1. Record Nr. UNINA9910298597303321

Autore	Ortega Arroyo Jaime
Titolo	Investigation of Nanoscopic Dynamics and Potentials by Interferometric Scattering Microscopy / / by Jaime Ortega Arroyo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-77095-0
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (168 pages)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	547
Soggetti	Chemistry, Physical and theoretical Chemistry, Organic Cytology Atoms Physics Physical Chemistry Organic Chemistry Cell Biology Atomic, Molecular, Optical and Plasma Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Non-fluorescent single-molecule approaches to optical microscopy -- Experimental Methods -- Anomalous diffusion due to interleaflet coupling and molecular pinning -- Structural dynamics of myiosin 5a -- All optical label-free detection, imaging and tracking of single proteins -- Single-molecule chemical dynamics: direct observation of physical autocatalysis -- Outlook.
Sommario/riassunto	This thesis offers a unique guide to the development and application of ultrasensitive optical microscopy based on light scattering. Divided into eight chapters, it covers an impressive range of scientific fields, from basic optical physics to molecular biology and synthetic organic chemistry. Especially the detailed information provided on how to design, build and implement an interferometric scattering microscope, as well as the descriptions of all instrumentation, hardware interfacing

	and image processing necessary to achieve the highest levels of performance, will be of interest to researchers now entering the field.

2.

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Autore	McAdams Patricia
Titolo	Promise and challenges in systems microbiology : workshop summary
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, c2004
ISBN	1-280-17631-8 9786610176311 0-309-53077-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (48 p.)
Disciplina	579/.17
Soggetti	Microbial ecology Microbiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	FrontMatter -- Preface -- Acknowledgments -- Contents -- 1 Introduction -- 2 Workshop Proceedings -- 3 Summary of Key Points -- Appendixes -- Appendix A--Progress and Promise in Systems Microbiology--Agenda -- Appendix B--Participant Biographies.
Sommario/riassunto	Microbiologists have become interested in applying oesystems biology to understand and harness complex biological processes in microbial communities. A systems approach, which attempts to use comparative, high-throughput assays, and mathematical or computational models, has been used to generate a picture of system-wide activity that can yield insight into processes operating within a single cell. But the concept of integrating advances in genomics, proteomics, and metabolomics and incorporating them into mathematical models can also be applied to microbial ecosystems, which typically occur in consortia of related and unrelated organisms. Research on microbial communities using a system-based approach could provide a broader perspective on controls on biological processes and how they operate in and among microorganisms. The National Academies of Sciences,

Engineering, and Medicine held a workshop on oeProgress and Promises of Systems Microbiology in August 2003, with the intent of providing a forum for discussion of the tools, technology, and programs that are needed to advance the study of microorganisms through a systems approach. Participants also discussed ways to encourage collaboration among scientists of different disciplines. This report summarizes the presentations and discussions from the workshop.