Vol. 31 No. 7(1) 2019

**Sensor Applications** 

Arduino-based System (S & M 1929)

## Sensors and Materials

## **CONTENTS**

Special Issue on Materials, Devices, Circuits, and Analytical Methods for Various Sensors (Selected Papers from ICSEVEN 2018) (2) Guest editors: Chien-Jung Huang (National University of Kaohsiung), Chi-Chih Liao (II-V Epiworks, Inc.), and Ja-Hao Chen (Feng Chia University)
Preface
Research Papers of Special Issue
Sensor Applications  Real-time Thermographic Methodology with High-accuracy Temperature Monitoring Applied to Stacked Package of High-power Semiconductor Laser Diode (S & M 1923)  Shun-Lung Yen, Shiang-Feng Tang, Chung-Wei Ou, Chin-Jung Chao, Hsin-Yen Cheng, Ing-Jiunn Su, and Tzu-Chiang Chen
Related Technologies  Enhanced Sensitive Surface Acoustic Wave Device Designed for Nitric Oxide Gas Detection (S & M 1924)  Mei-Hui Chung, Rey-Chue Hwang, Jing-Jie Chiu, Min-Wen Yang, Tien-Tsan Hung, and Chi-Yen Shen
Related Technologies Improved One-cycle Control for Realizing AC/DC Power Factor Correction Boost Converte (S & M 1925) Ching-Lung Chu, Ming-Tsung Tsai, and Jheng-Fong Shen2213
Related Technologies Synthesis of Ladder-type Radio Frequency Surface Acoustic Wave Filter Based on Lumped Circuit Mode by Using Neural Network (S & M 1926)  Mei-Hui Chung, Huang-Chu Huang, Rey-Chue Hwang, Pei-Fen Huang, and Shuming T. Wang
Related Technologies Impact of Active Surface Area on Performance and Reliability of Tri-gate FinFET (S & M 1927) Yi-Lin Yang, Chiao-Feng Chuang, Chih-Jui Lai, Wenqi Zhang, Yun-Hsuan Hsu, Chia-Jung Tsai, Wei-De Lin, Meng-Yen Lin, and Wen-Kuan Yeh
Sensor Applications  Realization of Person Tracking and Gesture Recognition with a Quadrotor System (S & M 1928)  Neng-Sheng Pai, Yue-Han Zhou, Pi-Yun Chen, Wei-Lun Chen, and Shih-An Chen2245

A Low-cost, Portable, and Wireless Environmental Pollution Exposure Detection Device with a Simple

## SPECIAL ISSUE ON MATERIALS, DEVICES, CIRCUITS, AND ANALYTICAL METHODS FOR VARIOUS SENSORS (SELECTED PAPERS FROM ICSEVEN 2018) (2)

## **PREFACE**



The era of ubiquitous sensing has begun recently owing to the rapid development of Internet of Things (IoT). Sensors are essential components of automotive electronic systems used in modern applications including smart industry, smart cities, smart cars, robots, and smart homes.



This special issue focuses on "Materials, Devices, Circuits, and Analytical Methods for Various Sensors". The topics include all aspects of research and development related to sensors and materials, sensor circuits, readout circuits, analytical software, and sensor applications. We selected very interesting papers on sensors with special materials, circuits, and/or softwares to achieve advanced sensing functions for some niche sensor markets.

Finally, we would like to thank all the authors who contributed to this special issue and the reviewers for their helpful support. We also thank Ms. M. Sakano of MYU K.K. for her kind support in the publication of this issue.



Chien-Jung Huang Department of Applied Physics National University of Kaohsiung Taiwan, R.O.C.

> Chi-Chih Liao II-V Epiworks, Inc. USA

Ja-Hao Chen Department of Communications Engineering Feng Chia University Taiwan, R.O.C.