Record Nr. UNINA9910437890403321 **Titolo** Applications of organic and printed electronics: a technology-enabled revolution / / Eugenio Cantatore, editor Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 1-283-62248-3 9786613934932 1-4614-3160-3 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (186 p.) Collana Integrated circuits and systems, , 1558-9412 Altri autori (Persone) CantatoreEugenio Disciplina 621.381 621.3815 Soggetti Organic electronics Microelectronics Integrated circuits Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto OE-A Roadmap for Organic and Printed Electronics -- Solution-Processed Organic Photovolaics -- High-Performance Organic Lightemitting Diode (OLED) Displays -- High Efficiency OLEDs for Lighting Applications -- Large Area Electronics gith Organic Transistors --Printed RFID and Smart Objects for New High-Volume Applications --Organic RFID Tags -- Printed Organic Chemical Sensors and Sensor Systems. Sommario/riassunto Organic and printed electronics can enable a revolution in the applications of electronics and this book offers readers an overview of the state-of-the-art in this rapidly evolving domain. The potentially low cost, compatibility with flexible substrates and the wealth of devices that characterize organic and printed electronics will make possible applications that go far beyond the well-known displays made with large-area silicon electronics. Since organic electronics are still in their early stage, undergoing transition from lab-scale and prototype activities to production, this book serves as a valuable snapshot of the current landscape of the different devices enabled by this technology,

reviewing all applications that are developing and those can be

foreseen. Provides a complete roadmap for organic and printed electronics research and development for the next several years; Includes an overview of the printing processes for organic electronics, along with state of the art applications, such as solar cells; Discusses light emitting diode (OLED) displays, including the different types of OLED pixels in commercial use and in development, and gives insight into the most relevant display and backplane issues; Provides an overview of OLED for lighting applications, including a description of the materials, physics, architecture and benchmarking of OLED lighting devices, as well as fabrication methods, reliability and commercial applications; Reviews the state-of-the-art of chemical sensors based on organic electronic devices; Offers a vision for the future of organic electronics based on organic thin film transistors (OTFTs), including applications such as organic RFIDs and smart objects enabled by the integration of OTFTs with sensors and actuators.