NanoFab.SDSU

Industrial Consortium and Research Center
Engineering and Interdisciplinary Sciences Building (EIS) – 110, San Diego, CA 9218

2500 ft² ISO 9001-Certified Class 1000 Cleanroom
4” & 6” wafer processing with 0.2μm lithography

Equipment & Facilities

- ABM, High Resolution Mask Alignment and Exposure System (0.2μm resolution)
- PECVD & Pyrolysis Split-Tube Furnace (4 channel gas mixing)
- Nordiko Metal Deposition System. Co-deposition of up to 4 metals.
- Technics Series 85 DRIE and Plasma Etcher
- OAI UV Light Source
- Brewer Spin-coater
- ETS-150 Thermal Evaporation + Sputtering
- High-temperature ovens
- Signatone Probe Station and 4-Point Probe
- Filmetrics F40-PAR Profilometer
- SEM (FEI Quanta 450 FEG)
- Hirox 3D Microscope
- Solartron & Gamry CV & EIS Measurement
- Newport Solar Simulator with Oriel I-V Station

Capabilities

- CVD/PECVD Deposition of Dielectric Materials
- DRIE
- Wet and Dry Oxide Growth
- Thin-film Metal Deposition (Sputtering and Evaporation)
- Acid Etching
- Pyrolysis
- SEM and 3D Microscopy

Management

Director of Center
Professor Sam Kassegne
kassegne@sdsu.edu
Major Achievements

- Training next generation of workforce and researchers (alumni work in Apple, Intel, Qualcomm, ASML and several start-ups).
- Several patents & disclosures in MEMS IMU, solar cells, neural probes, & graphene processes.
- Incubated start-ups & licensed several technologies
- Unique strength in integrating carbon, polymer, and silicon-based microfabrication.
- First to introduce single and double-sided pattern transfer technology for carbon microelectrodes on polymer substrates
- Hosted CMEMS 2018 Conference.
- Funded by NSF, DoE, DoD and Industry

Industries Covered

- Semi-conductor
- Energy storage and generation
- Photovoltaics
- Microfluidics
- Molecular Diagnostics
- Optics
- Biochemical Sensors

Membership Advantages

- Direct access to highly-trained students
- Access to pre-publication research
- Interaction with leading researchers
- State-of-the-art equipment and processes
- Participate in annual “Industry Day”
- Reduced rate for members
- Simple paperwork
- No institutional barriers
- Your IP is protected
- Opportunity to license IP from consortium labs.

Services Offered to Industry

- **TumorGen MDx** (microfluidics chips)
- **TissueNetix** (microfluidics chips)
- **Graphetron**

Research Labs

- **University of Washington** (CSNE) – (cortical and spinal neural probes)
- **University of Texas at Dallas**
- **Physikalisch-Technische Bundesanstalt** (PTB), Berlin, Germany
- **University of Ferrara** – (ECoG Neural Probes, 12, 32, and 64-channels)
- **University of Indonesia**
- **Yonezawa University** (Japan)
- **SPAWAR**, SSC-Pacific, US Navy

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Contact

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