Docket #: S06-203

Trench Isolated CMUT Arrays

Stanford researchers have developed a novel method of fabricating one-dimensional and two-dimensional capacitive micromachined ultrasonic transducer (CMUT) arrays. The method builds a CMUT array on a silicon-on-insulator (SOI) wafer using either the wafer-bonding method or the sacrificial release method. The electrical interconnect to CMUT array elements is provided through the highly conductive silicon substrate. A deep through-wafer trench provides isolation, and a frame structure provides mechanical support for the rigidity of the CMUT array.

Applications

- Fabrication of capacitative micromachined ultrasonic transducers (CMUT)
- Acoustic applications
- Ultrasonic imaging
- Microfluidics

Advantages

- Flexible arrays

Patents

- Published Application: 20080048211
- Issued: 7,741,686 (USA)

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