

# **Montana Microfabrication Facility**

# Who We Are

The MMF is a resource for Montana State University, external academics, and commercial entities that provides affordable access to a range of micro and nano fabrication equipment. We support applications ranging from basic physics and biology, microfluidics, MEMS, MOEMS, and sensors. Our facilities include 2,200 sq ft of Class 1,000 and Class 10,000 cleanroom laboratories with broad capabilities in lithography, thin film deposition, thermal processing, wet and dry etching, packaging, and finally testing.

www.mmf.montana.edu



Photo taken by Adrian Sanchez Gonzalez

### Tools

#### Lithography:

AB-M Contact Aligner, YESS III, Vapor Prime Oven, Solvent/ Headway Spinner Bench, EMS Hotplate, TrioTech Hotplate, Laurell Spin Coater, CEE Spin Coater and Hotplate

#### **Deposition:**

Amod Evaporator, Angstrom Sputter System, Modulab Evaporator, and EvoVac and Evaporator

#### **Etching:**

Oxford ICP, March 1703, PVA Tepla Ion 10, and Harrick HP-001 High Power Plasma Cleaner

#### Wetbenches:

Acid Process Wetbench, Oxidation Diffusion Wetbench, Cobleigh 523 General Use Wetbench, Cobleigh 525A General Use Wetbench, Barnard 107 Cleaning Bench, Barnard 107 Acid Bench, Barnard 107 Base Bench, and Barnard 107 Solvent Bench

#### **Thermal Processing:**

ATV PEO 603 Oxidation Furnace, Modulab Oxidation Furnace, Modulab Phosphorus Diffusion Furnace, and Lindberg/Blue Boron Diffusion Furnace

#### Packaging:

Microautomation 1006 Dicing Saw, K&S 4523 AD Wedge Bonder, AML Wafer Bonder, and Disco DAD 3221 Dicing Saw

#### **Miscellaneous:**

MRL Oxidation, Crest Ultrasonic Cleaner, COMSOL FEA, and Mixer

#### Metrology:

Ambios, XP2, Filmetrics Profilm 3D, Filmetrics F20

#### **Miscellaneous:**

MRL Oxidation, Crest Ultrasonic Cleaner, COMSOL FEA, and Mixer

## Contact

To talk more in detail about how we may be able to help you, contact MONT director David Dickensheets at davidd@montana.edu

Dr. Andrew Lingley is the MMF Director

MMF is a part of MONT, the Montana Nanotechnology Facility, supported by NSF. MONT supports open access to 6 research facilities at MSU and is a part of the National Nanotechnology Coordinated Infrastructure (NNCI) with access to 15 additional sites across the US. If MONT does not have the instrumentation you need, we will find what you're looking for at one of our partner institutions.

www.nnci.net

