

# Abstracts

## Monolithic GaAs surface acoustic wave chemical microsensor array

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A four-channel surface acoustic wave (SAW) chemical sensor array with associated RF electronics is monolithically integrated onto one GaAs IC. The sensor operates at 690 MHz from an on-chip SAW based oscillator and provides simple DC voltage outputs by using integrated phase detectors. This sensor array represents a significant advance in microsensor technology offering miniaturization, increased chemical selectivity, simplified system assembly, improved sensitivity, and inherent temperature compensation.

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