

SNF FY17 Rates¹

Effective 9/1/16

Cleanroom (Soft Capped Tools) ²				
Activity	Description	Rate Category ³		
		Academic	Industry	Industry: SBIR
Equipment Rates	Base Rate \$/hr < Soft Cap	\$60	\$120	\$96
	Monthly Soft Cap (60 hrs)	\$3,600	\$7,200	\$5,760
	Above Soft Cap (>60 hours)	25% of hourly rates		
	Epitaxial Deposition (Epi2/2B)	\$70.00	\$140	\$112
ExFab Lab ⁴				
Area	Tool	Rate Category		
		Academic (\$/hr)		Industry (\$/hr)
Deposition	Aixtron Graphene Furnace*	\$35		\$105
	AJA Evaporator	\$35		\$105
	Carbon Nanotube Furnace*	\$35		\$105
	Hummer Evaporator*	\$0		\$0
	Lesker Sputter	\$35		\$105
	Parylene Coater	\$20		\$60
Patterning	Nanoinkjet	\$10		\$30
	Raith EBeam Writer*	\$70		\$140
	3D Wax Printer	\$3		\$9
Machining	Chemical Mechanical Polish*	\$45		\$135
	DISCO Wafersaw*	\$35		\$105
	Laser Cutter	\$35		\$105
	Manual Micromill Press	\$0		\$0
	Modela Micromill	\$0		\$0
	Minitch Micromill	\$15		\$45
	Thermolyne Muffle Furnace	\$3		\$9
Controlled Environment	Fumehood #1	\$3		\$9
	Fumehood #2	\$3		\$9
	Fumehood #3	\$3		\$9
	Fumehood #4	\$3		\$9
	Glovebox-Left Side	\$3		\$9
	Glovebox-Right Side	\$3		\$9
Characterization	AFM #2*	\$10		\$30
	AFM-nsil	\$10		\$30
	Alphastep Profilometer*	\$0		\$0
	Biologic Potentiostat	\$1.50		\$4.50
	Cytoviva Hyperspectral Analyzer	\$30		\$90
	Ellipsometer	\$0		\$0
	Jasco-UV/Vis/NIR Spectrometer	\$20		\$60
	Malvern Dynamic Light Scatter	\$20		\$60
	Micromanipulator Probe Station	\$5		\$15
	PV/Solar Tester	\$5		\$15
	SEM 4160*	\$20		\$60
	Sensofar Optical Profilometer*	\$0		\$0
Other	Flipchip Bonder	\$35		\$105
	Heatseal Press	\$10		\$30
	Hotplate-1	\$5		\$15
	Plasma Etcher	\$20		\$60

	Spincoater g3p8	\$10	\$30
	Thermoscientific Oven	\$5	\$15
	Thinky PDMS Mixer	\$10	\$30
ExFab Lab Planned (Est. January 2017)⁵			
Area	Tool	Rate Category	
		Academic (\$/hr)	Industry (\$/hr)
Patterning	Headway3 Spin Coater	\$10	\$30
	Heidelberg MLA 150 Direct Write	\$35	\$105
	Karlsuss2 Contact Align	\$20	\$60
	Laurell Spin Etch/Develop	\$10	\$30
	Wet Bench-Flex Corrosives 5	\$10	\$30
	Wet Bench-Flex Solvents 2	\$10	\$30
Characterization	Stereoscope Imager	\$0	\$0
	Video Capture Microscope	\$0	\$0
MOCVD Lab^{4,6}			
Area	Tool	Rate Category	
		Academic (\$/hr)	Industry (\$/hr)
MOCVD	Aixtron 200	\$150	\$300
	Aixtron CCS	\$150	\$300
General			
Service	Description	Rate	
Staff Support	Training Recharge \$/hr	\$75.00	
	Staff Support \$/hr	\$75.00	
Stores	Inventory / Subscriptions	Refer to Stores price list sheets	

- (1) **FY17 Rates:** All rates are subject to the University Facilities & Administration (F&A) overhead which for FY17 is 57% for industry and 8% for most other external (see <https://doresearch.stanford.edu>). Overhead is applied by the University upon billing, so will not appear in Badger Financial Reports.
- (2) **Soft Cap Fee Structure:** Cleanroom tools come under the Soft Cap fee structure. The exceptions are:
 - a. **Epi2/2B** are excluded from the Soft Cap and charged on a straight hourly basis.
 - b. **Precious Metals** use is charged by gram and based on the weighted market price for this year, rounded up to the nearest \$1: Gold-\$40; Iridium-\$17; Palladium-\$19; Platinum-\$32. Precious metal use is incorporated into the equipment charges for metallization tools.
 - c. **No-Charge Tools:**
 - i. Analytical tools: optical/IR microscopes, stylus profilometers (p2, alphastep 500), ellipsometer (Rudolph EL4 only), nanospecs 1/2, surfscan4500
 - ii. Ovens: 90C post-spin bake, 110C pre bake, 150C singe, and white-oven
 - iii. Solvent benches: lithosolv, solvhood, wbebres, wbmiscres, wbsolvent (except hot plate & sonicator)
 - iv. Miscellaneous: mask cleaner, uv cure
- (3) **Rate Categories:** Academic rates apply to Stanford/SLAC research. Academic rates also apply to government and non-profit research. Companies supported by a verifiable SBIR award are eligible for the SBIR rate.
- (4) **ExFab and MOCVD labs:** Equipment here are charged on a straight hourly basis. Note that the following tools (indicated by the “*”) have moved from the Cleanroom Cap to ExFab in FY17. Precious metals are charged separately from equipment by the nm of deposition as follows: Gold-\$0.88/nm, Iridium-\$0.42/nm, Palladium-\$0.42/nm, Platinum-\$0.70/nm.
- (5) **ExFab Plan:** Provisional rates for equipment slated for acquisition or move into the ExFab, later in FY17.
- (6) **MOCVD Precursor Fees:** Precursor use in excess of 3 grams per run will be charged at \$40/gram. This fee applies to the following precursors and is incorporated into equipment charges: UDMHy, TBP, and TBAs.