

# **SENSORS FOR MONITORING COMPONENTS, SYSTEMS AND PROCESSES**

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**Abstract:** The application of sensors encompasses many sectors of industry. In this paper, we outline different sensors – Raman distributed temperature sensor, sensor based on nano ferrofluids and MEMS based ultrasonic sensors. The development and application of these sensors for monitoring performance of systems and processes are discussed. Further, we also discuss the application of acoustic emission and infrared thermal imaging for process monitoring.

**Index terms:** Fiber optic sensor, nano ferrofluids, MEMS, ultrasonic sensor. Acoustic emission, thermal imaging.