
ELECTROMAGNETIC WAVES

PIERL 86

Progress

In

Electromagnetics

Research Letters

© 2019 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
PIERL 86

Progress
In
Electromagnetics
Research Letters

Chief Editors: Weng Cho Chew and Sailing He

EMW Publishing
Cambridge, Massachusetts, USA

CONTENTS

A General ADE-FDTD with Crank-Nicolson Scheme for the Simulation of Dispersive Structures	
Shi-Yu Long, Wei-Jun Chen, Qi-Wen Liang, and Min Zhao	1
A Compact Dispersive Delay Line Using Microstrip Lines and Opened Slot Lines	
Yujie Li, Jiade Yuan, Shiji Wu, and Zhimeng Xu	7
Dual-Band Microstrip Filtering Antennas with Symmetrical Slots	
Jianfang Deng and Lanping Feng	13
Electromagnetic Shielding Effectiveness of Gypsum-Magnetite Composite at X-Band Frequency	
Mohamad Ashry Jusoh, You Kok Yeow, Rodziah Nazlan, and Fahmiruddin Esa	21
Design of a Polarization Insensitive Wideband Absorber Using Graphene Based Metasurface	
Gopinath Samanta, Jeet Ghosh, Tarakeswar Shaw, and Debasis Mitra	27
Design of Triband Bandstop Filter Using an Asymmetrical Cross-Shaped Microstrip Resonator	
Shujun Yang, Zhigang Xiao, and Satilmis Budak	35
A Mach-Zehnder Interferometry Method for the Measurement of Photonic State Squeezing in Quantum Cavities	
Siamak Khademi, Ghasem Naeimi, and Ozra Heibati	43
Differential Far-End Crosstalk Mitigation with Polarity Reversal	
Xiaofeng Song and Deheng Li	53
Frequency Reconfigurable Pixel Antenna with PIN Diodes	
Raji George, C. R. S. Kumar, Shashikala Gangal, and Makarand Joshi	59
SIW Cavity MIMO Antenna Using Hybrid Boundaries and Anti-Symmetric U-Shaped Slots	
Bing-Jian Niu and Jie-Hong Tan	67
A Compact Microstrip Triplexer with a Novel Structure Using Patch and Spiral Cells for Wireless Communication Applications	
Abbas Rezaei, Salah I. Yahya, Saman Moradi, and Mohd H. Jamaluddin	73
On the Mutual Inductance between Non-Coaxial Coplanar Circular Loops	
Marcello Salis and Marco Muzi	83
Shared Aperture Microstrip Patch Antenna Array for L and S-Bands	
Jonny Dhiman, Achyut Sharma, and Sunil K. Khah	91

A Compact Dual Band-Rejected MIMO Vivaldi Antenna for UWB Wireless Applications Deng-Hui Li, Fu-Shun Zhang, Li-Xin Cao, and Yi Zhao	97
Wideband Harmonic Suppression Slot Antenna with Vertical Rounded Bow-Tie Slots Junho Yeo	107
Side-Lobe Suppression for the Third Harmonic Resonance of Planar Dipole Antennas Using High Refractive Index Metamaterials Xiao-Fei Zhang, Guang-Ming Wang, and Jian-Gang Liang	113
Electromagnetic Hotspots Identification in Integrated Circuits Dipesh Kapoor, Vivek Sangwan, and Cher Ming Tan	121
Differentially-Fed, Multi-Band Dual-Polarized Filtering Patch Antenna without Extra Circuits Jianfang Deng and Lanping Feng	129
Dual-Band Circular Polarized Slot Array Antenna in Substrate Integrated Waveguide using Two Propagation Modes for Communication Satellites Transceivers Iván Herrero-Sebastián and César Benavente-Peces	137
Practical Beamforming Technologies for Wideband Digital Array Radar Mingxin Liu, Lin Zou, and Xuegang Wang	145