

# SENSORS LETTERS

*(SCIE indexed American Scientific Publishers Journal)*

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## *A Special Issue on* **Embedded Sensors**

## **CALL FOR PAPERS**

Generally, embedded sensors are robust, self-powered or passively powered sensors residing inside or around the object/area of interest for real-time, localized information gathering. Physical, chemical, and/or biological data gathered from these sensors are transmitted to a centralized system, via wires or wirelessly, for further processing and interpretation. For multi-parameter or multi-location monitoring, these sensors are usually networked and automated for increased efficiency and throughput. Embedded sensors have many applications, ranging from continuous structural health monitoring to human health monitoring, pollution detection to home security. Since different types of sensors can be incorporated into various forms of embedded systems, embedded sensors are not limited to a single class of sensor or a specific measurement technique. Passive wireless sensors such as RFID sensors and magnetoelastic sensors, battery-powered wireless networked sensors or even an embedded strain gauge are all examples of embedded sensors. Embedded sensors can provide unique solutions for many challenging sensing applications. For example, a wireless embedded sensor can gather multiple measurements from the inside of an object continuously and in real time, a feat that is impossible for many sensors.

Recent advancement in wireless networked sensors and communication algorithms have greatly enhanced the development of embedded sensors. The popularity of powerful personal portable devices has also accelerated the incorporation of embedded sensors into various consumer products for improving product functionality. Similarly, the emergence of wearable sensors has allowed gathering of human health in real time, providing valuable information for disease treatment or tracking personal wellness. In addition, continuous improvements on electronics, sensor materials, and manufacturing techniques have improved the efficiencies of embedded sensors for many applications, and further pushing them towards new applications. This special issue is intended to highlight these current advancements on the embedded sensors and the associated technologies, and to summarize their state of the art. We welcome submissions of review articles, original research articles, and communications/letters.

We invite submission of **(i) Review Articles, (ii) Original Research Articles, (iii) Communications/Letters** to editors covering the following topics (but not limited to):

- RFID sensors, piezoelectric sensors and others as embedded sensors
- Embedded networked and/or wearable sensors
- Embedded sensor materials and fabrication techniques
- Novel detection techniques for embedded sensors
- Data transmission and processing techniques and algorithms
- Power management and energy scavenging schemes for embedded sensors
- Embedded sensors for industrial and environmental monitoring
- Application to consumer products and biomedical sensing
- Application to nondestructive evaluations of structural health

## ABOUT SENSORS LETTER

Sensor Letters is a multidisciplinary peer-reviewed journal covering the fundamental and applied research aspects on sensor science and technology in all fields of science, engineering, and medicine. Topics include chemical, biological and physical sensors, cell and tissue-based sensors, sensor networks and systems, sensing materials, fabrication techniques, etc.

## Abstracting and Indexing

- Science Citation Index Expanded (SCIE, SciSearch)
- ISI-Scientific Database
- Chemistry Citation Index
- Materials Science Citation Index
- Current Contents/Physical
- Chemical and Earth Sciences
- Current Contents/Engineering Computing and Technology
- Journal Citation Reports/Science Edition
- Chemical Abstracts
- INSPEC Information Services
- Scopus
- Cambridge Scientific Abstracts/METADEX-Engineered Materials Abstracts.

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## Manuscript Submission

All manuscripts must be **100% original and unpublished** which should be prepared according to Journal's guidelines, available at <http://www.aspbs.com/sensorlett.html>. Submit your manuscripts as a single file either in **MS word or PDF format by EMAIL** to one of the guest editors. All papers submitted to this special issue will be subject to a strict peer review process to ensure high quality articles. Please make sure in the cover letter that the submitted paper has not been published previously and is not currently submitted for review to any other journal/conference proceedings and will not be submitted elsewhere before a decision is made by this journal.

## KEY DATES

*Manuscript Due: February 15, 2015*

*Review Completed: March 15, 2015*

*Publication Date: May/June, 2015*