

## *Novel Nanoscale Etching of Electronic, Photonic, and Quantum Materials*

Harvard University, Geological Museum, Lecture Hall 100  
8am – 5pm, Dec. 6, 2019

### Invited Speakers



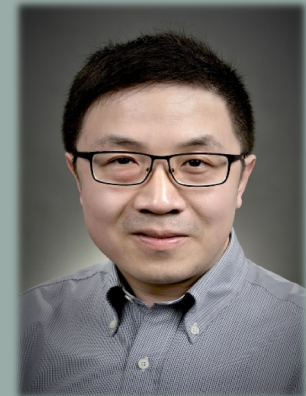
**Prof. Federico Capasso**  
Harvard



**Prof. Evelyn Hu**  
Harvard



**Prof. Max Shulaker**  
MIT



**Dr. Mian Zhang**  
CEO, Hyperlight, Co.

- 8:00am – 8:20am ***Continental Breakfast***
- 8:20am – 8:30am ***Welcome***  
Dr. William Wilson, Executive Director, Center for Nanoscale Systems, Harvard
- \*\* 8:30am – 9:15am ***Next-Generations Electronics: Transforming Technologies from the "Lab" to the "Fab"***  
Prof. Max Shulaker, MIT
- \*\* 9:15am – 10:00am ***Integrated Ultrahigh Performance Electro-Optic Circuits  
- Etching Enabled Photonics Breakthrough***  
Dr. Mian Zhang, CEO, HyperLight Co.
- 10:00am – 10:30am ***Break/Exhibition***
- 10:30am – 10:55am ***Making High Aspect Ratio Wires with Greater Precision***  
Dr. Peter Starts, Harvard
- \*\* 10:55am – 11:40am ***Flat Optics with Metasurfaces***  
Prof. Federico Capasso, Harvard
- 11:40am – 12:05pm ***Advanced Nanoscale Etching Solutions***  
Henry Chan, General Manager, Samco, Inc.
- 12:05pm – 1:00pm ***Lunch (provided)***
- \*\* 1:00pm – 1:45pm ***What Will Quantum Bring?***  
Prof. Evelyn Hu, Harvard
- 1:45pm – 2:10pm ***Impact of Etching on Superconducting Q-bit Fabrication***  
Dr. Bethany Huffman, MIT-Lincoln Labs
- 2:10pm – 2:35pm ***Dry Etching for Diamond Applications***  
Colin Welch, Oxford Instruments America, Inc.
- 2:35pm – 3:05pm ***Break/Exhibition***
- 3:05pm – 3:30pm ***Interfacing Silicon Vacancy Centers with Optomechanical Crystals in Diamond***  
Cleaven Cai, Harvard
- 3:30pm – 3:55pm ***AlN Piezo - MEMS Process: Impact of Crystal Quality on Plasma Etching***  
Dr. Ben Davaji, Cornell
- 3:55pm – 4:20pm ***Plasma Processes for Wide Bandgap Materials for Power and RF Applications***  
Dr. Steve Fargo, Senior Manager, SPTS Technologies, Inc., A KLA Company
- 4:20pm – 4:45pm ***Ion Beam Etching***  
Dr. David Lishan, Plasma-Therm LLC
- 4:45pm – 5:15pm ***Touring CNS Facilities***

**Free public event, registration required:**  
<https://projects.iq.harvard.edu/nnci>  
**Contact: Ling Xie**  
[lxie@cns.fas.harvard.edu](mailto:lxie@cns.fas.harvard.edu)

**Organizing Committee:**  
*Vince Genova, Cornell*  
*Ling Xie, Harvard*  
*Usha Raghuram, Stanford*  
*Sarmita Majumder, U. of Texas*