
ELECTROMAGNETIC WAVES
PIERM 76

Progress

In

Electromagnetics

Research M

© 2018 EMW Publishing. All rights reserved.

No part of this publication may be reproduced. Request for permission should be addressed to the Publisher.

All inquiries regarding copyrighted material from this publication, manuscript submission instructions, and subscription orders and price information should be directed to: EMW Publishing, P. O. Box 425517, Kendall Square, Cambridge, Massachusetts 02142, USA.

ELECTROMAGNETIC WAVES
PIERM 76

Progress
In
Electromagnetics
Research M

Chief Editors: Weng Cho Chew and Sailing He

EMW Publishing
Cambridge, Massachusetts, USA

CONTENTS

Magnetic and Electric Coupling Analysis for Angular Misalignment of Spiral Resonators in WPT Systems	
Yangjun Zhang and Tatsuya Yoshikawa	1
Improved Matrix Synthesis for Inline Filters with Transmission Zeros Generated by FVC	
Yong-Liang Zhang	9
Symmetric Extension of Steering Vectors and Beamforming	
Shexiang Ma and Fei Pan	19
Performance Enhancement of Ag-Au Bimetallic Surface Plasmon Resonance Biosensor using InP	
Hasan Khaled Rouf and Tauhidul Haque	31
Simulating Underwater Electric Field Signal of Ship Using the Boundary Element Method	
Xiangjun Wang, Qinglin Xu, Jianchun Zhang, and Fangjun Liu	43
An SIW Quasi-Elliptic Filter with a Controllable Bandwidth Based on Cross Coupling and Dual-Mode Resonance Cavity	
Xiang An, Qi Zhou, and Zhi-Qing Lv	55
Millimeter-Wave Antenna Array Performance Sensitivity to Structural Distortion Using Coupled Structural-Electromagnetic-Statistical Technique	
Oluwole J. Famoriji, Akinwale Fadamiro, Rabiu S. Zakariyya, Zakir Khan, and Fujiang Lin	65
Rapidly Adaptive CFAR Detection in Antenna Arrays	
Anatolii A. Kononov	75
Applying Convolutional Neural Networks for the Source Reconstruction	
He Ming Yao, Wei E. I. Sha, and Li Jun Jiang	91
Polarization Diversity UWB Antennas with and without Notched Bands	
Bazil Taha Ahmed and Eva Morodo Lasa	101
Decoupler Design for MIMO Antennas of USB Dongle Applications Using Ground Mode Coupling Analysis	
Zeeshan Zahid, Longyue Qu, Hyung Hoon Kim, and Hyeongdong Kim	113
HIS-EBG Unit Cells for Pattern and Frequency Reconfigurable Dual Band Array Antenna	
Raimi Dewan, Mohamad K. A. Rahim, Mohamad R. Hamid, Mohamed Himdi, Huda A. Majid and Noor A. Samsuri	123
Simulation-Driven Design for a Hybrid Lumped and Distributed Dual-Band Stub Using Input and Output Space Mapping	
Jianqiang Gong, Yuhao Wang, and Chaoqun Zhang	133

A Technique to Retrieve High-Frequency Permeability of Metals from Constitutive Parameters of Composites with Metal Inclusions of Arbitrary Shape, Estimate of the Microwave Permeability of Nickel

Sergey Nickolaevich Starostenko, Konstantin Nickolaevich Rozanov, Artem Olegovich Shiryaev and Andrey Nickolaevich Lagarkov 143

Cross Polarized 2×2 UWB-MIMO Antenna System for 5G Wireless Applications

Haitham Alsaif, Muhammad Usman, Muhammad T. Chughtai, and Jamal Nasir 157

Asymmetric Ground Structured Circularly Polarized Antenna for ISM and WLAN Band Applications

Badugu Prudhvi Nadh, Boddapati Taraka Phani Madhav, Munuswamy Siva Kumar Manikonda Venkateswara Rao and Tirunagari Anilkumar 167

Microstrip Moisture Sensor Based on Microstrip Patch Antenna

Sweety Jain, Pankaj Kumar Mishra, Vandana Vikas Thakare, and Jyoti Mishra 177

Dual-Mode Diplexer with High Isolation Based on Amplitude and Phase Cancellation Technique

Natchayathorn Wattikornsirikul and Montree Kumngern 187

MZR Resonators Etched in Microstrip Patch with Enhanced Bandwidth and Reduced Size

Xiao-Feng Li, Lin Peng, Jing Ma, Bin Shi, Xiao-Ming Li, and Xing Jiang 197

Low Loss and High Transmission Electromagnetically Induced Transparency (EIT) Effect in Cylindrical Through-Hole Dielectric Cubes

Lei Zhu, Xin Zhao, Chun Hui Zhao, Liang Dong, Feng Juan Miao, Chao Hui Wang, and Jing Guo 207

Inverse Source of Circumference Geometries: SVD Investigation Based on Fourier Analysis

Giovanni Leone, Maria A. Maisto, and Rocco Pierri 217