



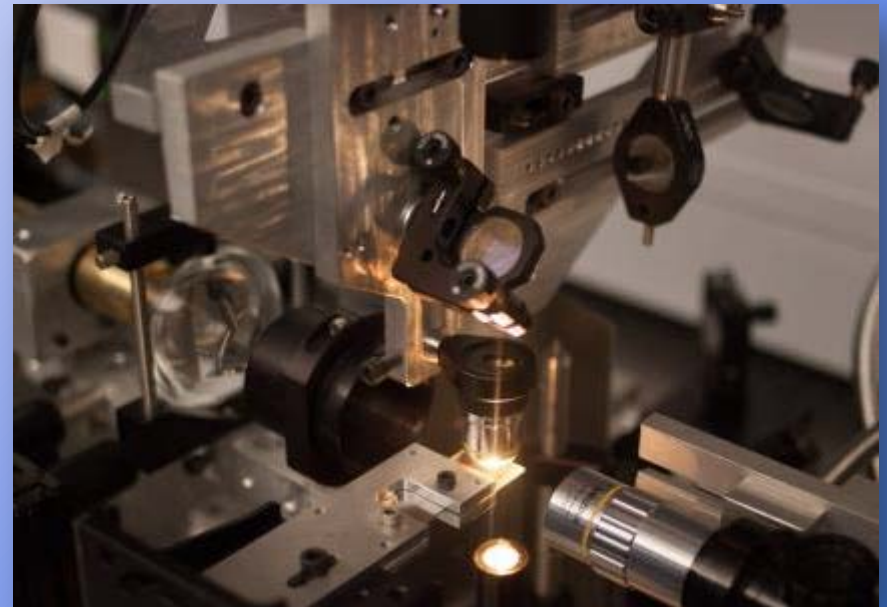
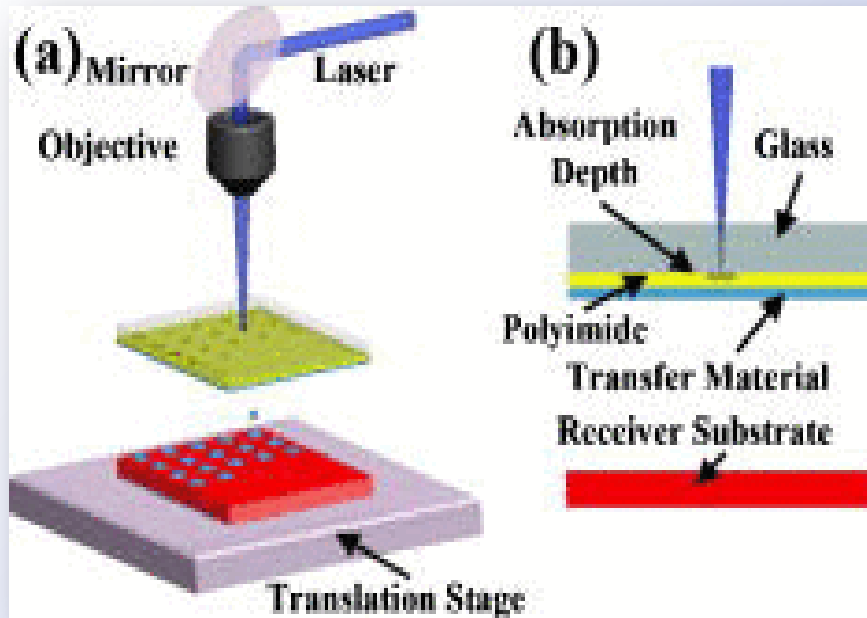
# Liquid Jet Formation: Laser-Induced Forward Transfer (LIFT) and the Liu Method

Benjamin Rosen<sup>1</sup>, Craig Arnold<sup>2</sup>

<sup>1</sup> East Brunswick High School, East Brunswick, NJ, 08816, USA

<sup>2</sup> Princeton University, Princeton, NJ, 08544, USA

# BACKGROUND OF *LIFT*

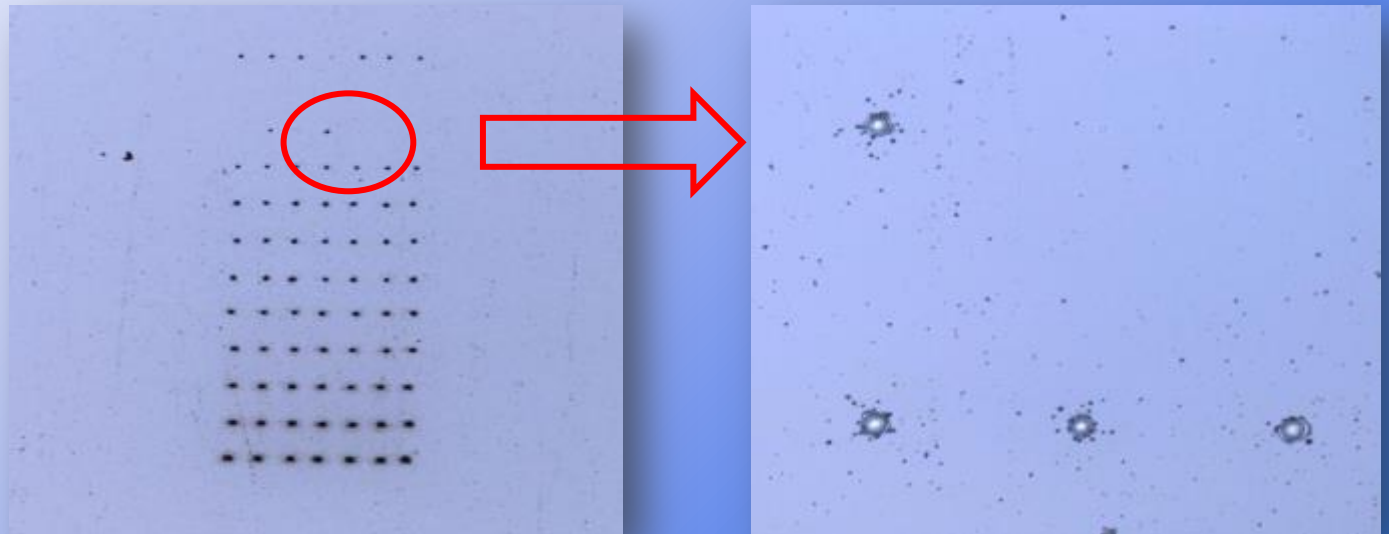


# PURPOSE OF THE LIU METHOD

- Constant spot size of the beam
- Ablation threshold
  - minimum laser intensity
- Peak fluence ( $\text{J}/\text{cm}^2$ ) of the beam

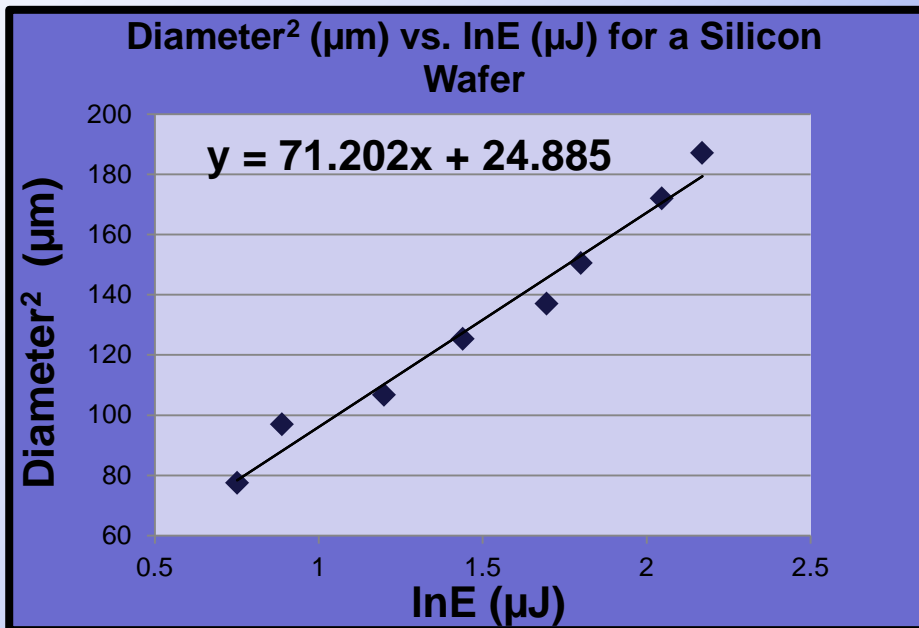
$$B = -2\omega_0^2(\ln E_{th})$$

$$\Phi = (2E_{th}) / (\pi\omega_0^2)$$



# RESULTS

- Symmetrical jet
  - Symmetrical blister
  - Vertical formation throughout
- Terminates due to surface tension



**SEE POSTER #17 FOR MORE INFORMATION**