Table of Contents

Design of a High-speed CMOS Image Sensor with an Intelligent Digital Correlated Double Sampling and a Symmetrical 3-Input Comparator <i>Minhyun Jin, Daehyuck Kim, and Mlinkyu Song</i>	1
Pet Food Industry: E-nose and E-tongue Technology for Quality Control Federica Cheli, Martina Novacco, Valentino Bontempo, and Vittorio Dell'Orto	5
Design and Fabrication of Sensor Chip with Heater for Semiconductor Flip-Chip Package Application <i>Boo Taek Lim, Young-Su Kim, Nam Soo Park, and Boung Ju Lee</i>	8
Using the Measurement-based Approach to Emulate the Behavior of a Sensor for Internal Hydraulic Pressure Drop Measurements of Sprayers in the Agricultural Industry Rafael Magossi, Elmer Penaloza, Shankar Battachharya, Vilma Oliveira, and Paulo Cruvinel	10
Low-cost Gas Concentration Sensor System Axel Kramer, Teresa Jorge, Mariya Porus, Thomas Alfred Paul, and Dieter Zeisel	16
Optical Detection of Lesions in the Depth of a Solid Breast Phantom Anett Bailleu, Axel Hagen, Rene Freyer, and Dirk Grosenick	18
Effects of the WSN Deployment Environment on MaxMin and LQI-DCP Multihop Clustering Protocols <i>Cherif Diallo</i>	24
Multi Objective Nodes Placement Approach in WSN based on Nature Inspired Optimisation Algorithms <i>Faten Hajjej, Ridha Ejbali, and Mourad Zaied</i>	30
Hydrogen Peroxide Vapours Sensors Made From ZnO <la> and SnO2<co> Films Vladimir Aroutiounian, Valeri Arakelyan, Mikael Aleksanyan, Artak Sayunts, Gohar Shahnazaryan, Petr Kacer, Pavel Picha, Jiri Kovarik, Jakub Pekarek, and Berndt Joost</co></la>	36
Comparaison between MOX Sensors for Low VOCs Concentrations with Interfering Gases Frank James, Tomas Fiorido, Marc Bendahan, and Khalifa Aguir	39
Studies of Resistive-type Hydrogen-Sensitive Sensors Using Pd-Based Thin Films Hao Lo, Chieh Lo, Jian-Hong Wu, and Wen-Shiung Lour	41
Study of Propylene Glycol and Dimethylformamide Vapors Sensors Based on MWCNTs/SnO2 Nanocomposites Zaven Adamyan, Artak Sayunts, Vladimir Aroutiounian, Emma Khachaturyan, Arsen Adamyan, Martin Vrnata, Premysl Fitl, and Jan Vlcek	44
Ab Initio Investigation of CO Gas Sensing Mechanism on SnO2 Surfaces	50

Hayk Zakaryan and Vladimir Aroutiounian

Aluminum-doped Zinc Oxide Nanocrystals for NO2 Detection at Low Temperature Sandrine Bernardini, Bruno Lawson, Olivier Margeat, Khalifa Aguir, Christine Videlot-Ackermann, and Jorg Ackermann	56
Area and Speed Efficient Layout Design of Shift Registers using Nanometer Technology Rajesh Mehra, Priya Kaushal, and Ayushi Gagneja	58