Record Nr. UNINA9910464342803321 Smart and interactive textiles: selected, peer reviewed papers from **Titolo** CIMTEC 2012 - 4th International Conference on Smart Materials. Structures and Systems, June 10-14, 2012, Terme, Italy / / edited by Pietro Vincenzini and Cosimo Carfagna Pubbl/distr/stampa Stafa-Zuerich:,: Trans Tech,, [2013] ©2013 **ISBN** 3-908158-88-5 Descrizione fisica 1 online resource (181 p.) Collana Advances in science and technology;; 80 Altri autori (Persone) CarfagnaCosimo VincenziniP. <1939-> Disciplina 620.197 Soggetti Smart materials Smart structures Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Vol. 4 of 10 volumes from the 4th International Conference "Smart Materials, Structures and Systems". Includes bibliographical references. Nota di bibliografia Smart and Interactive Textiles: Preface and Committees: Table of Nota di contenuto Contents; Chapter 1: Adaptive/Active Textiles; Smart Textiles: A Strategic Perspective of Textile Industry; Development of Piezoresistive Fiber Sensors, Based on Carbon Black Filled Thermoplastic Elastomer Compounds, for Textile Application; Integration of OLEDs in Textiles; The Concept of Mood Changing Garments Made from Luminescent Woven Fabrics and Flexible Photovoltaics "MoodWear"; Shape Memory Polymers in Textiles: Cosmeto-Textiles: State of the Art and Future Perspectives Halochromic Textile Materials as Innovative pH-Sensors Integration of Small Diameter Wire Form SMA for the Creation of Dynamic Shape Memory Textiles: Development of Paper Transistor Using Carbon-Nanotube-Composite Paper; Chapter 2: E-Textiles; Textile Sensor Applications with Composite Monofilaments of Polymer / Carbon Nanotubes; The Power Conversion Characteristics of Woven Organic Photovoltaic Wire Fabrics; Feasibility of Printing Woven Humidity and

Temperature Sensors for the Integration into Electronic Textiles:

Essential Building Blocks of Fibrous Transistors, Part I: Gate Layer Improvements of Smart Garment Electronic Contact System Chapter 3: Manufacturing and Applications; Design and Optimization of an Injection-Moldable Force-Fit Interconnection Module for Smart Textile Applications; Thigmo-Morphogenetic Fiber Composites Embedded with Shape Memory Alloys; Research through Design: A Way to Drive Innovative Solutions in the Field of Smart Textiles; Washable Screen Printed Textile Antennas; Two Novel Techniques of Fabric Sensing Using Carbon Nanofibers; Smart Textiles with Biosensing Capabilities; Respiratory Volume Estimation by a Stretchable Textile Sensor Classified Catalogue for Textile Based Sensors Durable Self-Healing Super-Liquid-Repellent Fabrics; Prosys-Laser: Smart Laser Protective Textile Systems; Structural Conformability and Fluid Uptake Properties of Smart Wound Dressings; Keywords Index; Authors Index

## Sommario/riassunto

The 25 peer-reviewed papers collected here together offer a plenitude of up-to-date information on ""Smart and Interactive Textiles"". The papers are conveniently arranged into: Chapter 1: Adaptive/Active Textiles, Chapter 2: E-Textiles, Chapter 3: Manufacturing and Applications. Review from Book News Inc.: The 25 papers in this volume were presented during the Smart and Interactive Textiles symposium held during the CIMTEC 2012 Fourth International Conference on Smart Materials, Structures, and Systems at Montecani Terme, Italy in June 2012. The three primary topics are adaptive/active textil