

SENSORS AND ACTUATORS A: PHYSICAL

International Journal Devoted to Research and Development of Physical and
Chemical Transducers

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Aims and Scope

Sensors and Actuators A brings together multidisciplinary interests in one journal entirely devoted to disseminating information on all aspects of research and development of solid-state devices for transducing physical signals.

Sensors and Actuators A regularly publishes original papers, letters to the Editors and from time to time invited review articles within the following device areas:

- **Fundamentals and Physics** such as: classification of effects, physical effects, measurement theory, modelling of sensors, measurement standards, measurement errors, units and constants, time and frequency measurement.

- **Materials and their Processing** such as: piezoelectric materials, polymers, metal oxides, III-V and II-VI semiconductors, thick and thin films, optical glass fibres, amorphous, polycrystalline and monocrystalline silicon.

- **Optoelectronic sensors** such as: photovoltaic diodes, photoconductors, photodiodes, phototransistors, position-sensitive photodetectors, optoisolators, photodiode arrays, charge-coupled devices, light-emitting diodes, injection lasers and liquid-crystal displays.

- **Mechanical sensors** such as: metallic, thin-film and semiconductor strain gauges, diffused silicon pressure sensors, silicon accelerometers, solid-state displacement transducers, piezo junction devices, piezoelectric field-effect transducers (PiFETs), tunnel diode strain sensors, surface acoustic wave devices, silicon micromechanical switches, solid-state flow meters and electronic flow controllers.

- **Thermal sensors** such as: platinum resistors, thermistors, diode temperature sensors, silicon transistor thermometers, integrated temperature transducers, PTAT circuits, thermocouples, thermopiles, pyroelectric thermometers, quartz thermometers, power transistors and thick-film thermal print heads.

- **Magnetic sensors** such as: magnetoresistors, Corbino disks, magnetodiodes, Hall-effect devices, integrated Hall devices, silicon depletion-layer magnetometers, magneto-injection transistors, magnistors, lateral magnetotransistors, carrier-domain magnetometers, MOS magnetic-field sensors, solid-state read and write heads.

- **Micromechanics** such as: research papers on actuators, structures, integrated sensors-actuators, microsystems, and other devices or subdevices ranging in size from millimetres to submicrons; micromechatronics; microelectromechanical systems; microrobots; silicon and non-silicon fabrication techniques; basic studies of physical phenomena of interest to micromechanics; mechanooptics and mechano-chemical systems; analysis of microsystems; exploration of new topics and materials related to micromechanics; microsystem-related problems like power supplies and signal transmission, microsystem-related simulation tools; other topics of interest to micromechanics.

- **Interface electronics:** electronic circuits which are designed to interface directly with the above transducers and which are used for improving or complementing the characteristics of these devices, such as linearization, A/D conversion, temperature compensation, light-intensity compensation, current/frequency conversion and microcomputer interfacing.

- **Sensor Systems and Applications** such as: sensor buses, multiplesensor systems, sensor networks, voting systems, telemetering, sensor arrays, and automotive, environmental, monitoring and control, consumer, medical, alarm and security, robotic, nautical, aeronautical and space measurement systems.

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