VANDERBILT

Vanderbilt Institute *of* Nanoscale Science and Engineering

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Training and certification procedures to become an independent VINSE cleanroom tool user:

Thank you for your interest to become an independent tool user in the VINSE cleanroom. If you have questions about the feasibility of a tool or process, please use the contact information available on the tool webpage.

Certification requires at least two instances of working with the tool. If available, a graduate student Superuser will first provide basic training on a tool or process. A staff member will then observe the trainee operating the tool to evaluate competence and awareness of hazards and safety procedures. At the staff member's discretion, the trainee will be certified or requested to spend additional time training before another certification attempt.

In order to use a tool independently:

1. Visit the Get Access page and follow all steps to become an authorized VINSE cleanroom user. This includes the cleanroom orientation and safety walkthrough.
2. Send an email to vinse-cleanroom@vanderbilt.edu with the following details:
    - Tool(s) requested for training
    - Research group (Please note if you are a summer student, IMS student doing rotations, or in other temporary positions)
    - Project plans (Expected processes and materials, how frequently you plan to use the tool)
    - Urgency of training (Training will likely include your own samples. Please postpone training until samples are ready)
3. VINSE staff will evaluate the request and connect the requestor with the appropriate Superuser or staff member to create a training schedule. Ideally, basic training and certification sessions will be completed within a week of each other.

VINSE Cleanroom Tool Assignments (Arranged by Types)

Deposition

Tool	Superuser	Staff	Staff Email
Electroplating System	Owen Meilander	Ben Schmidt	ben.schmidt@vanderbilt.edu
Parylene Coater (SCS)	Grace Adams	Ben Schmidt	ben.schmidt@vanderbilt.edu
Plasma-Enhanced Atomic Layer Deposition (Picosun)	Owen Meilander	Ben Schmidt	ben.schmidt@vanderbilt.edu
Plasma-Enhanced CVD (Trion)	Ikjun Hong	Ben Schmidt	ben.schmidt@vanderbilt.edu
Multimode Deposition Chamber (Angstrom)	Tao Hong	Christina McGahan	christina.mcgahan@vanderbilt.edu
	Theodore Anyika		
	Ikjun Hong		
	Rahul Shah		
Resistive Evaporator (Angstrom)	Tao Hong	Christina McGahan	christina.mcgahan@vanderbilt.edu
	Theodore Anyika		
	Ikjun Hong		
	Rahul Shah		
Sputter Deposition (AJA)	Grace Adams	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Tube Furnace 1" (Lindberg)		Christina McGahan	christina.mcgahan@vanderbilt.edu
Tube Furnace 4" (MTI)		Christina McGahan	christina.mcgahan@vanderbilt.edu

Lithography

Tool	Superuser	Staff	Staff Email
Electron Beam Lithography System (Raith)	Tao Hong	Christina McGahan	christina.mcgahan@vanderbilt.edu
	Theodore Anyika		
	Ikjun Hong		
	Rahul Shah		
Laser Writer (Heidelberg)	Owen Meilander	Christina McGahan	christina.mcgahan@vanderbilt.edu
Mask Aligner (Suss)	Grace Adams	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
	Owen Meilander		
Photoplotter (Bungard)	Owen Meilander	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Process Hoods		All	vinse-cleanroom@vanderbilt.edu
Soft Lithography	Owen Meilander	Megan Dernberger	megan.k.dernberger@vanderbilt.edu

Etch

Tool	Superuser	Staff	Staff Email
Deep Reactive Ion Etch (Oxford)	Rahul Shah (Fluorine)	Ben Schmidt	ben.schmidt@vanderbilt.edu
	Tao Hong (Fluorine)		
	Owen Meilander (Chlorine)		
Reactive Ion Etch - Chlorine (Trion Minilock)	Owen Meilander	Ben Schmidt	ben.schmidt@vanderbilt.edu
Reactive Ion Etch – Fluorine (Trion Phantom)	Owen Meilander	Ben Schmidt	ben.schmidt@vanderbilt.edu
	Grace Adams	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Plasma Cleaner (Harrick)	Owen Meilander	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Porous Silicon Etching System (AMMT)		TBD	vinse-cleanroom@vanderbilt.edu
Process Hoods (RCA Clean, Acid/Base)		Ben Schmidt (RCA)	ben.schmidt@vanderbilt.edu
		Megan Dernberger (Acid/Base)	megan.k.dernberger@vanderbilt.edu
		Christina McGahan (Acid/Base)	christina.mcgahan@vanderbilt.edu
XeF_2 Vapor Etch	Owen Meilander	Ben Schmidt	ben.schmidt@vanderbilt.edu

Processing

Tool	Superuser	Staff	Staff Email
Cleanroom Glovebox (Inert PureLab)		Christina McGahan	christina.mcgahan@vanderbilt.edu
HMDS Oven (YES)	Owen Meilander	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Microfluidic Flow Control System (Fluigent)		Christina McGahan	christina.mcgahan@vanderbilt.edu
Process Hoods		All	vinse-cleanroom@vanderbilt.edu
Rapid Thermal Processor (SSI)		Dmitry Koktysh	dmitry.koktysh@vanderbilt.edu
Standard Ovens (Thermo Scientific, Yamato)		All	vinse-cleanroom@vanderbilt.edu
Tube Furnace 1" (Lindberg)		Christina McGahan	christina.mcgahan@vanderbilt.edu
Tube Furnace 4" (MTI)		Christina McGahan	christina.mcgahan@vanderbilt.edu
Vacuum Oven (Thermo Scientific)		All	vinse-cleanroom@vanderbilt.edu

Packaging

Tool	Superuser	Staff	Staff Email
Dicing Saw (DISCO)	Owen Meilander	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Wire Bonder (Westbond)	Owen Meilander	TBD	vinse-cleanroom@vanderbilt.edu

Metrology and Characterization

Tool	Superuser	Staff	Staff Email
Contact Angle Goniometer (Ossila)		Ben Schmidt	ben.schmidt@vanderbilt.edu
Four-Point Probe (Ossila)		Christina McGahan	christina.mcgahan@vanderbilt.edu
Electrical Probe Station	Owen Meilander	Christina McGahan	christina.mcgahan@vanderbilt.edu
Solar Testing		TBD	vinse-cleanroom@vanderbilt.edu
Spectroscopic Ellipsometer (JA Woollam)	Owen Meilander Grace Adams	Megan Dernberger	megan.k.dernberger@vanderbilt.edu
Stylus Profilometer (KLA Tencor)	Grace Adams	Megan Dernberger	megan.k.dernberger@vanderbilt.edu