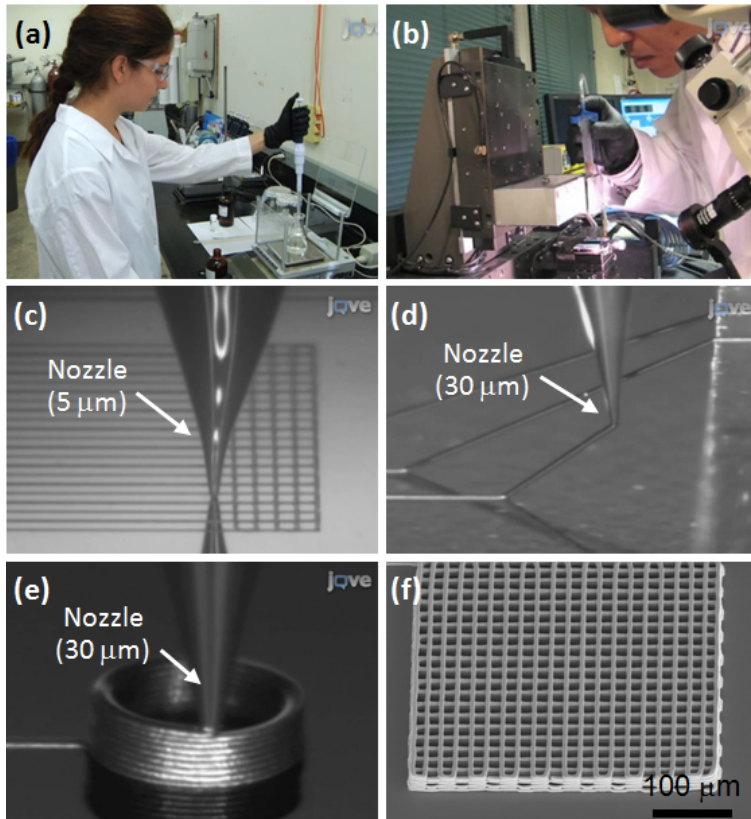


# Planar and 3D Printing of Conductive Inks



Visualization of (a) ink synthesis and (b) printing. (c-d) Printing of planar, spanning and 3D structures.

Work was performed at University of Illinois at Urbana-Champaign

## Scientific Achievement

The ability to print conductive microelectrodes in planar and three-dimensional forms opens up a new avenue in photovoltaics and electronics.

## Significance and Impact

Visualization of this printing technique is critical as the ink optimization and printing expertise affect the quality of printed structures and devices.

## Research Details

- Visualized ink synthesis and rheology control.
- Visualized printing of planar, spanning, and 3D microelectrodes.
- Demonstrated applications in photovoltaics and optoelectronic devices.

B. Y. Ahn, S. B. Walker, S. C. Slimmer, A. Russo, A. Gupta, S. Kranz, E. B. Duoss, T. F. Malkowski, and J. A. Lewis, *J. Vis. Exp.*, 58, e3189 (2011).