

YOUR MEMS PARTNER



Tanner
LABS



Research and Development
Prototype and Low Volume Fabrication
Custom Services

TANNER RESEARCH MEMS R&D AND FABRICATION FACILITY

If you are new to MEMS or are an experienced MEMS professional, we can help you. Our facility enables the development, prototyping and low-volume manufacturing of MEMS. We are capable of traditional silicon-based processes as well as non-traditional, low temperature (<250°C) materials and processes. The facility provides approximately 1,100 sq. ft. of dedicated cleanroom floorspace (Class 100 photolithography area and Class 1000 processing area).

EXPERTISE

RESEARCH & DEVELOPMENT

- Highly experienced Ph.D Researchers
- Design and development of MEMS devices and processes
- MEMS silicon processing, nanotechnology and other materials
- ASIC design, development, post processing and integration with MEMS

PROCESSING OVERVIEW

PHOTOLITHOGRAPHY

- Various resists and epoxy coatings available for litho and packaging
- Mask aligner (with backside alignment up to 8" wafers, 0.5 micron resolution)

SILICON ETCHING

- STS DRIE (4" & 6" capability)
- Technics RIE (4", 6" & 8" wafers)
- Standard wet etching processes (TMAH, KOH)

MATERIAL DEPOSITION

- RF magnetron sputtering (4", 6" & 8" wafers; automated Cr/Au/Ag metals; SiN and other dielectrics)
- Additional metals and dielectrics available
- Parylene
- Epoxies, SUS, Elastomers

BONDING

- Anodic and epoxy bonding
- Optional processing steps (e.g., SEM analysis) available

MEMS LAYOUT SOFTWARE AND FINITE ELEMENT SIMULATION

- L-Edit™ and AutoCAD® for mask layouts
- SolidWorks® for 3D MEMS design
- COSMOS™ for thermal, structural and dynamic simulation of MEMS devices in linear and non-linear regimes

ANALYTICAL CAPABILITIES

TEST & MEASUREMENT EQUIPMENT

- Microscopes
- Surface profilers
- Probe stations, etc.
- Optical test equipment

ELECTRONICS ASSEMBLY AND TEST

- 500 sq. ft. electronics test and assembly laboratory



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