



For Immediate Release

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LatticeGear Scribing and Cleaving Portfolio to Support Wafer and Sample Preparation of photonic materials at MIT

MIT's Jaramillo group is integrating LatticeGear solutions into their wafer/sample preparation workflow for controlled, damage-free wafer downsizing that is critical to their device fabrication process.

Hillsboro, OR; October 15, 2019. The Jaramillo Group at the Massachusetts Institute of Technology has adopted LatticeGear's complete scribing and cleaving tool portfolio in support of their research on photonic devices. LatticeGear solutions were chosen for their ability to deliver precisely-placed, mirror-finish cleaved edges, wafer downsizing and experiments in photonic properties—without generating particles or damaging the surface. The complete suite of tools – patented [LatticeAx®](#) and [FlipScribe®](#), plus [FlexScribe](#) and [Small Sample Cleaver](#) – were recently installed at MIT.

High quality, mirror-finish cleaved edges are vital for developing and characterizing photonics and other fabricated nanoscale devices. Cleaving in the cleanroom requires that the samples must stay clean and tools cannot produce particles.

MIT's Jaramillo Group (Department of Material Science and Engineering) are excited to use LatticeGear solutions in their sample preparation workflow. "We are a synthesis lab with special focus on photonics and semiconducting applications. The surface quality of the substrate is critical in applications and can be modified by improper processing techniques including cleaving, and processes that involving contacting the top surface," states Akshay Singh, postdoctoral associate with the Jaramillo group. "The LatticeGear cleaving portfolio can circumvent such problems by providing well controlled cleaving techniques, which reduce particles on top surface, for better downsizing. Back scribing and indent-controlled cleaving promise to be useful tools in our process."



Efrat Moyal, co-founder of LatticeGear, further comments “It is great that the Jaramillo group is seeing the potential to improve the surface quality of their substrates by integrating LatticeGear’s scribing and cleaving methods into their device processing workflow. Because of the wide range of sample types, we expect them to utilize our tools in ways we have not imagined.”

In September 2019, LatticeGear held the workshop, *Cleaving Technologies for Downsizing, Singulating, and Cross-sectioning Substrates* at MIT. This workshop was presented in conjunction with the installation of LatticeGear’s scribing and cleaving portfolio at MIT. Attendees were given an orientation to the tools and participated in sessions to develop new strategies for proper wafer downsizing.

About the Jaramillo Group

The Jaramillo Group at MIT is broadly interested in the synthesis, properties and applications of electronic materials. Their particular focus areas fall under the control of chalcogenide semiconductors to enable energy and information technologies.

<https://jaramillo.mit.edu/>

About LatticeGear LLC

LatticeGear is committed to removing sample preparation as a barrier to developing advanced devices using new materials and processes. The flagship products, LatticeAx®, FlipScribe® and FlexScribe use novel scribing and cleaving technology to enable fast, clean downsizing and cross-sectioning for a variety of materials including glass, sapphire, III-V, SiC and silicon—from 300 mm wafers to 1 mm pieces.

<https://latticegear.com/>