Progress
In
Electromagnetics
Research
Progress

In

Electromagnetics

Research

Chief Editors: Weng Cho Chew and Sailing He

EMW Publishing
Cambridge, Massachusetts, USA
CONTENTS

Retrieval Approach for Determining Surface Susceptibilities and Surface Porosities of a Symmetric Metascreen from Reflection and Transmission Coefficients
Christopher L. Holloway, Edward F. Kuester, and Abdulaziz H. Haddab ............................... 1

Reconstruction of Two-Dimensional Objects Buried into Three-Part Space with Locally Rough Interfaces via Distorted Born Iterative Method
Yasemin Altuncu, Tulun Durukan, and Riza Erhan Akdogan ............................................. 23

A Dual-Mesh Microwave Reconstruction Method Based on Compressive Sampling Matching Pursuit Algorithm
Huiyuan Zhou and Ram M. Narayanan ................................................................. 43

Filter-Free Light Absorption Measurement of Volcanic Ashes and Ambient Particulate Matter Using Multi-Wavelength Photoacoustic Spectroscopy
Gaoxuan Wang, Pierre Kulinski, Patrice Hubert, Alexandre Deguine, Denis Petitprez
Suzanne Crumeyrolle, Eric Fertein, Karine Deboudt, Pascal Flament, Markus W. Sigrist
Hongming Yi and Weidong Chen ................................................................. 59

Impact of Permittivity Patterns on Fully Polarimetric Brightness Temperature Signatures at L-Band
Moritz Link, Carsten Montzka, Thomas Jagdhuber, Sten S. Søbjærg, Stephan Dill
Markus Peichl, Thomas Meyer, and François Jonard .................................................. 75

Phaseless Microwave Imaging of Dielectric Cylinders: An Artificial Neural Networks-Based Approach
Jesús E. Fajardo, Julián Galván Fernando Vericat, C. Manuel Carlevaro, and Ramiro M. Irastorza 95

Two-Photon Luminescence and Second Harmonic Generation of Single Layer Molybdenum Disulphide Nanoprobe for Nonbleaching and Nonblinking Optical Bioimaging
Qiuqiang Zhan, Xin Zhang, Baoju Wang, Nana Li, and Sailing He ................................. 107

Modulation on Silicon for Datacom: Past, Present, and Future
Binhao Wang, Qiangsheng Huang, Kaixuan Chen, Jianhao Zhang, Geza Kurczveil, Di Liang,
Samuel Palermo, Michael R. T. Tan, Raymond G. Beausoleil, and Sailing He .................... 119

Green’s Dyadic, Spectral Function, Local Density of States, and Fluctuation Dissipation Theorem
Weng C. Chew, Wei E. I. Sha, and Qi I. Dai ......................................................... 147

High-Sensitivity and Temperature-Insensitive Refractometer Based on TNHF Structure for Low-Range Refractive Index Measurement
Fang Wang, Kaibo Pang, Tao Ma, Xu Wang, and Yufang Liu ........................................ 167