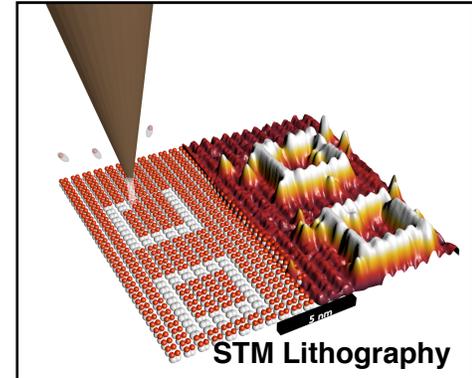
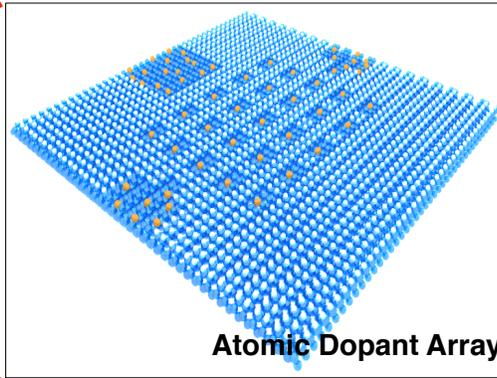
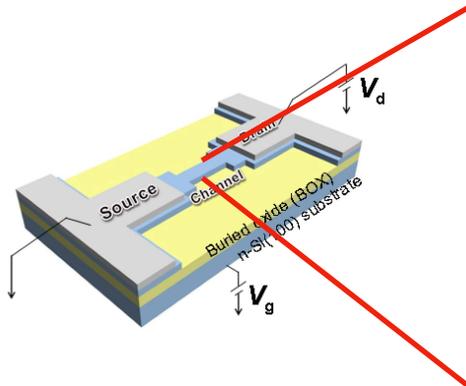


# 2D Quantum MetaMaterials



From Prati et al.  
 Nature Nanotech. (2012)  
 doi:10.1038/nnano.2012.94

**Dopant atoms placed with atomic precision into tunable arrays using scanning tunneling microscopy can be made to display electronic and photonic properties across a wide range of structures for 2D quantum metamaterials.**

The workshop will explore useful commonalities between fabrication, theoretical prediction, and alternative approaches to **tunable** quantum materials, including cold-atom realizations.

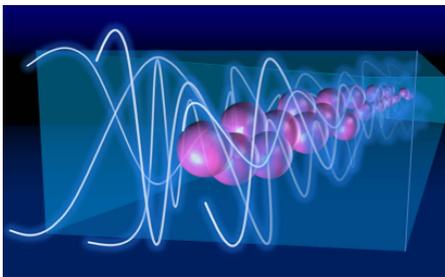
Theoretical efforts served by this new simulation platform include Hubbard model systems, design of 2D materials, and other exotic materials.

The workshop will be a combination of:

- i) all-invited talks by leading researchers,
- ii) breakout sessions for discussions and future plans,
- iii) a published Workshop Summary Report.

**Goal:** to develop a roadmap for practitioners and funders in this burgeoning field.

We invite interested parties as well as program managers from federal agencies to attend and lend their expertise and insights.



Organizing Committee  
 Chair: John N. Randall, Zyvex Labs  
 Joshua Ballard, Zyvex Labs,  
 James Owen, Zyvex Labs,  
 Wiley P. Kirk, UT Arlington, 3DET  
 Richard M. Silver, NIST  
 Neil Zimmerman, NIST  
 Shashank Misra, Sandia National Labs  
 Ezra Bussmann, Sandia National Labs  
 Clark Highstrete, Sandia National Labs

For more information and to apply to attend:  
[www.zyvexlabs.com/2d-workshop/](http://www.zyvexlabs.com/2d-workshop/)

Contact: [info@zyvexlabs.com](mailto:info@zyvexlabs.com)