

Not too big, not too small...It's just right

# Amod

Countless configurations, premium performance



**e**  
**A** **ANGSTROM**  
ENGINEERING  
Your Thin Film Partner

# Amod

## Deposition Sources

With its 500 mm x 500 mm baseplate, your Amod can accommodate up to 10 sources and a wide variety of PVD processes. The chamber can be integrated to a **glovebox**, a **cleanroom wall**, or selected in a standalone configuration. With our standard chamber height of 500 mm, your Amod system is very customizable to your process requirements.

### Sputtering

RF, DC, pulsed DC, reactive gas, and HiPIMS  
Circular, linear & cylindrical cathodes available

### Thermal Evaporation

Wide range of boats, filaments & crucible heaters  
Auto-tuning ensures precise rate control and simple setup

### Electron Beam Evaporation

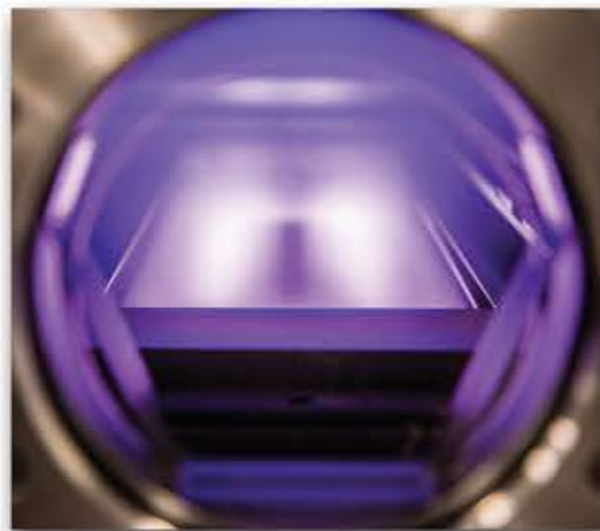
Wide range of source and power supply options  
Programmable sweep controller with recipe storage  
Torque sensing crucible indexer detects pocket jams

### Plasma and Ion Beam Processing

Range of ion sources for cleaning & film enhancements  
Glow discharge plasma cleaning

## Vacuum Control

Your Amod can be configured for **high vacuum (HV)** or **ultra-high vacuum (UHV)** utilizing a turbo pump or cryo pump. Chamber construction can be high-purity aluminum or stainless steel using Viton or metal gaskets. We can help you decide what is best for your application.



## Substrate Fixturing and Masking

### Heated, Cooled, & Biased Stages

LN<sub>2</sub>/GN<sub>2</sub> cooling to -170 °C

Heating to 900 °C

Auto-calibration via AERES software

RF or DC stage biasing

### Roll to Roll Processing

Servo wind and unwind for precise speed and tension control

Allows flexible substrate coating using production technology

Process is scalable for high throughput

### Load Locks & Mask Handling

Manual, semi-auto or full-auto substrate and mask handling

Options for single substrate or high capacity parking chambers

### Masking Shutter

Two programmable shutters selectively expose rows and columns in a sample matrix, creating many unique samples in a single run

### Variable Angle Stages

Conformally coat 3D features

Create complex nano-structures

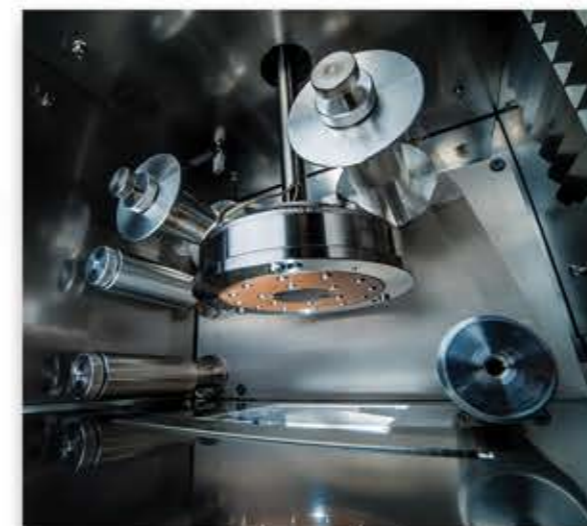
-95 ° to 95 ° tilt with continuous rotation

Heating and cooling options available

### Planetary & Dome Fixturing

Domed substrate carrier for lift-off and batch processes

Planetary motion & flip fixturing available



*"We have several labs with over \$2M of equipment from 30+ vendors and Angstrom Engineering has the best customer service. I like the people there, how they will work side by side with their customers to meet their needs."*

*Dr. Quyen Nguyen  
University of California Santa Barbara*

## AERES Integrated Software

Simple to use yet can handle the most complex process recipes  
PC/PLC controlled recipes for single, batch, or fully automated processes  
Advanced data logging and process tracking ensure consistent and repeatable processes  
High resolution control provides impressive low rate stability and consistent doping ratios  
Automatic PID control loop tuning significantly reduces process development time

Our team of engineers, chemists, and nanotechnologists will help design the best tool for your process and material requirements. We offer support and can optimize your system for film thickness uniformity, film structure and material utilization.

Please call us to discuss your application in detail.

# Your Amod can be everything you need it to be:



Cadmium telluride photovoltaic deposition system

Noble metal UHV evaporation system



Dielectric optical sputtering system for broadband filters



## Service and Support: Our Commitment

An Angstrom system in your lab makes us partners; we become part of your team. We guarantee **same day** response to any service inquiry regarding parts, technical support, and software support.



Yellow pin: Head office and manufacturing facility

Blue pin: Service and Support facilities

Red pin: Some of our existing systems in use



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