (T. Salditt, A.-L. Robisch) -- Basic Knowledge: X-ray Focusing & Optics (T. Salditt and M. Osterhoff) -- Statistical Foundations of Nanoscale Photonic Imaging (A. Munk, T. Staudt, and F. Werner) -- Inverse Problems (T. Hohage, B. Sprung, and

F. Weidling) -- Proximal Methods for Image Processing (D. R. Luke) -- Part II: Progress and Perspectives -- Quantifying the Number of Molecules in STED/RESOLFT Nanoscopy (J. Keller-Findeisen, S. Sahl, and S. W. Hell) -- Metal-Induced Energy Transfer Imaging (A. I. Chizhik, and J. Enderlein) -- Reversibly Switchable Fluorescent Proteins for RESOLFT Nanoscopy (N. A. Jensen, I. Jansen, M. Kamper, and S. Jakobs) -- A Statistical and Biophysical Toolbox to Elucidate Structure and Formation of Stress Fibers (B. Eltzner, L. Hauke, S. Huckemann, F. Fehfeldt, and C. Wollnik) -- Photonic Imaging with Statistical Guarantees: From Multiscale Testing to Multiscale Estimation (A. Munk, K. Proksch, H. Li, and F. Werner) -- Efficient, Quantitative Numerical Methods for Statistical Image Deconvolution and Denoising (D. R. Luke, C. Charitha, R. Shefi, and Y. Malitsky) -- Holographic Imaging and Tomography of Biological Cells and Tissues (T. Salditt, and M. Töpperwien) -- Constrained Reconstructions in X-ray Phase Contrast Imaging: Uniqueness, Stability and Algorithms (S. Maretzke, T. Hohage) -- Scanning Small-Angle X-ray Scattering and Coherent X-ray Imaging of Cells (T. Salditt and S. Köster) -- Single Particle Imaging with FEL using Photon Correlations (B. von Ardenne and H. Grubmüller) -- Development of Ultrafast X-ray Free Electron Laser Tools in (Bio) Chemical Research (S. Techert, S. Thekku Veedu, S. Bari) -- Polarization-sensitive Coherent Diffractive Imaging Using HHG (S. Zayko, O. Kfir, and C. Ropers) -- Nonlinear Light Generation in Localized Fields Using Gases and Tailored Solids (M. Sivis and C. Ropers) -- Wavefront and Coherence Characteristics of Extreme UV and Soft X-ray Sources (B. Schäfer, B. Flöter, T. Mey, and K. Mann) -- Laboratory-scale Soft X-ray Source for Microscopy and Absorption Spectroscopy (M. Müller and K. Mann) -- Multilayer Zone Plates for Hard X-ray Imaging (M. Osterhoff and H.-U. Krebs) -- Convergence Analysis of Iteraive Algorithms for Phase Retrieval (D. R. Luke and A.-L. Martins) -- One-Dimensional Discrete-Time Phase Retrieval (R. Beinert and G. Plonka).

Sommario/riassunto

This open access book, edited and authored by a team of world-leading researchers, provides a broad overview of advanced photonic methods for nanoscale visualization, as well as describing a range of fascinating in-depth studies. Introductory chapters cover the most relevant physics and basic methods that young researchers need to master in order to work effectively in the field of nanoscale photonic imaging, from physical first principles, to instrumentation, to mathematical foundations of imaging and data analysis. Subsequent chapters demonstrate how these cutting edge methods are applied to a variety of systems, including complex fluids and biomolecular systems, for visualizing their structure and dynamics, in space and on timescales extending over many orders of magnitude down to the femtosecond range. Progress in nanoscale photonic imaging in Göttingen has been the sum total of more than a decade of work by a wide range of scientists and mathematicians across disciplines, working together in a vibrant collaboration of a kind rarely matched. This volume presents the highlights of their research achievements and serves as a record of the unique and remarkable constellation of contributors, as well as looking ahead at the future prospects in this field. It will serve not only as a useful reference for experienced researchers but also as a valuable point of entry for newcomers.

2. Record Nr. UNINA9910557541903321

Autore	Contini Alessandro
Titolo	Folded Synthetic Peptides for Biomedical Applications
Pubbl/distr/stampa	Frontiers Media SA, 2019
Descrizione fisica	1 online resource (145 p.)
Soggetti	Science: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This eBook is a collection of articles from a Frontiers Research Topic. Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: frontiersin. org/about/contact

3. Record Nr. UNINA9910163046303321

Titolo	3D Microelectronic Packaging : From Fundamentals to Applications / / edited by Yan Li, Deepak Goyal
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-44586-3
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (IX, 463 p. 331 illus., 253 illus. in color.)
Collana	Springer Series in Advanced Microelectronics, , 1437-0387 ; ; 57
Disciplina	621.381
Soggetti	Electronics Microelectronics Optical materials Electronics - Materials Electronic circuits Biotechnology Nanotechnology Metals Electronics and Microelectronics, Instrumentation Optical and Electronic Materials Electronic Circuits and Devices Microengineering Nanotechnology and Microengineering Metallic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to 3D Microelectronic Packaging.-3D packaging architecture and assembly process design.-Materials and Processing of TSV.-Microstructural and Reliability Issues of TSV -- Fundamentals and failures in Die preparation for 3D packaging.-Direct Cu to Cu bonding and other alternative bonding techniques in 3D packaging -- Fundamental of Thermal Compression Bonding Technology and Process Materials for 2.5/3D Packages -- Fundamentals of solder alloys in 3D packaging.-Fundamentals of Electromigration in interconnects of 3D

	packages.-Fundamentals of heat dissipation in 3D IC packaging -- Fundamentals of advanced materials and processes in organic substrate technology -- Die and Package Level Thermal and Thermal/Moisture Stresses in 3-D Packaging: Modeling and Characterization -- Processing and Reliability of Solder Interconnections in Stacked Packaging -- Interconnect Quality and Reliability of 3D Packaging -- Fault isolation and failure analysis of 3D packaging. .
Sommario/riassunto	This volume provides a comprehensive reference for graduate students and professionals in both academia and industry on the fundamentals, processing details, and applications of 3D microelectronic packaging, an industry trend for future microelectronic packages. Chapters written by experts cover the most recent research results and industry progress in the following areas: TSV, die processing, micro bumps, direct bonding, thermal compression bonding, advanced materials, heat dissipation, thermal management, thermal mechanical modeling, quality, reliability, fault isolation, and failure analysis of 3D microelectronic packages. Numerous images, tables, and didactic schematics are included throughout. This essential volume equips readers with an in-depth understanding of all aspects of 3D packaging, including packaging architecture, processing, thermal mechanical and moisture related reliability concerns, common failures, developing areas, and future challenges, providing insights into key areas for future research and development. Provides comprehensive coverage of the state-of-the-art in 3D microelectronic packages Covers advanced materials and processes, quality and reliability concerns, and fault isolation and failure analysis Discusses 3D electronic package architecture and assembly process design Features contributions from both academic and industry authors, for a complete view of this important technology.