Record Nr. UNINA9910438112703321 Autore Sitter Helmut Titolo Small organic molecules on surfaces: fundamentals and applications / / Helmut Sitter, Claudia Draxl, Michael Ramsey, editors Heidelberg;; New York,: Springer, c2013 Pubbl/distr/stampa 1-299-33689-2 **ISBN** 3-642-33848-8 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (xv, 323 pages): illustrations (some color) Collana Springer Series in Materials Science, , 0933-033X;; 173 Altri autori (Persone) DraxlClaudia RamseyMichael Disciplina 620.192 Soggetti Polymers Optical materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "ISSN: 0933-033X." Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Tunable surfaces based upon photoreactive molecular layers and photopolymers -- Reconstruction of molecule orbitals -- Growth and structural analysis of organic nanofiber -- Transport in OFETs and diodes, a comparison -- Ehrlich Schwoebel barriers and mound formation in organic thin film growth -- Interface engineering in organic field effect transistors -- Edible electronics -- Optical properties of organic nanofibers -- Theoretical description of electrical transport in disordered systems -- In-situ observation of organic thin film growth on grapheme -- Optical spectroscopy on organic nanostructures. Sommario/riassunto This book deals with basic aspects of polymer electronics and optoelectronics. There is an enormous world-wide effort both in basic scientific research as well as in industrial development in the area of organic electronics. It is becoming increasingly clear that, if devices based on organic materials are ever going to have a significant relevance beyond being a cheap replacement for inorganic semiconductors, there will be a need to understand interface formation,

film growth and functionality. A control of these aspects will allow the realisation of totally new device concepts exploiting the enormous flexibility inherent in organic chemistry. In this book we focus on

oligomeric/molecular films as we believe that the control of molecular structures and interfaces provides highly defined systems which allow, on the one hand the study of the basic physics and on the other hand to find the important parameters necessary to improve organic devices.