



BIO SENSING

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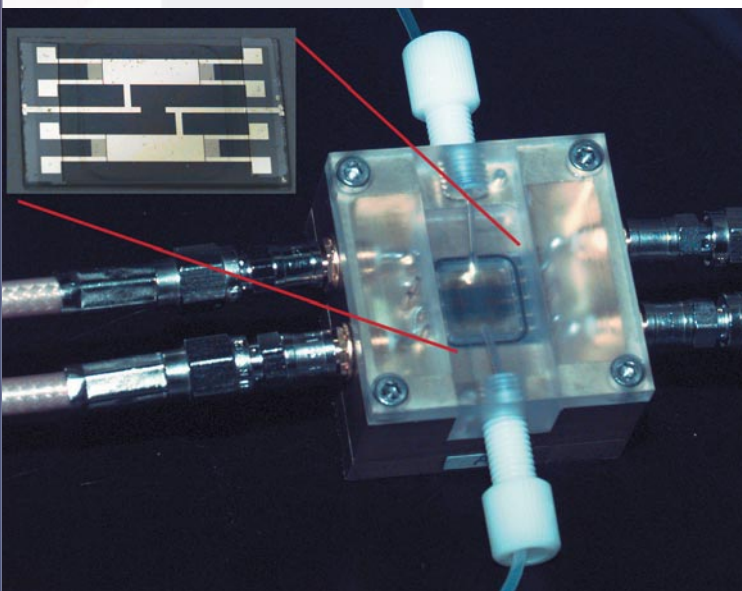
Sandia offers tremendous sensor expertise, including the capability to integrate biology with novel microtransducers, microelectronics and MEMS to yield innovative biological microsystems. As an example, by designing biomimetic transducers that mimic the molecular machinery of the cell, we can make highly “flexible” biological and chemical microsensors. Our research is working to combine chemistry, materials science, cell biology, genomics, advanced engineering and systems analysis for rapid identification of toxins, pathogens, viruses, and DNA. Current biosensor technologies include electrochemical, optical, and acoustic

transducer systems as a basis for the design of immuno-based and DNA sensors. In addition to developing sensor systems, we design new tools and instrumentation to detect and manipulate single molecules and to address cell membrane signaling.

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A miniaturized biosensor consisting of a shear horizontal surface acoustic wave sensor coated with a molecular recognition layer, applicable to BW agent detection and medical diagnostics.



LOCKHEED MARTIN



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