
ELECTROMAGNETIC WAVES

PIERL 97

Progress

In

Electromagnetics

Research Letters

© 2021 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.

E-ISSN 1937-6480

ELECTROMAGNETIC WAVES
PIERL 97

Progress
In
Electromagnetics
Research Letters

Chief Editors: Weng Cho Chew and Sailing He

EMW Publishing
Cambridge, Massachusetts, USA

CONTENTS

Microstrip Crossover on FR-4 Substrate Takeru Inaba and Hitoshi Hayashi	1
Frequency Reconfigurable High Power GaN/AlGaN HEMT Based Self Oscillating Active Integrated Antenna Rakhi Kumari, Ananjan Basu, and Shibam K. Koul.....	7
A Terahertz Demultiplexer Based on Metamaterials Applied to Terahertz Communication Systems Wu Pan, Xuewen Zhang, Yong Ma, Zhen Zhang, Xi Wang, Tao Shen, Yi Li and Lihao Yang....	13
Design of a Compact Lowpass-Bandpass Diplexer with High Isolation Seda Elden and Ali Kursad Gorur.....	21
Fast Estimate of Plane Wave Attenuation of Conductive Powders for Rapid Deployment of Customized Cement Based Microwave Absorbing Solutions Narayanan Balagangadharan Sabarish and Madaswamy Jayakumar	27
An Online Extraction Method of Noise Source Impedance Based on Network Analyzer Mingxing Du, Yang Li, Qiqi Dai, and Ziwei Ouyang	35
Matrix Splitting Technique for Solving Electromagnetic Scattering Problems over a Wide Angle by Compressive Sensing Qi Qi, Xinyuan Cao, Mingsheng Chen, Zhixiang Huang, and Xianliang Wu.....	45
Compact Quarter Mode and Eighth Mode Substrate Integrated Waveguide Bandpass Filters with Frequency-Dependent Coupling Zhiwei Shi, Guohui Li, Yulu Song, and Binbin Cheng	51
Design of Low Profile Multiband Reflective Polarization Converter for Both Linear and Circular Polarized Waves Surya Durga Padmaja Bikkuri and Sudhakar Alapati	61
Comparative Analysis of Electromagnetic Performance of Magnetic Gear Xiaocun Huang, Yuxiu Guo, and Libing Jing	69
A Novel Miniaturized Bandpass Filter Basing on Stepped-Impedance Resonator Man Zhang, Minquan Li, Pingjuan Zhang, Kaiyue Duan, Bao Kun Jin, Lichang Huang and Yawen Song	77
Highly Sensitive Polymer Based Fabry-Perot Interferometer for Temperature Sensing Lashari G. Abbas, Farhan Mumtaz, Yutang Dai, Ai Zhou, Wenbin Hu, and Muhammad A. Ashraf	87
Quad-Port Miniaturized Ultra-Wideband MIMO Antenna with Metal Vias Qingzhi Yang, Kang Wang, and Yufa Sun	95

A Method for Thinning Useless Elements in the Planar Antenna Arrays	
Jafar Ramadhan Mohammed	105
Frequency Reconfigurable Antenna with Dual-Band and Dual-Mode Operation	
Ting-Yan Liu, Jun-Yan Chen, and Jeen-Sheen Row	115
Hammer-Shaped Element-Based Compact MIMO Antenna for WLAN Application	
Vinay Sharma, Madhur Deo Upadhayay, Atul Vir Singh, and Jitendra Prajapati	121
Comparison of the Uniformity and Efficiency of the Square and Circular Helmholtz Coils for Wireless Power Transmission System	
Zenglei Zhang, Changshun Yuan, Jinyang Gao, Chen Gao, and Jinshan Zhou	131
An Inline Quarter-Mode SIW Bandpass Filter Based on Frequency-Dependent Coupling Structures with Controllable Transmission Zeros	
Zhiwei Shi, Guohui Li, Yulu Song, and Binbin Cheng	141
I-Shaped Frequency and Pattern Reconfigurable Antenna for WiMAX and WLAN Applications	
Poonam Thanki and Falguni Raval	149
Optimization Technique for Lumped-Element LC Resonator Constructed on Multilayer Substrate	
Ke Cao and Xia Pan	157