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ABSTRACTS

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MEMS and Micromachining Technology: A Review

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Micro-electro-mechanical-systems (MEMS) have received a great deal of attention in recent years. This is due not only to the excitement naturally associated with a nascent technology, but also because of the great promise of increased miniaturization and performance of MEMS devices over conventional devices. Amongst MEMS based devices, the MEMS pressure sensors currently dominate the market far greater than atmospheric pressure sensors. In this paper, MEMS is presented in brief. The different technologies of bulk, surface and high aspect ratio micromachining are also presented.
Pressure Sensors based on MEMS Technology: A Review

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This paper is a review of previously reported pressure sensors, starting with traditional "Macro-machined" and then dealing with "Micro-machined" or MEMS based pressure sensors. Most Micromachined pressure sensors are based on diaphragms. However, several transduction techniques have been used for micromachined pressure sensors, including piezo-resistance, capacitance, optics, and resonance. Since piezo-resistance and capacitance sensors are the most common in the literature, the emphasis will be given on them. Acoustic sensors, which are often similar to pressure sensors, are also presented.