

The Washington Technology Center is home to the Pacific Northwest's largest public Microfabrication Laboratory. This 15,000 square foot lab provide companies and university researchers access to facilities and specialized equipment for MEMS research and production/process development. The lab is a critical research and development facility for primary-stage product development and product manufacturing. Some of the technology developed in our lab includes fiberoptic medical imaging and microminiature retinal scanning displays. The lab serves more than 75 clients each month, generating over \$850,000 in revenue annually, and represents millions of dollars in facilities and equipment.



Capabilities

Wafer materials & sizes: Our cleanroom processes primarily silicon substrates, although we also have experience with silicon on sapphire, quartz, compound semiconductors and other less common materials. The wafer size for which we have the most equipment is 4", but we also process wafers from 3" to 8". Wafer thickness vary from 200 micron to 1 mm substrates. Some clients utilize other materials such as piezoelectrics, polymers, and photonic materials.

Cleanroom class: Lab cleanroom is certified Class 10,000.

Processes: Oxidation, doping, annealing, and curing. A variety of metals can be sputtered or evaporated. LPCVD nitride and oxide are available. A new PECVD system provides lab users with oxynitride and other custom thin films.

Photolithography: HMDS oven, spin coaters contact aligners, bake ovens, and a develop station. Other wet benches provide cleaning (e.g., Nanostrip, SC1, SC2, BOE, piranha) and etching (e.g., HF, KOH, HNA, EDP, TFA gold etch) both isotropic and anisotropic.

Plasma etching of nitride and silicon is available, including the Bosch Process. A full set of characterization and testing equipment can be used, including KLA-Tencor P15, Nanospec Interferometer, ellipsometer, four point probe, Alphastep, Biorad and electrical testers.

SEM and EDX equipment and services are available at the WTC within the Microfab Lab.



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