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Nota di contenuto	1: Ecological Monitoring Using Wireless Sensor Networks — Overview, Challenges, and Opportunities -- #2: Development of an Embedded System-based Gateway for Environmental Monitoring in -- #3: Experimental Research Platform for Structural Health Monitoring -- #4: A Review of Cooperative Spectrum Sensing in Cognitive Radios -- #5: Dielectric Characterisation of Lipid Droplet Suspensions Using the Small Perturbation Technique -- #6: Dielectric Properties of Wood for Improved Internal Imaging -- #7: Laser-induced Breakdown Spectroscopy Measurements for Dielectric Materials and Metals -- #8: Microdevice With Half-Ring Shaped GMR Sensors For Magnetic Bead Manipulation And Detection -- #9: Design of Induction Gradiometer for MCG Measurement -- #10: Electroacoustic Model Based Pneumatic Fill-level Measurement For Fluids And Bulk Solids -- #11: New developments in Electrode Materials for Electrochemical Sensors -- #12: Optical Fiber Sensors Based on Lossy Mode Resonances -- #13: Ultrasonic Thermometry for Temperature Profiling of Heated

Materials -- #14: Non-invasive Measurement of Blood Components: Sensors for an in-vivo Haemoglobin Measurement -- #15: Cloud Solutions Aimed At Homeland And Security Challenges -- #16: Formulation, Characterization and LPG -Sensing Application of CuO - Doped ZnO Thick Film Resistor -- #17: Synthesis of Cu-doped SnO<sub>2</sub> Thin Films by Spray Pyrolysis for Gas Sensor Application -- #18: Nanocrystalline In<sub>2</sub>O<sub>3</sub> Thick Film Sensor. #3: Experimental Research Platform for Structural Health Monitoring -- #4: A Review of Cooperative Spectrum Sensing in Cognitive Radios -- #5: Dielectric Characterisation of Lipid Droplet Suspensions Using the Small Perturbation Technique -- #6: Dielectric Properties of Wood for Improved Internal Imaging -- #7: Laser-induced Breakdown Spectroscopy Measurements for Dielectric Materials and Metals -- #8: Microdevice With Half-Ring Shaped GMR Sensors For Magnetic Bead Manipulation And Detection -- #9: Design of Induction Gradiometer for MCG Measurement -- #10: Electroacoustic Model Based Pneumatic Fill-level Measurement For Fluids And Bulk Solids -- #11: New developments in Electrode Materials for Electrochemical Sensors -- #12: Optical Fiber Sensors Based on Lossy Mode Resonances -- #13: Ultrasonic Thermometry for Temperature Profiling of Heated Materials -- #14: Non-invasive Measurement of Blood Components: Sensors for an in-vivo Haemoglobin Measurement -- #15: Cloud Solutions Aimed At Homeland And Security Challenges -- #16: Formulation, Characterization and LPG -Sensing Application of CuO - Doped ZnO Thick Film Resistor -- #17: Synthesis of Cu-doped SnO<sub>2</sub> Thin Films by Spray Pyrolysis for Gas Sensor Application -- #18: Nanocrystalline In<sub>2</sub>O<sub>3</sub> Thick Film Sensor. #7: Laser-induced Breakdown Spectroscopy Measurements for Dielectric Materials and Metals -- #8: Microdevice With Half-Ring Shaped GMR Sensors For Magnetic Bead Manipulation And Detection -- #9: Design of Induction Gradiometer for MCG Measurement -- #10: Electroacoustic Model Based Pneumatic Fill-level Measurement For Fluids And Bulk Solids -- #11: New developments in Electrode Materials for Electrochemical Sensors -- #12: Optical Fiber Sensors Based on Lossy Mode Resonances -- #13: Ultrasonic Thermometry for Temperature Profiling of Heated Materials -- #14: Non-invasive Measurement of Blood Components: Sensors for an in-vivo Haemoglobin Measurement -- #15: Cloud Solutions Aimed At Homeland And Security Challenges -- #16: Formulation, Characterization and LPG -Sensing Application of CuO - Doped ZnO Thick Film Resistor -- #17: Synthesis of Cu-doped SnO<sub>2</sub> Thin Films by Spray Pyrolysis for Gas Sensor Application -- #18: Nanocrystalline In<sub>2</sub>O<sub>3</sub> Thick Film Sensor. #8: Microdevice With Half-Ring Shaped GMR Sensors For Magnetic Bead Manipulation And Detection -- #9: Design of Induction Gradiometer for MCG Measurement -- #10: Electroacoustic Model Based Pneumatic Fill-level Measurement For Fluids And Bulk Solids -- #11: New developments in Electrode Materials for Electrochemical Sensors -- #12: Optical Fiber Sensors Based on Lossy Mode Resonances -- #13: Ultrasonic Thermometry for Temperature Profiling of Heated Materials -- #14: Non-invasive Measurement of Blood Components: Sensors for an in-vivo Haemoglobin Measurement -- #15: Cloud Solutions Aimed At Homeland And Security Challenges -- #16: Formulation, Characterization and LPG -Sensing Application of CuO - Doped ZnO Thick Film Resistor -- #17: Synthesis of Cu-doped SnO<sub>2</sub> Thin Films by Spray Pyrolysis for Gas Sensor Application -- #18: Nanocrystalline In<sub>2</sub>O<sub>3</sub> Thick Film Sensor. #9: Design of Induction Gradiometer for MCG Measurement -- #10: Electroacoustic Model Based Pneumatic Fill-level Measurement For Fluids And Bulk Solids --

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#### Sommario/riassunto

The book presents the recent advancements in the area of sensors and sensing technology, specifically in environmental monitoring, structural health monitoring, dielectric, magnetic, electrochemical, ultrasonic, microfluidic, flow, surface acoustic wave, gas, cloud computing and bio-medical. This book will be useful to a variety of readers, namely, Master and PhD degree students, researchers, practitioners, working on sensors and sensing technology. The book will provide an opportunity of a dedicated and a deep approach in order to improve their knowledge in this specific field.