



**VANDERBILT**

Vanderbilt Institute *of* Nanoscale Science and Engineering

Updated 28 August 2024

### **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](mailto: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.



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## VINSE Cleanroom Tool Assignments (Arranged by Type)

### Deposition

Tool	Superuser	Superuser Email	Staff	Staff Email
Atomic Layer Deposition (Picosun)			Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Electroplating System			Dmitry Koktysh	<a href="mailto:dmitry.koktysh@vanderbilt.edu">dmitry.koktysh@vanderbilt.edu</a>
Plasma-Enhanced CVD (Trion)			Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Multimode Deposition Chamber (Angstrom)	Tao Hong	<a href="mailto:tao.hong@vanderbilt.edu">tao.hong@vanderbilt.edu</a>	Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
	Theodore Anyika	<a href="mailto:theodore.h.anyika@vanderbilt.edu">theodore.h.anyika@vanderbilt.edu</a>		
Parylene Coater (SCS)			Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Resistive Evaporator (Angstrom)	Tao Hong	<a href="mailto:tao.hong@vanderbilt.edu">tao.hong@vanderbilt.edu</a>	Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
	Theodore Anyika	<a href="mailto:theodore.h.anyika@vanderbilt.edu">theodore.h.anyika@vanderbilt.edu</a>		
Sputter Deposition (AJA)	Grace Adams	<a href="mailto:grace.m.adams@vanderbilt.edu">grace.m.adams@vanderbilt.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
Tube Furnace 1" ( Lindberg)			Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
Tube Furnace 4" (MTI)			Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>

### Etch

Tool	Superuser	Superuser Email	Staff	Staff Email
Deep Reactive Ion Etch (Oxford)	Tao Hong (Fluorine)	<a href="mailto:tao.hong@vanderbilt.edu">tao.hong@vanderbilt.edu</a>	Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
	Owen Meilander (Chlorine)	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>		
Reactive Ion Etch - Chlorine (Trion Minilock)	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Reactive Ion Etch – Fluorine (Trion Phantom)			Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Plasma Cleaner (Harrick)	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
Porous Silicon Etching System (AMMT)			Dmitry Koktysh	<a href="mailto:dmitry.koktysh@vanderbilt.edu">dmitry.koktysh@vanderbilt.edu</a>
Process Hoods			All	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>
XeF2 vapor etch	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>



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## Lithography

Tool	Superuser	Superuser Email	Staff	Staff Email
Electron Beam Lithography System (Raith)	Tao Hong	<a href="mailto:tao.hong@vanderbilt.edu">tao.hong@vanderbilt.edu</a>	Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
	Theodore Anyika	<a href="mailto:theodore.h.anyika@vanderbilt.edu">theodore.h.anyika@vanderbilt.edu</a>		
Laser Writer (Heidelberg)	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
Mask Aligner (Suss)	Grace Adams	<a href="mailto:grace.m.adams@vanderbil.edu">grace.m.adams@vanderbil.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>		
Photoplotter (Bungard)	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
Process Hoods			All	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>

## Processing

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

## Packaging

Tool	Superuser	Superuser Email	Staff	Staff Email
Dicing Saw (DISCO)	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
Wire Bonder (Westbond)			TBD	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>



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## Printing and Assembly

Tool	Superuser	Superuser Email	Staff	Staff Email
3D Printers (Prusa)			Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
PDMS Aligner			All	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>
Screen Printer (MTI)			TBD	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>
Wax Printer (Xerox)			Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>

## Metrology and Characterization

Tool	Superuser	Superuser Email	Staff	Staff Email
Contact Angle Goniometer (Ossila)			Ben Schmidt	<a href="mailto:ben.schmidt@vanderbilt.edu">ben.schmidt@vanderbilt.edu</a>
Probe Station	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>	Christina McGahan	<a href="mailto:christina.mcgahan@vanderbilt.edu">christina.mcgahan@vanderbilt.edu</a>
Solar Testing			TBD	<a href="mailto:vinse-cleanroom@vanderbilt.edu">vinse-cleanroom@vanderbilt.edu</a>
Stylus Profilometer (KLA Tencor)	Grace Adams	<a href="mailto:grace.m.adams@vanderbilt.edu">grace.m.adams@vanderbilt.edu</a>	Megan Dernberger	<a href="mailto:megan.k.dernberger@vanderbilt.edu">megan.k.dernberger@vanderbilt.edu</a>
	Owen Meilander	<a href="mailto:owen.meilander@vanderbilt.edu">owen.meilander@vanderbilt.edu</a>		