# Fees for Keck Microfabrication Facility

## Option #1 - Annual membership

- The annual fee is $4800/year, billed monthly for $400 per month. The annual fee covers up to two users from each PI and includes unlimited usage of equipment in the facility, subject to equipment training/authorization and fair use. The annual fee for additional users (3$^{rd}$, forth, etc.) per PI is $900/year per user, billed monthly for $75/month per user.
- Equipment training fee: $50/hour. Training Fee is waived for **up to three training sessions** for each equipment.
- Equipment training surcharge fee: $100/hour. This surcharge only applies to users who need excessive training sessions

## Option #2 - Hourly user

- Initial cleanroom/safety training, account setup, initial set of cleanroom garments, assignment of private locker: $100
- Equipment training fee: $50/hour.
- Equipment training surcharge fee: $100/hour. This surcharge only applies to users who need excessive training sessions
- Daily Access Fee: $30 for each usage day to cover costs of cleanroom supplies.
- Facility entrance fee: $5 for each additional entry after the first entry on the same usage day to cover costs of disposable cleanroom garments.
- Equipment fee: See **Equipment Hourly Rates Schedule**.
- Equipment fee credit: $25 is credited to users for each usage day if any equipment in the **Equipment Hourly Rates Schedule** is used.

***Charges for hourly users are calculated daily using this formula:***

DailyCharge = $30 + (#OfEntries – 1) * $5 + Sum(HourlyRate*hours) - $25 (If listed equipment is used)

## Equipment Hourly Rates Schedule

| Equipment | Hourly Rate |
|---|---|
| ABM Mask Aligner | $30 |
| Scanning Probe Microscope (AFM) | $30 |
| Edward 306 Thermal Evaporator | $25 |
| SU5000 FESEM/EBL System | $35 |
| S4700 FESEM | $35 |
| Edax Energy Dispersive spectrometer (EDS) | $5 |
| Dektak Surface Profiler | $25 |
| Bruker D8 X-ray diffractometer | $30 |
| ADT 7022 wafer dicing saw | $25 |
| Trion ICP RIE | $35 |

Minimum charge is **one hour**. Additional time is rounded to the nearest **half hour**.

## Materials

***Following materials are covered by KMF Fees:***

- Acetone
- Iso propyl alcohol (IPA)
- S1813 G2 photoresist
- MF319 developer for S1813 G2 photoresist
- PMMA ebeam resist
- PMMA/MAA ebeam resist
- MIBK - PMMA developer
- Remover PG - resist stripper
- Aluminum source for thermal evaporation
- Titanium source for thermal evaporation
- Copper source for thermal evaporation (not intended for thick films)
- Cleanroom garments – Gloves, coveralls, face masks, shoe covers, boots, hats, etc.
- Cleanroom wipes
- Cleanroom notebooks
- Cleanroom papers
- Cleanroom labels
- Aluminum foil and zipper bags
- Trash bags
- Personnel Protection equipment for chemicals and liquid nigtrogen
- Various other consumables

***Special chemicals and certain consumables are user's responsibility including, but not limited to:***

- Special lithography chemicals – AZ5214, AZ4260, SU-8, LOR-A, LOR-B, MF300, AZ Kwik Strip, AZ 300 MIF, HMDS, ma-N2401, chlorobenzene, etc.
- Various etchants – Gold etchant, Silver etchant, Al etchants, GaAs etchant, Nanostrip, BOE, Piranha solution, etc.
- Acids and bases – HF, sulfuric acid, nitric acid, hydrogen peroxide, etc.
- AFM Tips/probes.
- Liquid Nitrogen
- Boats for thermal evaporation.
- Source materials for evaporation – Gold, Silver, Copper, etc.
- Wafers of all varieties
- Photomasks