



# SENSORS AND ACTUATORS B: CHEMICAL

An international journal devoted to research and development of chemical transducers

## AUTHOR INFORMATION PACK

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### DESCRIPTION

*Sensors & Actuators, B: Chemical* is an interdisciplinary journal dedicated to covering research and development in the field of **chemical sensors**, **actuators** and **microsystems**.

The scope of the journal encompasses, but is not restricted to, the following areas:

- Sensing principles and mechanisms
- New materials development (transducers and sensitive/recognition components)
- Fabrication technology
- Actuators
- Optical devices
- Electrochemical devices
- Mass-sensitive devices
- Gas sensors
- Biosensors
- Analytical microsystems
- Environmental, process control and biomedical applications
- Signal processing
- Sensor and sensor-array chemometrics

*μTAS - Micro Total Analysis Systems: Microsystems for the generation, handling and analysis of (bio)chemical information*

The special section of *Sensors & Actuators, B: Chemical* on **micro TAS** is dedicated to contributions concerning miniaturised systems for (bio)chemical synthesis and analysis, also comprising work on Bio-MEMS, Lab-on-a-chip, biochips and microfluidics.

Topics covered by the micro TAS section include:

- Physics and chemistry of microfluidics
- Microfabrication technology for micro TAS
- Analytical chemical aspects
- Detectors, sensors, arrays for micro TAS
- Micro TAS applications
- DNA analysis
- Microinstrumentation
- Microsystems for combinatorial chemistry.

## AUDIENCE

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Academic and Industrial Researchers in Analytical Chemistry and Instrument Development

## IMPACT FACTOR

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Lab-on-a-Chip devices and their applications: Analytical microsystems, Miniaturized analytical devices based on microfluidics principle, Fabrication technology of microfluidic devices and systems; Electrochemical (bio)sensors and their biomedical applications: Electrochemical sensor for liquid samples, Affinity Biosensors, Biocatalytic Biosensors; Actuators.

**Xiaoqiang Chen**, Nanjing Tech University, Nanjing, China

**Róbert E. Gyurcsányi**, Budapest University of Technology and Economics, Budapest, Hungary

Electrochemical sensors (ion-selective electrodes, amperometric (bio)sensors, nanopore-based sensors, and ultramicroelectrodes), Optical sensors (optodes and surface plasmon resonance biosensors), Affinity biosensors, Mass-sensitive transducers, Development and application of selective synthetic receptors (nucleic acid analogs, aptamers, molecularly imprinted polymers, ionophores, etc.), Chemical imaging and microarrays.

**Akihito Hibara**, Tohoku University, Sendai, Japan

**Jong-Heun Lee**, Korea University, Seoul, The Republic of Korea

Metal oxide gas sensors, Metal oxide nanostructures for gas sensor applications, Metal oxide humidity sensors, Electrochemical gas sensors using solid oxide electrolytes, Sensing principles and mechanisms, Carbon-based gas sensors.

**Weiyang Lin**, Institute of Fluorescent Probes for Biological Imaging, University of Jinan, Shandong, China

**Ralf Moos**, Universität Bayreuth, Bayreuth, Germany

Exhaust gas sensors, Solid state gas sensor materials, Solid state gas sensor principles, Solid state gas sensor technology and Solid state gas sensor modeling; Solid state electrochemical sensors; Conductometric or impedancemetric sensors of framework-based materials (zeolites, MOF); Transducer technology, LTCC, HTCC, hot plates; Chemical sensors for harsh environments.

**Ramaier Narayanaswamy**

Optical Chemical sensors and Biosensors: development, applications and analytical instrumentation. New materials, devices, nano materials for optical chemical sensing, for environmental, biochemical and industrial applications; Colorimetric and Fluorescence based sensing systems. Nanoparticles, molecularly imprinted polymers, quantum dots, carbon dots and other novel materials in sensors;

Surface Plasmon Resonance sensors and sensing systems: devices and instrumentation with application; Mass sensitive devices, instrumentation and applications, e.g. SAW, BAW, QCM, QMB, etc.

**Dmitri Papkovsky**, University College Cork, Cork, Ireland

Fluorescence spectroscopy, Time-resolved fluorescence; Oxygen sensors; Sensor material chemistry.

**Gustavo Rivas**, Universidad Nacional de Córdoba, Córdoba, Argentina

Electrochemical devices; Electrochemical (bio)sensors; Enzymatic biosensors; Affinity biosensors; Biocatalytic sensors; DNA biosensors; Hybridization and DNA-damage biosensors; Immunosensors; Aptasensors, Glycobiosensors. (Bio)Sensing principles. Nanobiotechnology and Nanobiomedicine: (bio)sensors based on nanomaterials (carbon nanotubes, graphene and related materials, nanoparticles). Neurotransmitters sensors. Biomarkers Sensors. Modified electrodes. Surface plasmon resonance biosensors. Biomedical and Environmental applications

**Yasuhiro Shimizu**, Nagasaki University, Nagasaki, Japan

Semiconductor gas sensors including metal oxide-based and polymer-based gas sensors, humidity sensors based on any principles, Sensing principles and mechanisms of semiconductor gas sensors, Nanstructured materials and carbon-based materials for gas sensor applications.

**Hiroaki Suzuki**, University of Tsukuba, Tsukuba, Ibaraki, Japan

**Manabu Tokeshi**, Hokkaido University, Sapporo, Japan

Microfluidics, Biosensors.

**Udo Weimar**, Eberhard-Karls-Universität Tübingen, Tübingen, Germany

Chemical sensor systems, data processing of chemical sensor systems, related pattern recognition and multi-component analysis, electronic noses, application of chemical sensor systems. Metal-oxide chemical gas sensors, polymer based chemical gas sensors, innovative gas sensor solutions, sensing principles and mechanisms.

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### **Aims and Scope**

*Sensors & Actuators, B: Chemical* is an interdisciplinary journal dedicated to covering research and development in the field of chemical sensors, actuators, micro- and nanosystems.

The scope of the journal encompasses, but is not restricted to, the following areas:

- Sensing principles and mechanisms
- New materials development (transducers and sensitive/recognition components)
- Fabrication technology including nanotechnology
- Actuators
- Optical devices
- Electrochemical devices
- Mass-sensitive devices
- Gas sensors
- Biosensors
- Bio-MEMS
- Analytical microsystems
- Environmental
- Process control
- Biomedical applications
- Signal processing
- Sensor and sensor-array chemometrics

$\mu$ TAS - Micro Total Analysis Systems *Microsystems for the generation, handling and analysis of (bio)chemical information*. The special section of *Sensors & Actuators, B: Chemical* on  $\mu$ TAS is dedicated to contributions concerning miniaturised systems for (bio)chemical synthesis and analysis, also comprising work on Bio-MEMS, Lab-on-a-chip, biochips and *microfluidics*.

Topics covered by the  $\mu$ TAS section include:

- Lab-on-a-chip
- Physics and chemistry of microfluidics
- Microfabrication technology for  $\mu$ TAS
- Analytical chemical aspects
- Detectors, sensors, arrays for  $\mu$ TAS
- $\mu$ TAS applications
- DNA analysis
- Microinstrumentation
- Microsystems for combinatorial chemistry

### **Types of paper**

*Sensors and Actuators B: Chemical*, welcomes full length research papers and review articles, and short communications. Full length papers should in general not exceed 5000 words or about 12 printed pages including tables and diagrams. Short communications should not exceed 2000 words or 4 printed pages. For all contributions the acceptance criteria are quality, originality, and scientific and technological relevance to the field. An adequate referencing to the state-of-the-art is essential.

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## **PREPARATION**

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[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59.

Reference to a book:

[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

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[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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