

General Cleanroom Procedure

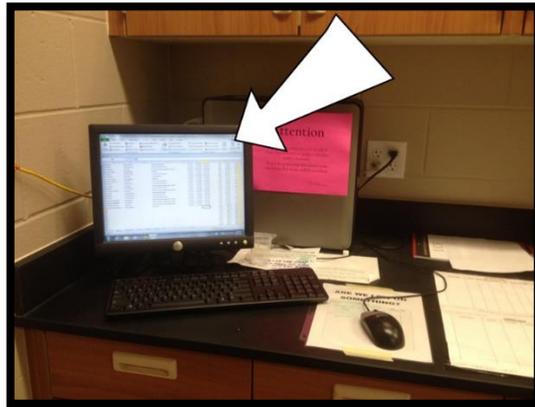
NOTE: Failure to follow these procedures can result in loss of cleanroom privilege and access. If you have any questions or concerns about something within the cleanroom please contact Seth Calhoun.

ENTERING THE CLEANROOM

1. **ALWAYS SIGN IN ON THE COMPUTER BEFORE ENTERING THE CLEANROOM.** Make sure that no one is using the tool that you need to be using.
 - A. Sign in with your name.
 - B. Select your Advisor or Company from the drop down list.
 - C. Fill in the “Project” if applicable. This is for organization purposes with certain companies. Otherwise, leave this blank.

NOTE: If your Advisor/Company or Project is not on the list, please contact Amanda.bogeman@ucf.edu to add it.

- D. Select the equipment you are using from the drop down menu.
- E. Type in the date and sign in time.



USER NAME	FACULTY	PROJECT	INSTRUMENT	DATE	TIME IN	TIME OUT
alvar	del Barco		Evan E-beam evaporator (443)	6/1/15	7:30 AM	11:30 AM
Jim Atkinson	del Barco		Clean Air Wet Hood	6/1/15	1:15 PM	1:45 PM
Javaneh	Chanda		1 HF hood	6/1/15	11:00 AM	11:30 AM
Chris Coleman	del Barco		Evan E-beam evaporator (443)	6/1/15	7:30 PM	10:00 PM
NEW USER						

*For AFM users without their own head, there is an extra \$20 charge per use

USER NAME	FACULTY	PROJECT	INSTRUMENT
alvar	del Barco		Evan E-beam evaporator
Jim Atkinson	del Barco		Clean Air Wet Hood
Javaneh	Chanda		1 HF hood
Chris Coleman	del Barco		Evan E-beam evaporator
NEW USER			

Abouraddy
Advanced Lab
Chanda
Coffey
CREOL Student Group
del Barco
Fathpour
Ishigami

*For AFM users without their own head, there is an extra \$20 charge per use

USER NAME	FACULTY	PROJECT	INSTRUMENT
alvar	del Barco		Evan E-beam evaporator (443)
Jim Atkinson	del Barco		Clean Air Wet Hood
Javaneh	Chanda		1 HF hood
Chris Coleman	del Barco		Evan E-beam evaporator (443)
NEW USER	Advanced Lab		

Airforce FA
Culvert
FA Sandia
PbSe
Phys. Sci
W909MY

FACULTY	PROJECT	INSTRUMENT	DATE	TIME
		Evan E-beam evaporator (443)	6/1/15	7:30
		Clean Air Wet Hood	6/1/15	1:15
		1 HF hood	6/1/15	11:00
		Evan E-beam evaporator (443)	6/1/15	7:30
Advanced Lab		Evan E-beam evaporator (443)		

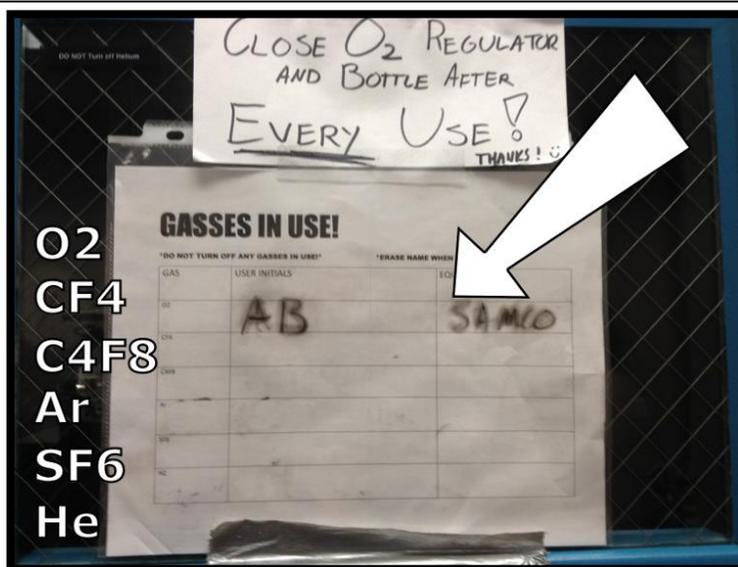
Cary Spectrophotometer
Clean Air Wet Hood
Cressington Sputter
Critical Point Dryer
Dek Tek Profilameter
Evan E-beam evaporator (443)
FH 403
Hall Effect

INSTRUMENT	DATE	TIME IN	TIME OUT
Evaporator (443)	6/1/15	7:30 AM	11:30 AM
Wet Hood	6/1/15	1:15 PM	1:45 PM
Evaporator (443)	6/1/15	11:00 AM	11:30 AM
Evaporator (443)	6/1/15	7:30 PM	10:00 PM
Evaporator (443)	MM/DD/YY		

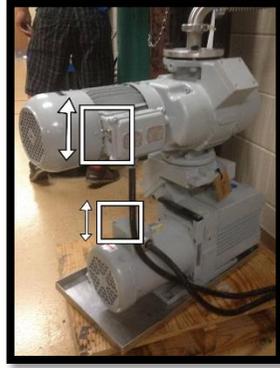
INSTRUMENT	DATE	TIME IN	TIME OUT
orator (443)	6/1/15	7:30 AM	11:30 AM
d	6/1/15	1:15 PM	1:45 PM
	6/1/15	11:00 AM	11:30 AM
orator (443)	6/1/15	7:30 PM	10:00 PM
orator (443)	MM/DD/YY	3:00 PM	

2. Check to see what gases are being used currently using the sheet on the gas cabinet.

- A. If a gas you are going to be using is currently being used, write your initials next to the first person's initials on the gas sheet.
- B. If a gas you need is not being used, open the cylinder and regulator and then write down your initials and machine being used on the gas sheet.



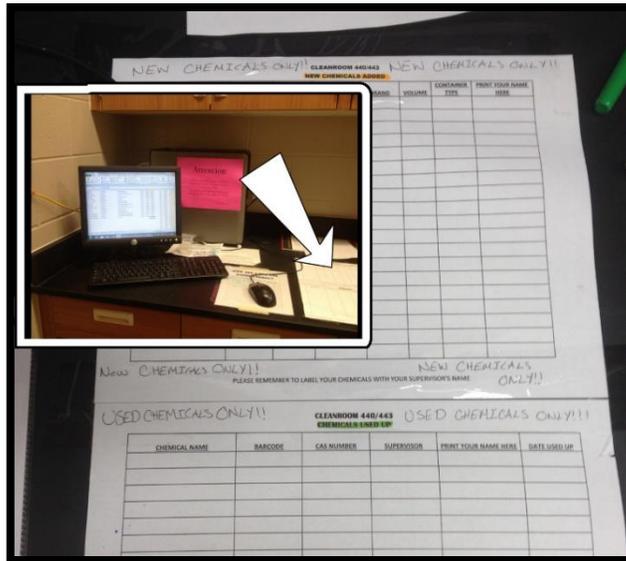
3. If using the Samco RIE tool, turn on the roughing pump and blower located in the corridor behind the cleanroom.

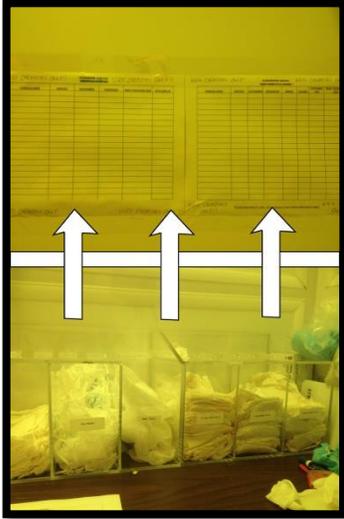
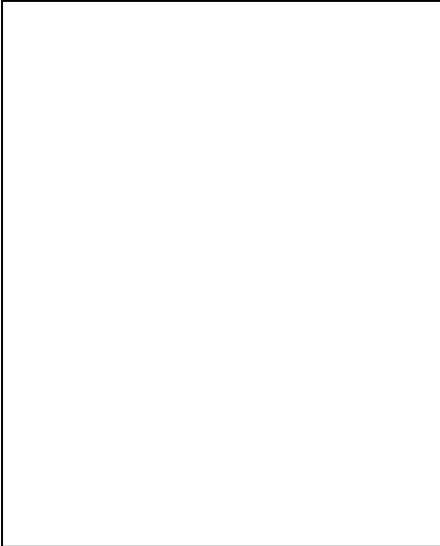


4. Enter the gowning room, making sure to step on the sticky mat before entering.



5. If you are bringing any chemicals and will be storing them in the lab, you must put **BARCODE LABEL** on to the bottle and then fill out the chemicals added sheet (one of which is taped to the desk and one is on the wall of the gowning area).

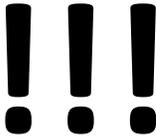


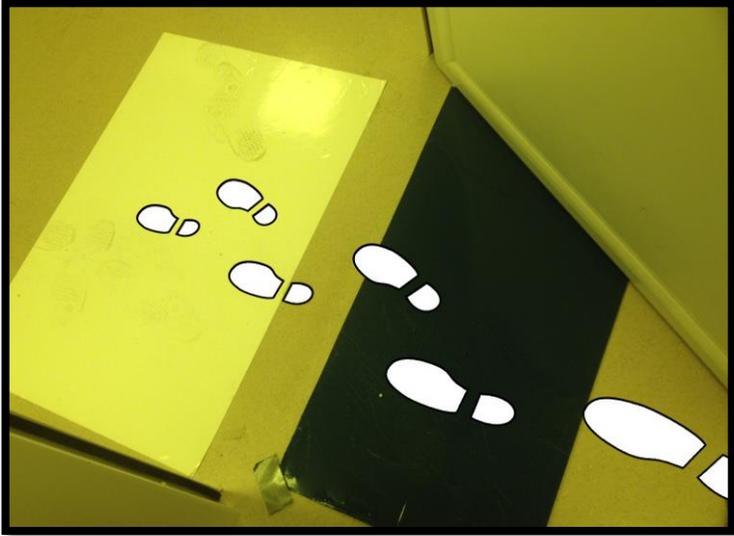


6. Put on **BOOTIES, GLOVES, HAIRNET, CLEANROOM SUIT AND BEARD NET**(if applicable) before entering the cleanroom. If you are not sure about the beard net contact Seth Calhoun.

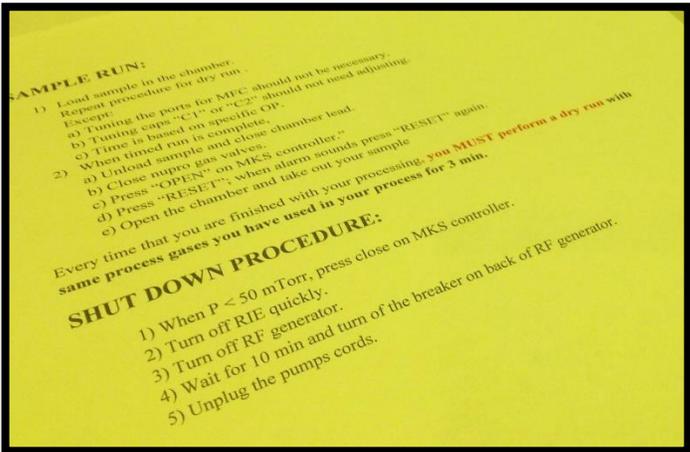


NOTE: ANYONE CAUGHT NOT WEARING PROPER EQUIPMENT WILL BE KICKED OUT OF THE CLEANROOM



<p>7. Enter the cleanroom, making sure that you have everything you need. If you left something out of the gowning area you must FULLY GOWN DOWN then go outside, and the gown back up when reentering the cleanroom. When entering cleanroom ensure to step on both sticky mats.</p>	
<p>8. Proceed with your process.</p>	

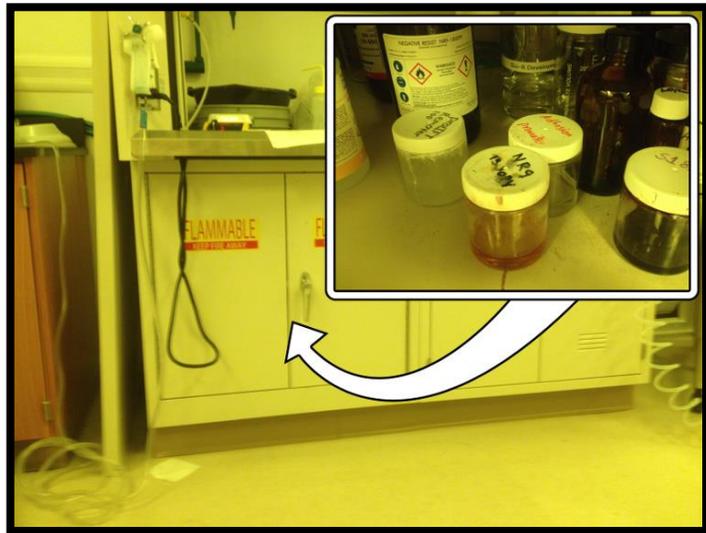
LEAVING THE CLEANROOM

<p>1. Ensure that all tools and machines used are properly shutdown and in their standby modes. If unsure of how to do this consult the SOP or call Seth Calhoun.</p>	 <p>SAMPLE RUN: 1) Load sample in the chamber. Repeat procedure for dry run. Except: a) Turning caps "C1" or "C2" should not be necessary. b) Time is based on specific OP. c) Time based run is complete. 2) When timed sample and close chamber lead. a) Unload sample and close chamber lead. b) Close sample gas valves. c) Press "OPEN" on MKS controller. d) Press "RESET" when alarm sounds, you MUST perform a dry run with same process gases you have used in your process for 3 min. e) Open the chamber and take out your sample.</p> <p>SHUT DOWN PROCEDURE: Every time that you are finished with your processing, you MUST perform a dry run with same process gases you have used in your process for 3 min. 1) When P < 50 mTorr, press close on MKS controller. 2) Turn off RIE quickly. 3) Turn off RF generator. 4) Wait for 10 min and turn of the breaker on back of RF generator. 5) Unplug the pumps cords.</p>
---	--

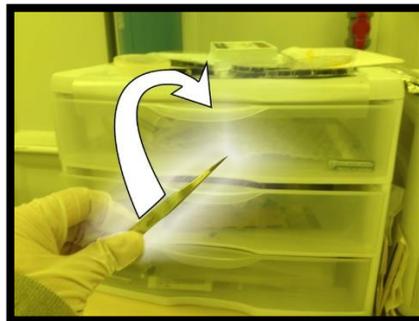
2. Put any chemical or other hazardous waste into appropriate containers.
 - A. For solvent/developer waste use the appropriate waste bottle in the left fume hood.
 - B. For solid chemical waste (photoresist waste) put it in one of the two small white garbage cans located in the fume hood.



3. Put any chemicals used back into their appropriate spots.

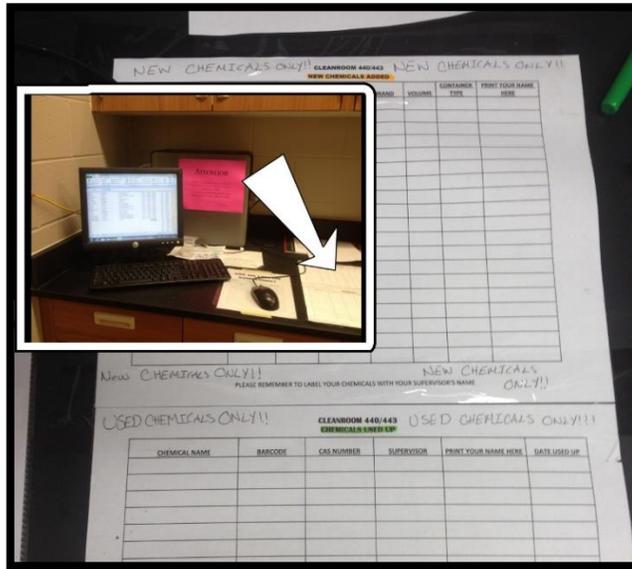


4. Put any other materials used (Kapton tape, tweezers, stop watches, etc) back into their appropriate locations

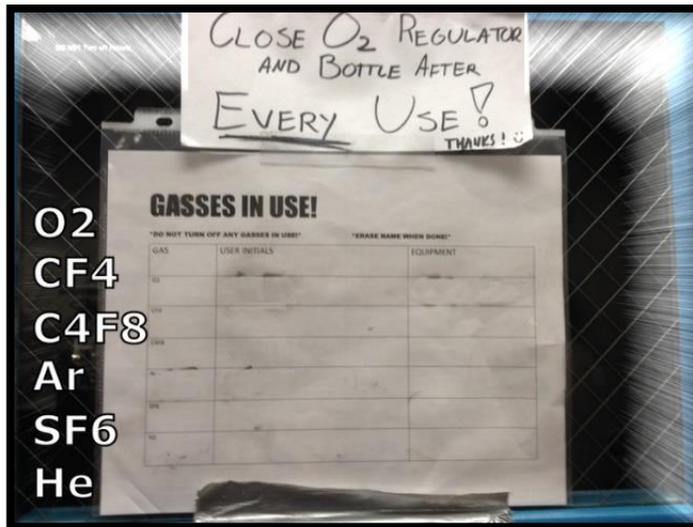


<p>5. After ensuring steps 1-5 are completed grab everything in the cleanroom that is yours.</p>	
<p>NOTE: ANYTHING LEFT IN THE CLEANROOM WITHOUT A NAME AND DATE ON IT WILL BE GIVEN TILL FRIDAY, IF IT IS STILL THERE FRIDAY IT WILL BE DISPOSED OF.</p>	<p>!!!</p>
<p>6. Exit the cleanroom to the gowning area. De-gown, either throw your hairnet, booties and gloves out if you will not be back for a few days OR if you will be using the cleanroom again put them in the plastic cubby hole on the desk and use the expo mark to write your initials on the front panel.</p>	
<p>7. Hang your suit up and exit the gowning area.</p>	

8. If you finished any bottles of chemicals or are permanently removing any chemicals you **MUST FILL OUT THE EMPTY CHEMICALS SHEET**. Make sure you put down the barcode number of the empty chemical. There are two of these sheets, one taped to the desk next to the computer and one taped to the wall of the gowning are. You need only fill out one of the two sheets



9. Close any gas bottles that only you were using. Erase your name from the gas sheet.



10. SIGN OUT ON THE COMPUTER.

- A. Fill in the sign out time. The computer will calculate your use time rounded to 15 minute increments automatically.
- B. If using precious metal on the Evan E-beam make sure to fill in the Gold or Platinum column with how many **nanometers** you deposited. Gold is the yellow column to the far right, and platinum is the grey one.

	DATE	TIME IN	TIME OUT	HRS	RATE (\$/h)	FEE (\$)
	6/1/15	7:30 AM	11:30 AM	4.00	\$13.50	54.00
	6/1/15	1:15 PM	1:45 PM	0.50	\$5.00	2.50
	6/1/15	11:00 AM	11:30 AM	0.50	\$13.50	6.75
	6/1/15	7:30 PM	10:00 PM	2.50	\$13.50	33.75
				0.00	#N/A	#N/A
	MM/DD/YY	3:00 PM	4:00 PM	1.00	\$13.50	13.50
				0.00	#N/A	#N/A
				0.00	#N/A	#N/A

HRS	RATE (\$/h)	FEE (\$)	SURCHARGE Au	SURCHARGE Pt
4.00	\$13.50	54.00		
0.50	\$5.00	2.50		
0.50	\$13.50	6.75		
2.50	\$13.50	33.75		
0.00	#N/A	#N/A		
1.00	\$13.50	13.50	30	
0.00	#N/A	#N/A		
0.00	#N/A	#N/A		