Record Nr. UNINA9910637714403321 Handbook of metamaterial-derived frequency selective surfaces / / Titolo edited by Shiv Narayan and Arun Kesavan Pubbl/distr/stampa Singapore:,: Springer,, [2023] ©2023 981-16-6441-2 **ISBN** Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (744 pages) Collana Metamaterials Science and Technology, , 2523-7950 ; ; 3 Disciplina 620.11 Soggetti Metamaterials Lingua di pubblicazione Inglese Formato Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Part -I: Defense and Security Systems -- theme 1- Metamaterial-FSS Nota di contenuto for the Design of High Performance Radome -- theme 2-Metamaterial-based high Performance Radar Absorbing Structure -theme 3- Design of Low Observable Antennas using Metamaterial- FSS -- theme 4- Graphene based Tunable Metamaterial-FSS RAS -- theme 5- Active metamaterial FSS based tunable RAS -- theme 6-Metamaterial-FSS based Radome using SIW Technology -- Part -II: Microwave Circuits and Devices -- Theme 1- Metamaterial-FSS based Compact and Wideband Bandpass Filter -- Theme 2- Metamaterialinspired High Performance Lenses -- Theme 3- High Performance Phase-shifter -- Theme 4- Metamaterial FSS as Polarizers -- Theme 5-Metamaterial-FSS based Waveguide Devices -- Part -III: Wireless Communication Systems -- Theme 1- Compact and broadband Microstrip Antennas -- Theme 2- Beam Steering of Antenna Array using Phase Gradient Metasurface -- Theme 3- Terahertz Metamaterial FSS for future Wireless Communication Systems -- Theme 4-Metamaterial enabled FSS for Beam-tilting MM-Wave Antenna Applications -- Theme 5- Wideband MM FSS Reflector for CP Millimeter-wave Antennas -- Theme 6- Metamaterial-FSS Antenna for Microwave Image Sensing -- Part -IV: Metamaterial-FSS for Industrial Applications -- Theme 1- Metamaterial-FSS for Energy Harvesting --

Theme 2- Metamaterial-FSS for Biomedical Systems -- Theme 3-

Metamaterial FSS based Smart Building. .

Sommario/riassunto

This volume provides a consolidated reference for the applications of frequency selective surfaces (FSS) technology in different sectors such as wireless communications, smart buildings, microwave and medical industries. It covers all aspects of metamaterial FSS technology starting from theoretical simulation, fabrication and measurement all the way to actual hardware implementation. Also included are in-depth discussions on the design methodologies of metamaterial FSS structures and their practical implementation in devices and components. It will be of interest to researchers and engineers working on developing metamaterial-FSS technology.