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Special Issue on Novel Materials and Sensing Technologies on Electronic and Mechanical Devices Part 2(1)

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In recent years, applications of novel materials and sensing technologies in electronic and mechanical devices have become rapidly developing fields. Manufacturing is the economic lifeline of a country and has been regarded as a labor-intensive industry. Therefore, to cut production costs, devices for Internet of Things (IoT) are widely developed. IoT is composed of the most integrated end devices and facilities, such as intelligent sensors for internal control, industrial systems, mobile terminal systems, floor control systems, and home intelligent facilities. Smart devices and external control information are utilized with the hope to attract companies that manufacture high-value-added aerospace, automotive, IT mold, textile, optoelectronic, watch, medical, defense-related, automation, energy, and semiconductor-related parts and components to drive a country’s economy. Therefore, the key to keeping up with the competitive advantage of domestic manufacturing in the future is still to rely on the development of advanced manufacturing and precision machinery-related technologies. The scope of this Special Issue “Novel Materials and Sensing Technologies on Electronic and Mechanical Devices” covers fundamental materials of electronic, mechanical, and electrical engineering, including their synthesis engineering, integration with many elements, designs of electronic or optical devices, evaluation of various performance characteristics, and exploration of their broad applications to industry, environmental control, materials analyses, and so forth. Part 2 of this special issue selects 18 excellent papers about five categories of sensors and materials fields:


2) Bio/Chemical Sensors: “Prediction of Atrial Fibrillation Cases: Convolutional Neural Networks Using the Output Texts of Electrocardiography” presented by Heo et al.

3) Related Materials: “Effects of Freeze–Thaw Cycles on Soil Properties and Carbon Distribution in Saline-alkaline Soil of Wetland” presented by Liu et al., “Use of Pyrolysis Oil from Scrap Tires with Control Module Adjustment of Diesel Engine” presented by Leu et al.,
and “Effect of Different Fuels (Methane, Methanol, and Hydrogen) on Rotary Engine Operation” presented by Leu et al.


(5) Sensor Applications: “Smart Driver Drowsiness Detection Model Based on Analytic Hierarchy Process” presented by Chang et al. and “Application of Internet of Things in Smart Farm Watering System” presented by Hsu et al.

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