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	Autore	Kargapolov, Mikhail Ivanovich
	Titolo	Eléments de la théorie des groupes / M. Kargapolov, Iou. Merzliakov
	Pubbl/distr/stampa	Moscou : Editions MIR, c1985
	Descrizione fisica	263 p. : ill. ; 24 cm
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	Autore	Tucker Jonathan B.
	Titolo	President Nixon's decision to renounce the U.S. offensive biological weapons program // by Jonathan B. Tucker and Erin R. Mahan
	Pubbl/distr/stampa	Washington, D.C. : , : National Defense University Press, , 2009
	Descrizione fisica	1 online resource (vii, 23 pages)
	Collana	Center for the Study of Weapons of Mass Destruction Case study ; ; 1
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3. Record Nr.	UNINA9910829947303321
Autore	Martin Ferran <1965->
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ISBN	1-119-81106-6 1-119-81104-X 1-119-81105-8
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Livello bibliografico	Monografia
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Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- Preface -- Acknowledgments -- About the Authors -- List of Acronyms -- Chapter 1 Introduction to Planar Microwave Sensors -- 1.1 Sensor Performance Indicators, Classification Criteria, and General Overview of Sensing Technologies -- 1.1.1 Performance Indicators -- 1.1.2 Sensors' Classification Criteria -- 1.1.3 Sensing Technologies -- 1.1.3.1 Optical Sensors -- 1.1.3.2 Magnetic Sensors -- 1.1.3.3 Acoustic Sensors -- 1.1.3.4 Mechanical Sensors -- 1.1.3.5 Electric Sensors -- 1.2 Microwave Sensors -- 1.2.1 Remote Sensing: RADARs and Radiometers -- 1.2.2 Sensors for In Situ Measurement of Physical Parameters and Material Properties: Non-remote Sensors -- 1.2.2.1 Classification of Non-remote Microwave Sensors -- 1.2.2.2 Resonant Cavity Sensors -- 1.2.2.3 The Nicolson-Ross-Weir (NRW) Method -- 1.2.2.4 Coaxial Probe Sensors -- 1.2.2.5 Planar Sensors -- 1.3 Classification of Planar Microwave Sensors -- 1.3.1 Contact and Contactless Sensors -- 1.3.2 Wired and Wireless Sensors -- 1.3.3 Single-Ended and Differential-Mode Sensors -- 1.3.4 Resonant and Nonresonant Sensors -- 1.3.5 Reflective-Mode and Transmission-Mode Sensors -- 1.3.6 Sensor Classification by Frequency of Operation -- 1.3.7 Sensor Classification by Application -- 1.3.8 Sensor Classification by Working Principle -- 1.3.8.1 Frequency-Variation Sensors -- 1.3.8.2 Phase-Variation

Sensors -- 1.3.8.3 Coupling-Modulation Sensors -- 1.3.8.4 Frequency-Splitting Sensors -- 1.3.8.5 Differential-Mode Sensors -- 1.3.8.6 RFID Sensors -- 1.4 Comparison of Planar Microwave Sensors with Other Sensing Technologies -- References -- Chapter 2 Frequency-Variation Sensors -- 2.1 General Working Principle of Frequency-Variation Sensors -- 2.2 Transmission-Line Resonant Sensors -- 2.2.1 Planar Resonant Elements for Sensing. 2.2.1.1 Semi-Lumped Metallic Resonators -- 2.2.1.2 Semi-Lumped Slotted Resonators -- 2.2.2 Sensitivity Analysis -- 2.2.3 Sensors for Dielectric Characterization -- 2.2.3.1 CSRR-Based Microstrip Sensor -- 2.2.3.2 DB-DGS-Based Microstrip Sensor -- 2.2.4 Measuring Material and Liquid Composition -- 2.2.5 Displacement Sensors -- 2.2.6 Sensor Arrays for Biomedical Analysis -- 2.2.7 Multifrequency Sensing for Selective Determination of Material Composition -- 2.3 Other Frequency-Variation Resonant Sensors -- 2.3.1 One-Port Reflective-Mode Submersible Sensors -- 2.3.2 Antenna-Based Frequency-Variation Resonant Sensors -- 2.4 Advantages and Drawbacks of Frequency-Variation Sensors -- References -- Chapter 3 Phase-Variation Sensors -- 3.1 General Working Principle of Phase-Variation Sensors -- 3.2 Transmission-Line Phase-Variation Sensors -- 3.2.1 Transmission-Mode Sensors -- 3.2.1.1 Transmission-Mode Four-Port Differential Sensors -- 3.2.1.2 Two-Port Sensors Based on Differential-Mode to Common-Mode Conversion Detectors and Sensitivity Enhancement -- 3.2.2 Reflective-Mode Sensors -- 3.2.2.1 Sensitivity Enhancement by Means of Step-Impedance Open-Ended Lines -- 3.2.2.2 Highly Sensitive Dielectric Constant Sensors -- 3.2.2.3 Displacement Sensors -- 3.2.2.4 Reflective-Mode Differential Sensors -- 3.3 Resonant-Type Phase-Variation Sensors -- 3.3.1 Reflective-Mode Sensors Based on Resonant Sensing Elements -- 3.3.2 Angular Displacement Sensors -- 3.3.2.1 Cross-Polarization in Split Ring Resonator (SRR) and Complementary SRR (CSRR) Loaded Lines -- 3.3.2.2 Slot-Line/SRR Configuration -- 3.3.2.3 Microstrip-Line/CSRR Configuration -- 3.4 Phase-Variation Sensors Based on Artificial Transmission Lines -- 3.4.1 Sensors Based on Slow-Wave Transmission Lines -- 3.4.1.1 Sensing Through the Host Line -- 3.4.1.2 Sensing Through the Patch Capacitors. 3.4.2 Sensors Based on Composite Right-/Left-Handed (CRLH) Lines -- 3.4.3 Sensors Based on Electro-Inductive Wave (EIW) Transmission Lines -- 3.5 Advantages and Drawbacks of Phase-Variation Sensors -- References -- Chapter 4 Coupling-Modulation Sensors -- 4.1 Symmetry Properties in Transmission Lines Loaded with Single Symmetric Resonators -- 4.2 Working Principle of Coupling-Modulation Sensors -- 4.3 Displacement and Velocity Coupling-Modulation Sensors -- 4.3.1 One-Dimensional and Two-Dimensional Linear Displacement Sensors -- 4.3.2 Angular Displacement and Velocity Sensors -- 4.3.2.1 Axial Configuration and Analysis -- 4.3.2.2 Edge Configuration Electromagnetic Rotary Encoders -- 4.3.3 Electromagnetic Linear Encoders -- 4.3.3.1 Strategy for Synchronous Reading Quasi-Absolute Encoders -- 4.3.3.2 Application to Motion Control -- 4.4 Coupling-Modulation Sensors for Dielectric Characterization -- 4.5 Advantages and Drawbacks of Coupling-Modulation Sensors -- References -- Chapter 5 Frequency-Splitting Sensors -- 5.1 Working Principle of Frequency-Splitting Sensors -- 5.2 Transmission Lines Loaded with Pairs of Coupled Resonators -- 5.2.1 CPW Transmission Lines Loaded with a Pair of Coupled SRRs -- 5.2.2 Microstrip Transmission Lines Loaded with a Pair of Coupled CSRRs -- 5.2.3 Microstrip Transmission Lines Loaded with a Pair of Coupled SIRs -- 5.3 Frequency-Splitting Sensors Based on Cascaded Resonators --

5.4 Frequency-Splitting Sensors Based on the Splitter/Combiner Configuration -- 5.4.1 CSRR-Based Splitter/Combiner Sensor: Analysis and Application to Dielectric Characterization of Solids -- 5.4.2 Microfluidic SRR-Based Splitter/Combiner Frequency-Splitting Sensor -- 5.5 Other Approaches for Coupling Cancellation in Frequency-Splitting Sensors -- 5.5.1 MLC-Based Frequency-Splitting Sensor. 5.5.2 SRR-Based Frequency-Splitting Sensor Implemented in Microstrip Technology -- 5.6 Other Frequency-Splitting Sensors -- 5.6.1 Frequency-Splitting Sensors Operating in Bandpass Configuration -- 5.6.2 Frequency-Splitting Sensors for Two-Dimensional Alignment and Displacement Measurements -- 5.7 Advantages and Drawbacks of Frequency-Splitting Sensors -- References -- Chapter 6 Differential-Mode Sensors -- 6.1 The Differential-Mode Sensor Concept -- 6.2 Differential Sensors Based on the Measurement of the Cross-Mode Transmission Coefficient -- 6.2.1 Working Principle -- 6.2.2 Examples and Applications -- 6.2.2.1 Microfluidic Sensor Based on Open Complementary Split-Ring Resonators (OCSRRs) and Application to Complex Permittivity and Electrolyte Concentration Measurements in Liquids -- 6.2.2.2 Microfluidic Sensor Based on SRRs and Application to Electrolyte Concentration Measurements in Aqueous Solutions -- 6.2.2.3 Microfluidic Sensor Based on DB-DGS Resonators and Application to Electrolyte Concentration Measurements in Aqueous Solutions -- 6.2.2.4 Prototype for Measuring Electrolyte Content in Urine Samples -- 6.3 Reflective-Mode Differential Sensors Based on the Measurement of the Cross-Mode Reflection Coefficient -- 6.4 Other Differential Sensors -- 6.5 Advantages and Drawbacks of Differential-Mode Sensors -- References -- Chapter 7 RFID Sensors for IoT Applications -- 7.1 Fundamentals of RFID -- 7.2 Strategies for RFID Sensing -- 7.2.1 Chip-Based RFID Sensors -- 7.2.1.1 Electronic Sensors -- 7.2.1.2 Electromagnetic Sensors -- 7.2.2 Chipless-RFID Sensors -- 7.2.2.1 Time-Domain Sensors -- 7.2.2.2 Frequency-Domain Sensors -- 7.3 Materials and Fabrication Techniques -- 7.4 Applications -- 7.4.1 Healthcare, Wearables, and Implants -- 7.4.2 Food, Smart Packaging, and Agriculture. 7.4.3 Civil Engineering: Structural Health Monitoring (SHM) -- 7.4.4 Automotive Industry, Smart Cities, and Space -- 7.5 Commercial Solutions, Limitations, and Future Prospects -- References -- Chapter 8 Comparative Analysis and Concluding Remarks -- Index -- EULA.

## Sommario/riassunto

"This book focuses on planar microwave sensors, and discusses the main relevant sensing strategies, working principles, and applications, on the basis of the authors' own experience and background, while highlighting the most relevant contributions to the topic reported by international research groups. The authors provide an overview of planar microwave sensors grouped by chapters according to their working principle. Thus, after a brief introductory chapter devoted to comparing different technologies for sensing, and highlighting the advantages and limitations of microwave sensors, particularly planar sensors. In each chapter, the working principle is explained in detail, and the specific sensor design strategies are discussed, including validation examples at both simulation and experimental level. The most suited applications in each case are also reported. The necessary theory and analysis for sensor design are also provided, with special emphasis on performance improvement (i.e., sensitivity and resolution optimization, dynamic range, etc.)."--

4. Record Nr.	UNINA9910830110303321
Autore	Wackett Lawrence P.
Titolo	Biocatalysis and Biodegradation : Microbial Transformation of Organic Compounds / / Lawrence P. Wackett, C. Douglas Hersberger
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Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	A textbook and resource for professional scientists working in the areas of industrial microbiology, environmental microbiology, and biodegradation. Details both the fundamental concepts of the microbial transformation of organic compounds as well as its application for biotechnology and biodegradation. Discusses the logic of catabolism, which is important in the context of genome annotation and predicting biodegradation reactions.