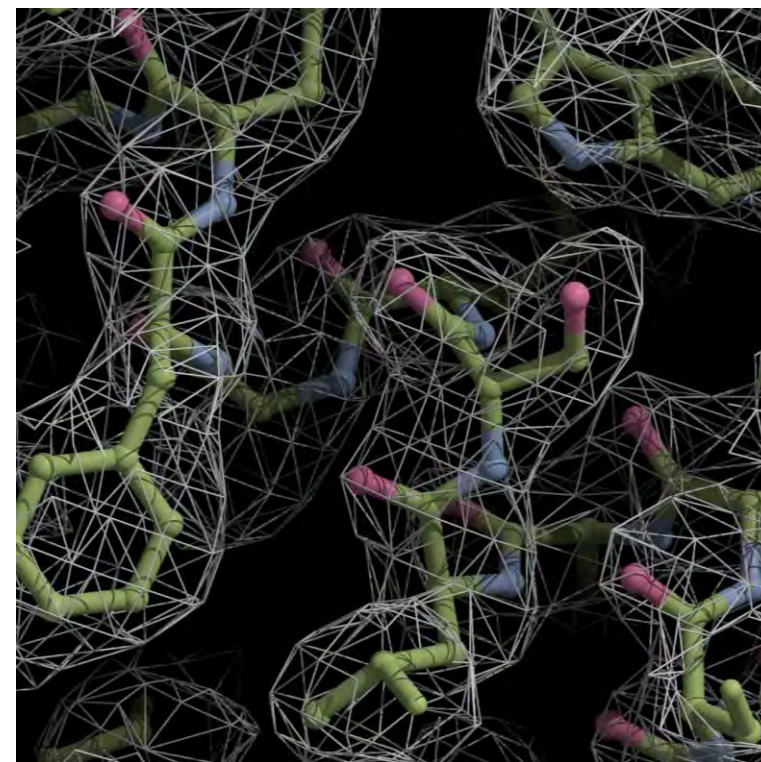
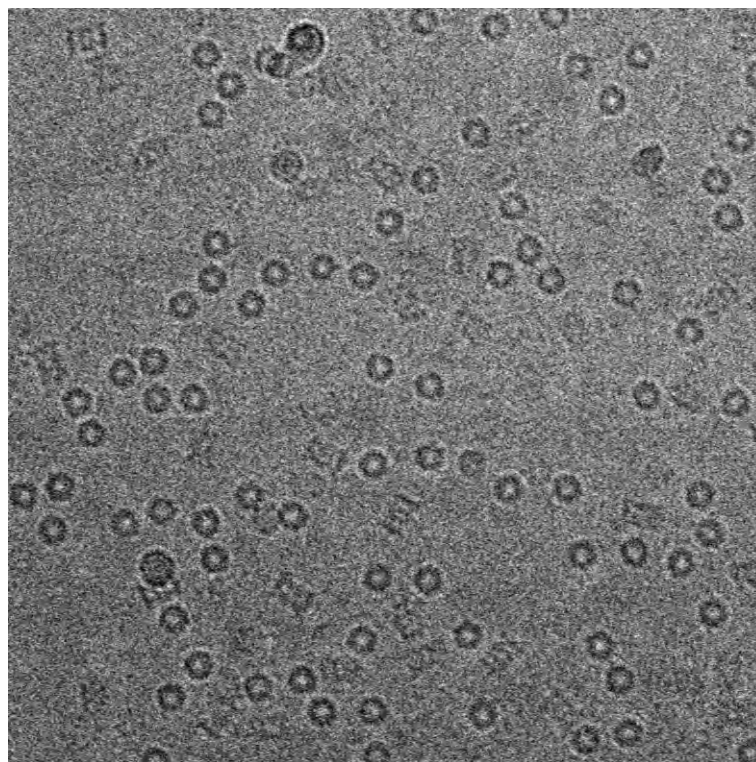
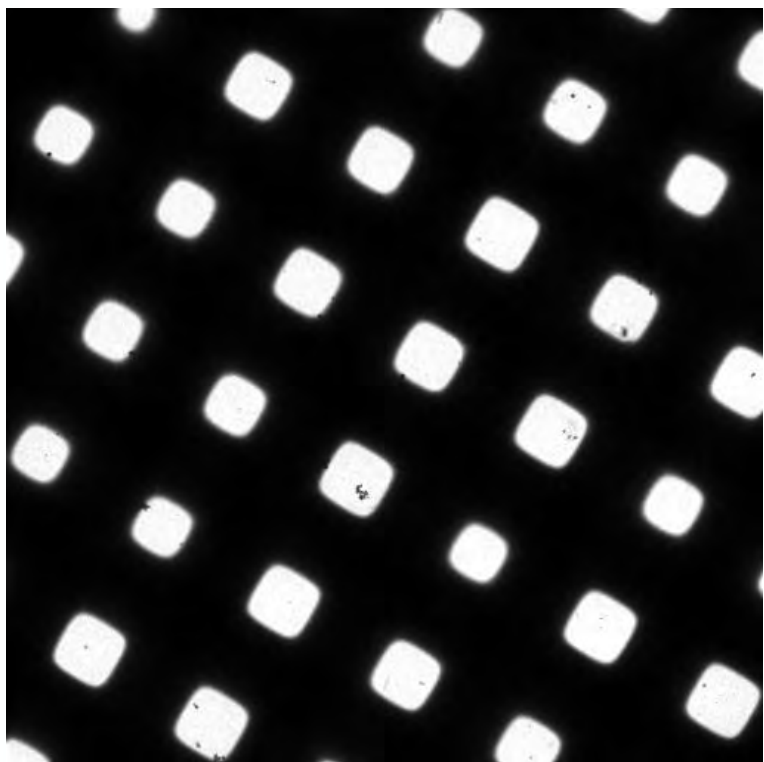


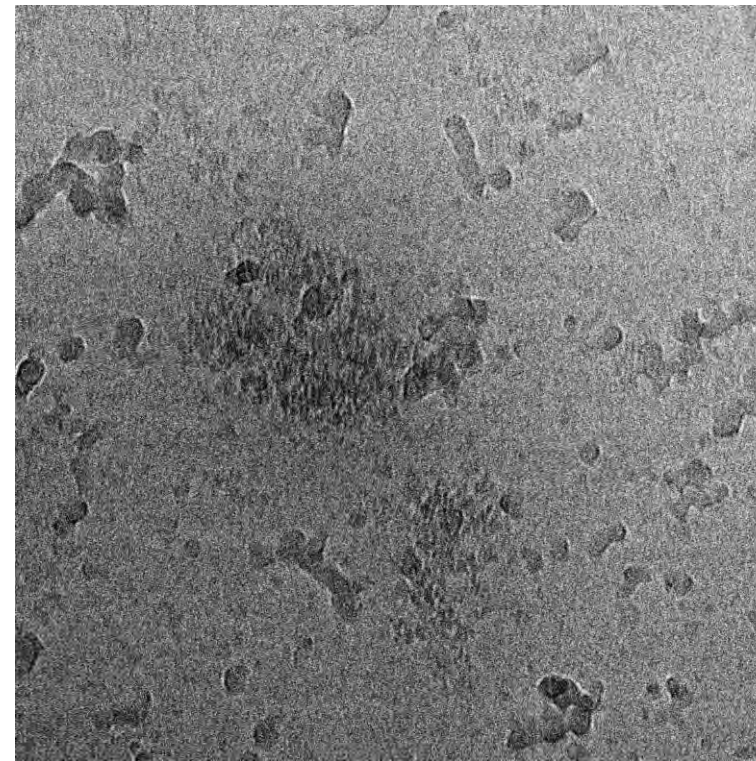
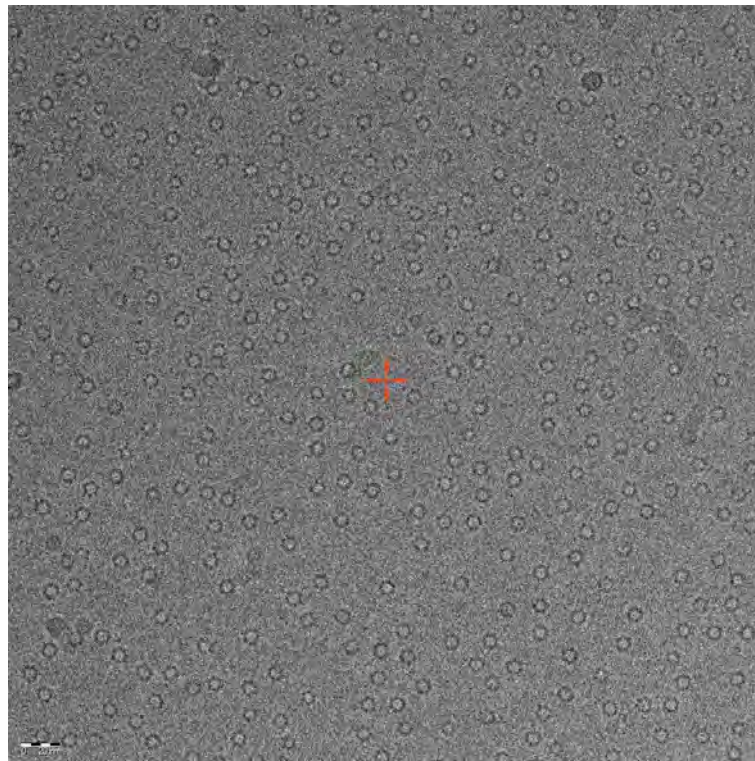
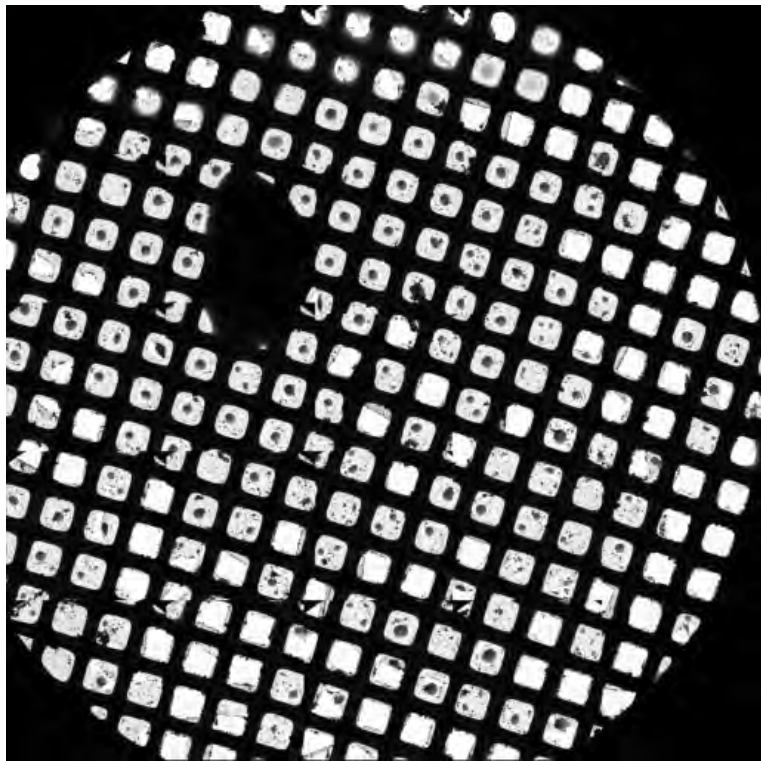
VitroJet

Bridging the Gap in Sample Prep


Expectation



Reality



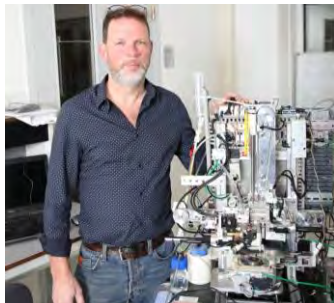
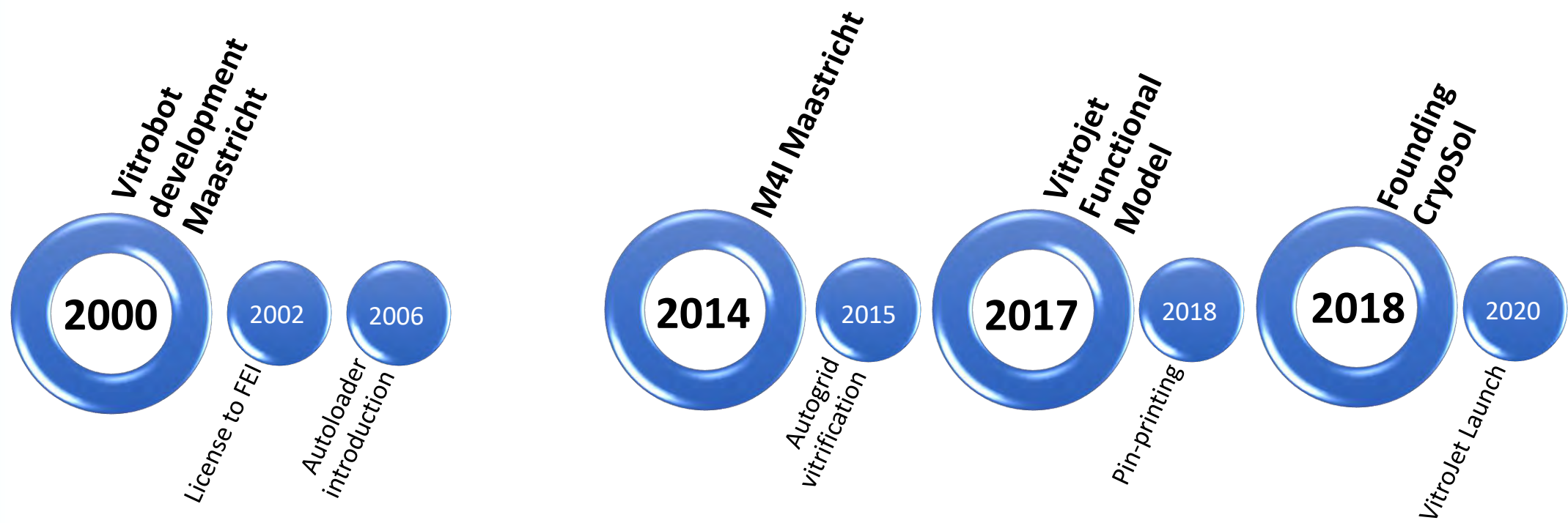
Current outcomes when optimizing “standard” sample preparation for single-particle cryo-em

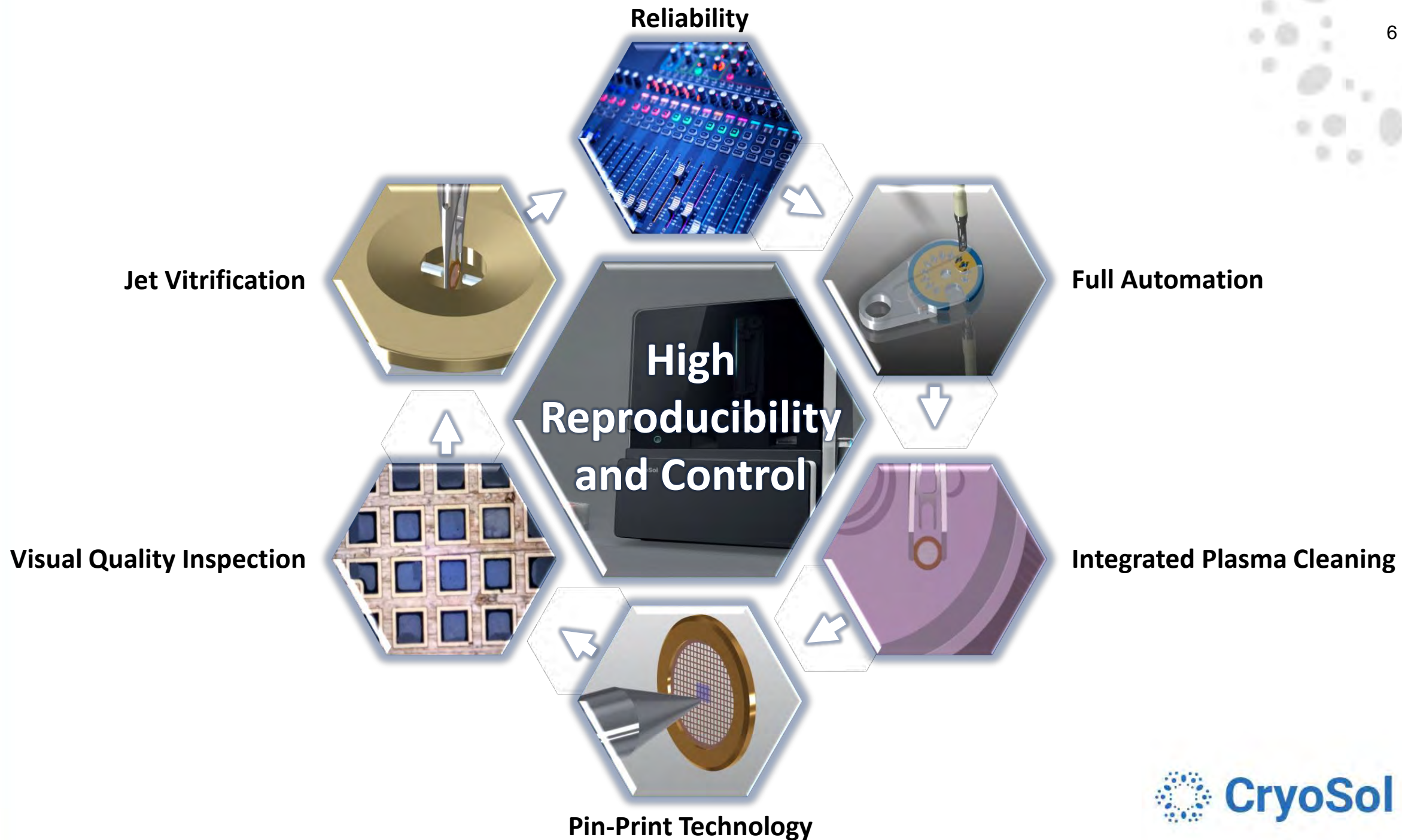
BRIDGET CARRAGHER, YIFAN CHENG, ADAM FROST, ROBERT M. GLAESER , GABRIEL C. LANDER, EVA NOGALES, HONG-WEI WANG

First published: 25 September 2019 | <https://doi.org/10.1111/jmi.12834>

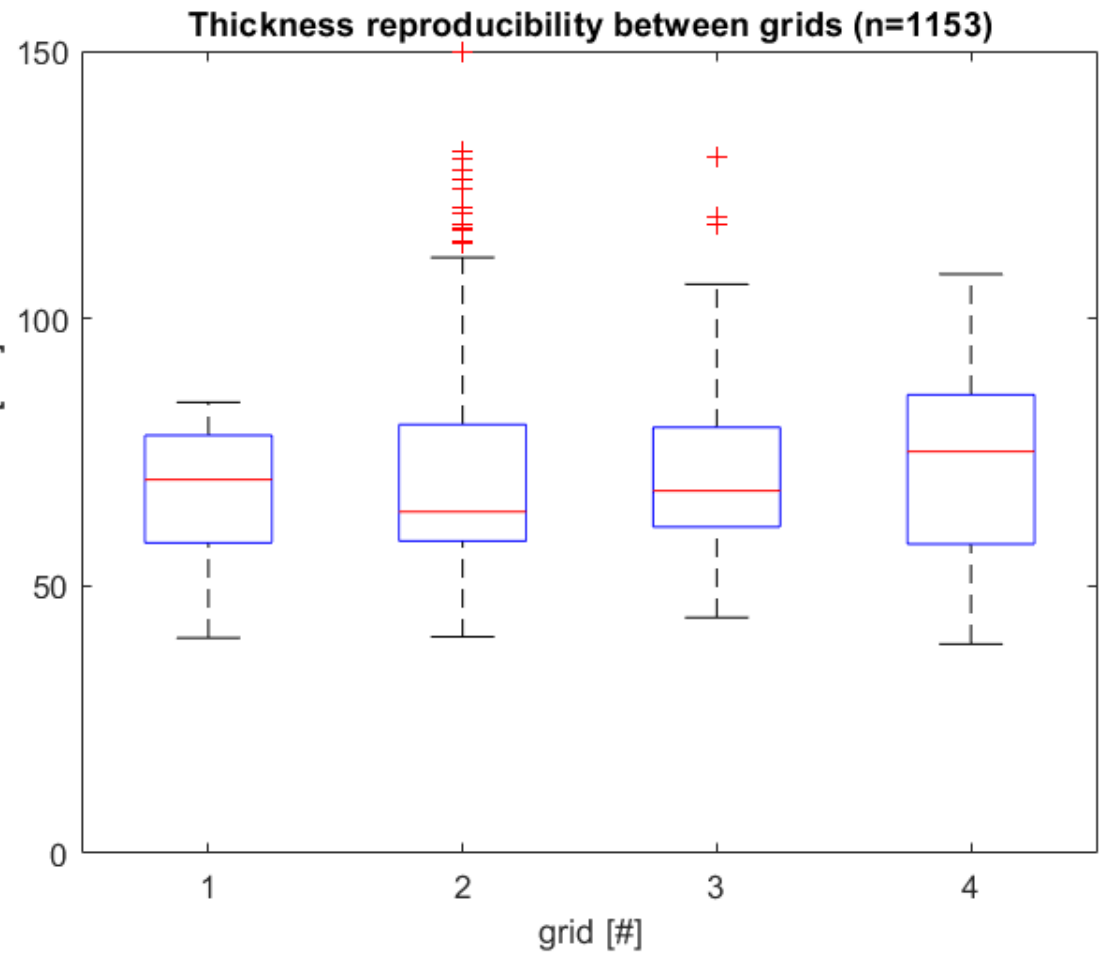
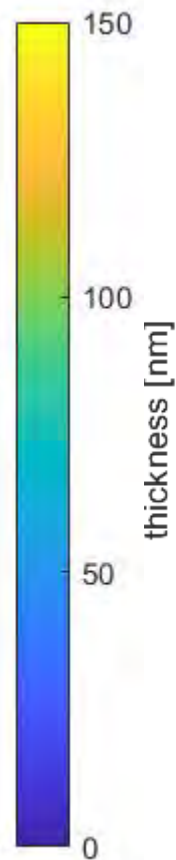
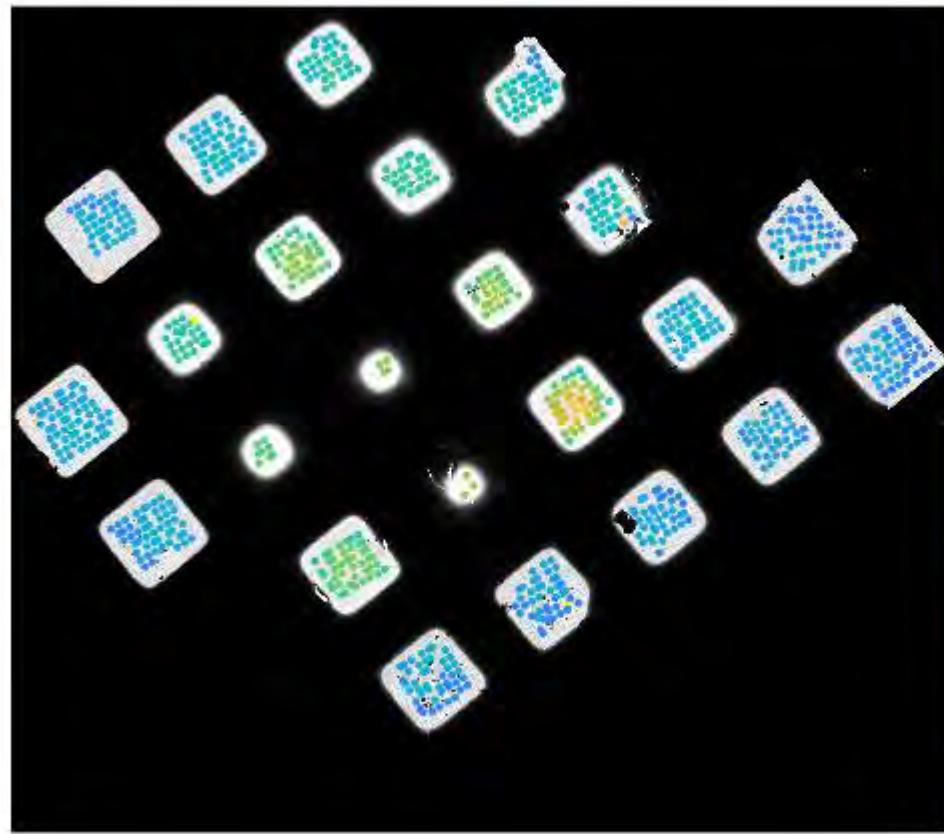
“Success on the first few attempts is rare; optimization is needed more often than not”

“None of the existing optimization methods works consistently well for different kinds of specimens”



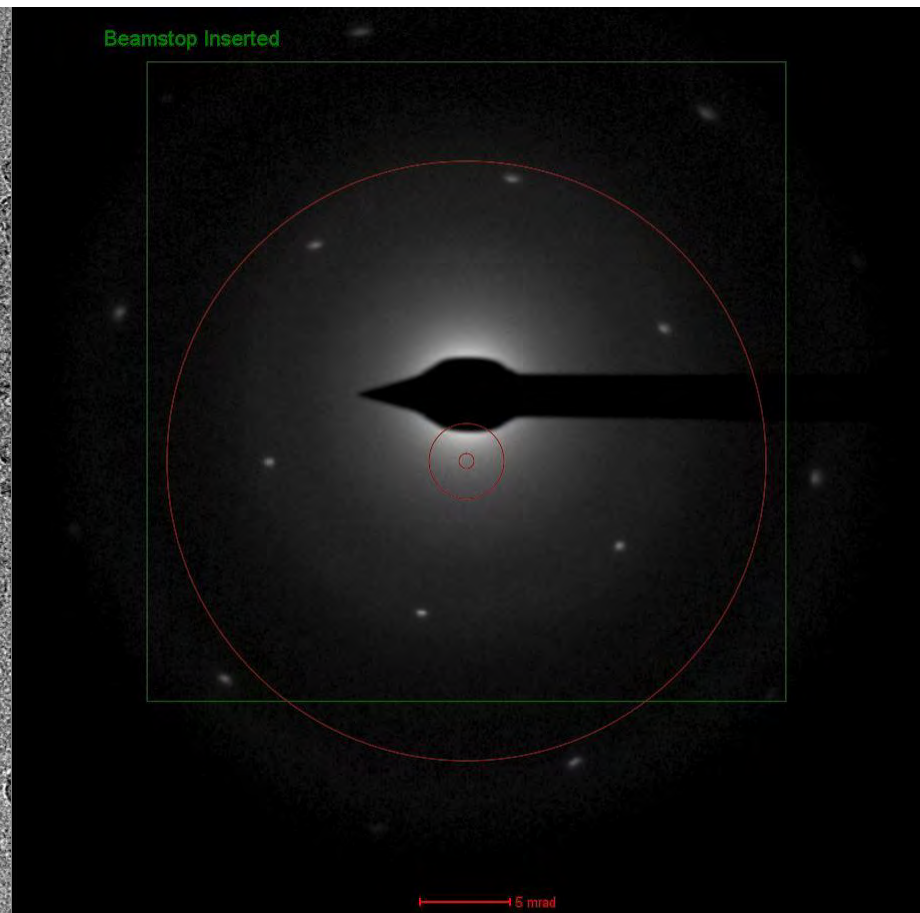
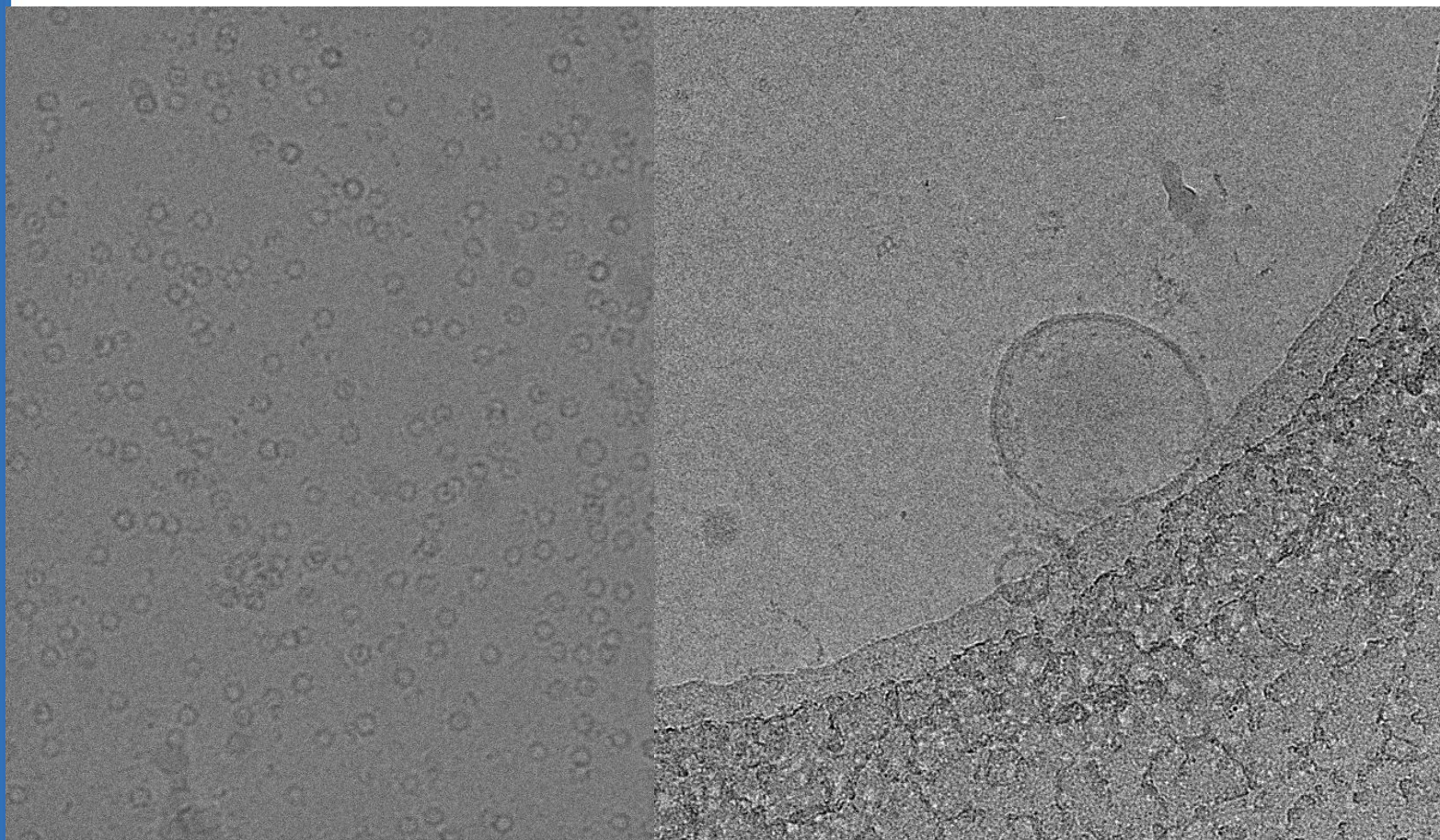


Reproducibility



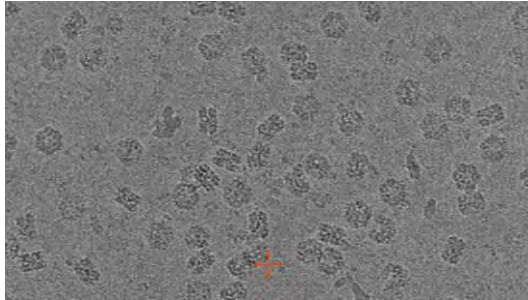
Method based on: Rice et al. 2018

Examples

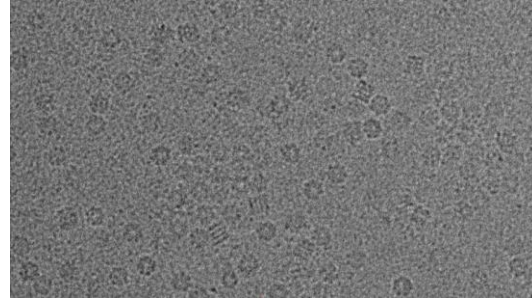


Proof of Principle (200kV)

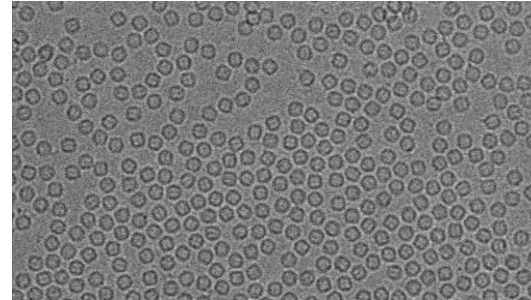
Wormhemoglobin 3.1Å



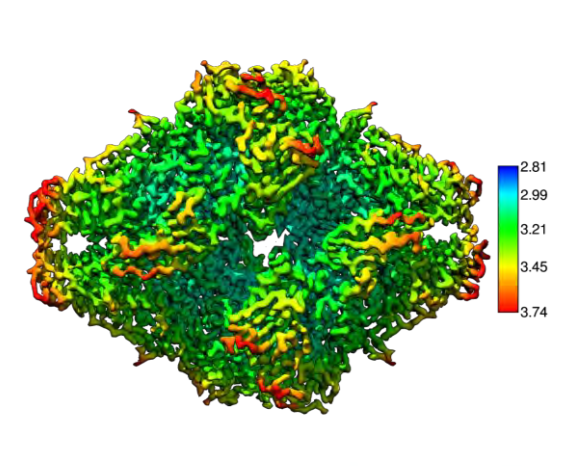
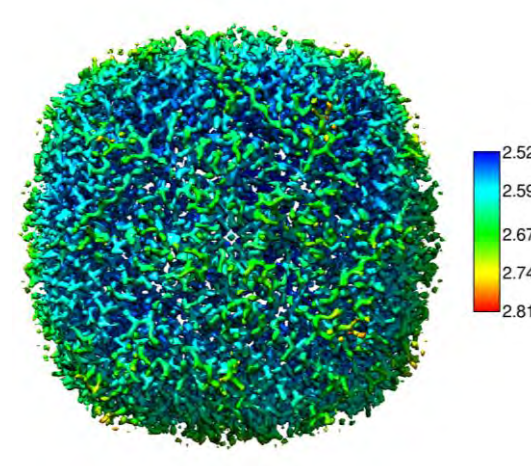
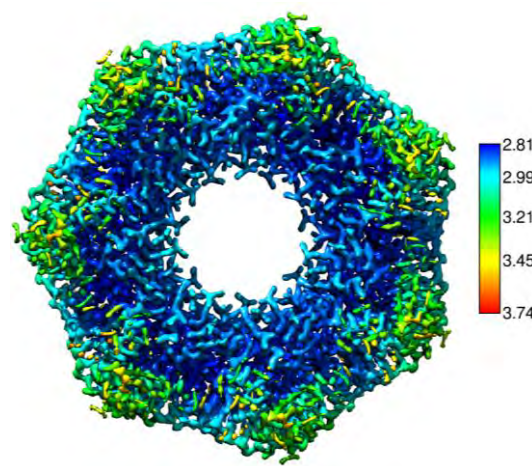
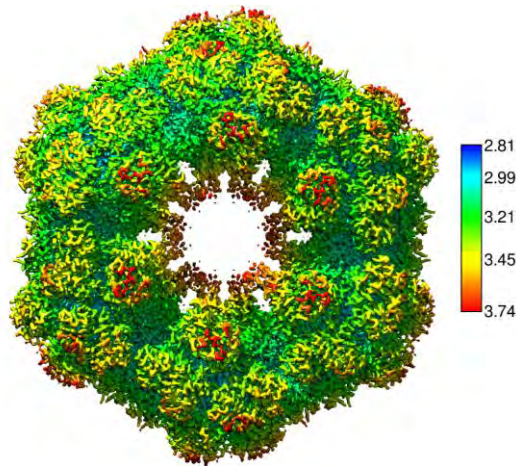
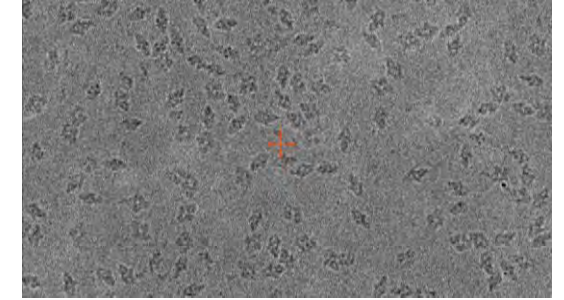
GroEL 2.9Å

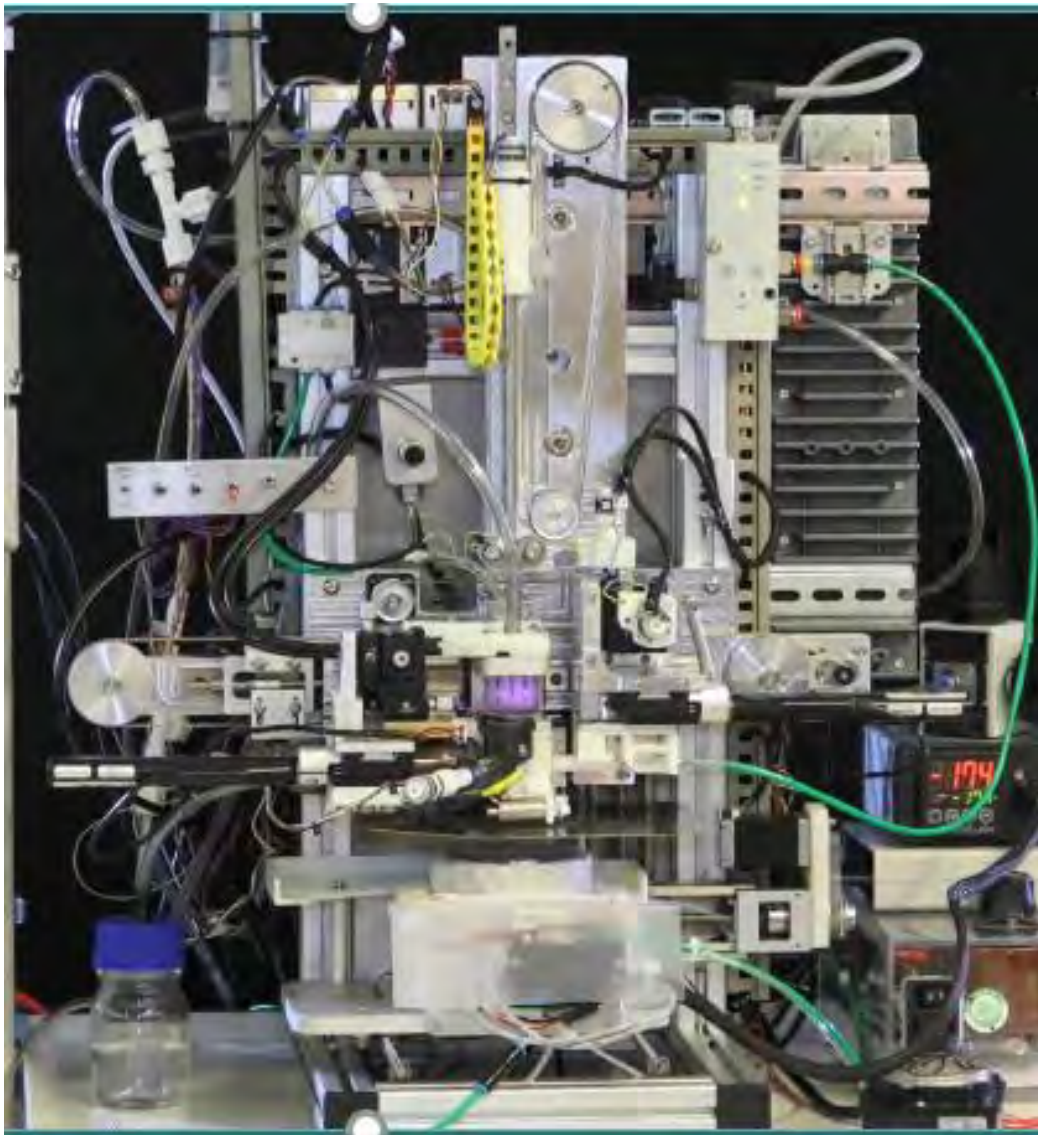


Apoferritin 2.5Å

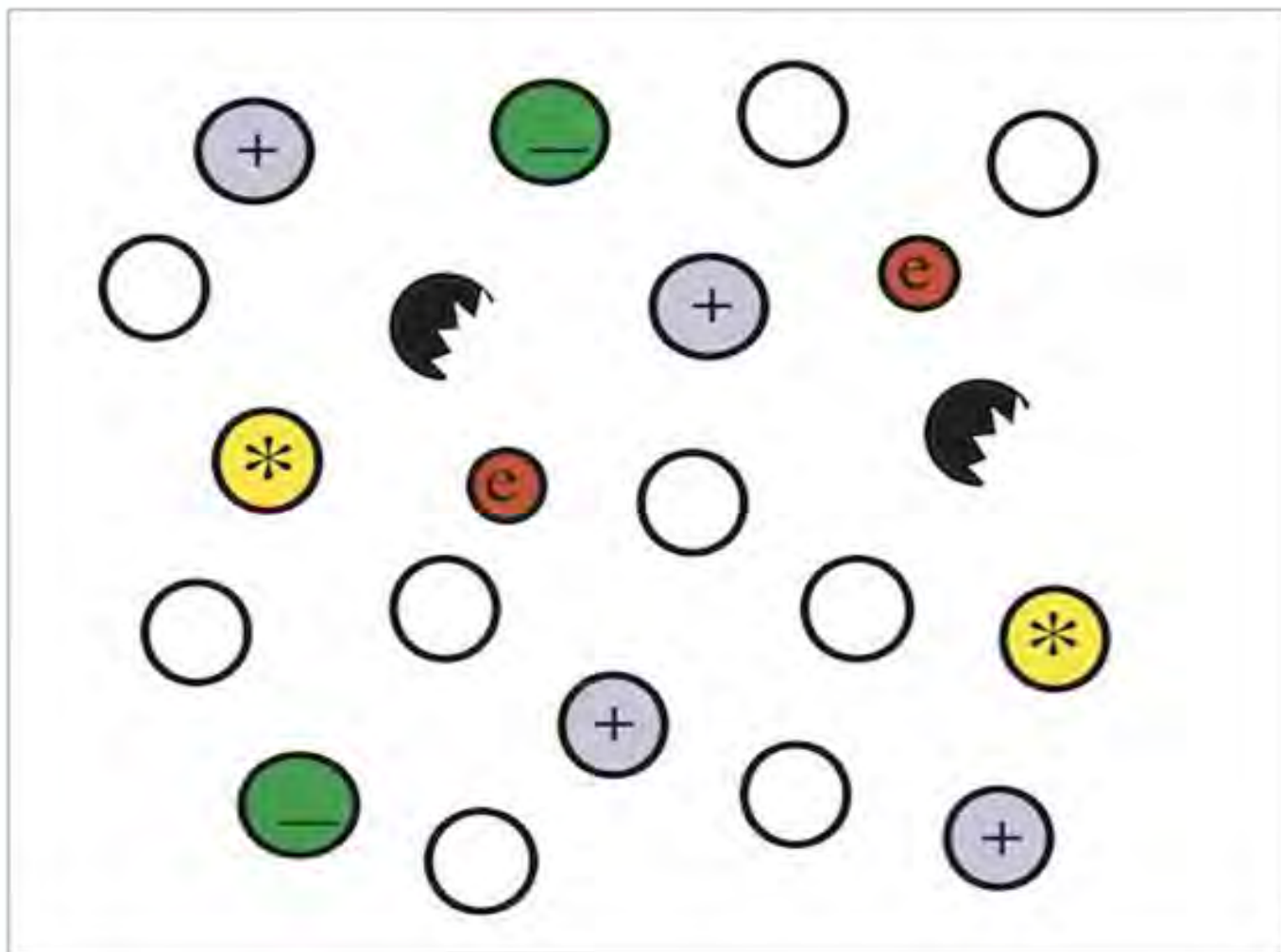








β -galactosidase 3.1Å



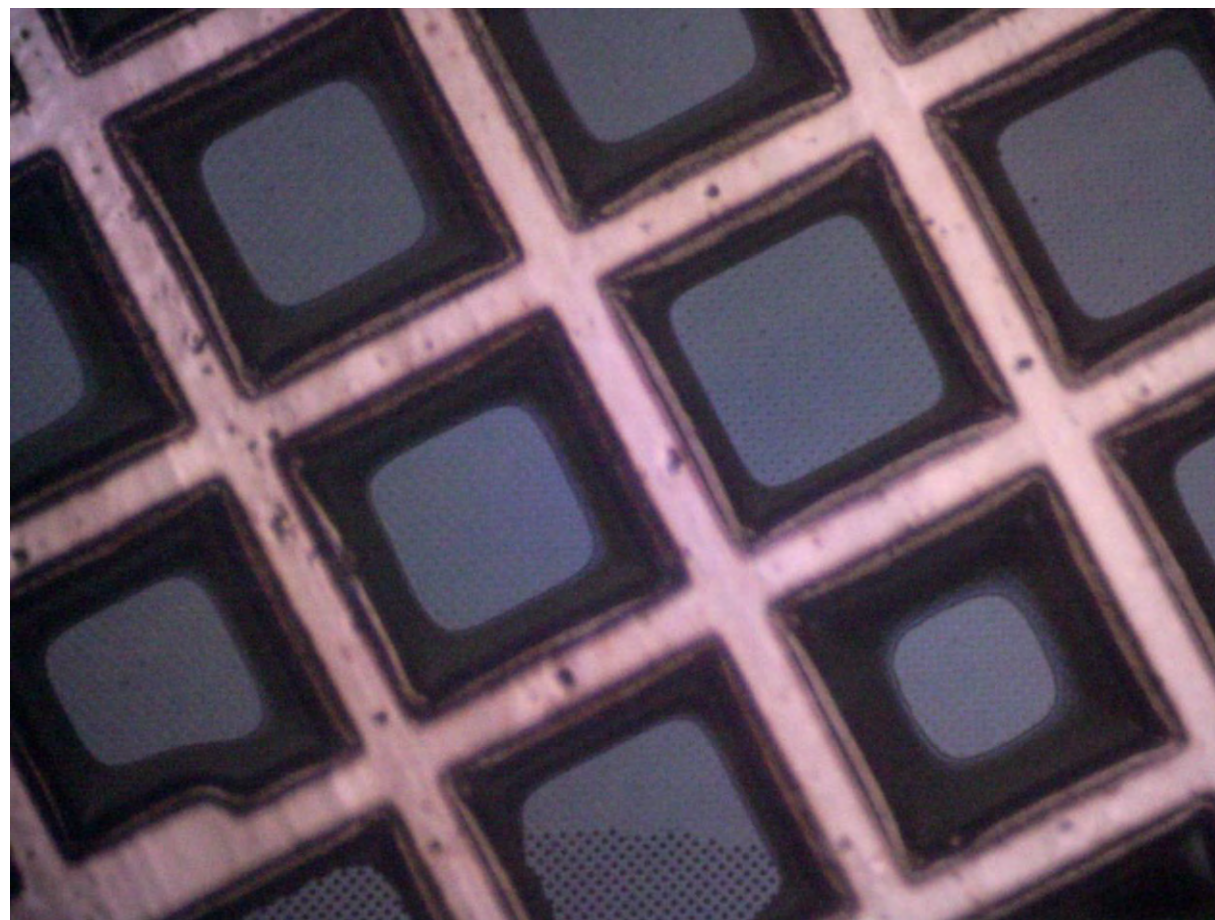


Plasma Cleaning

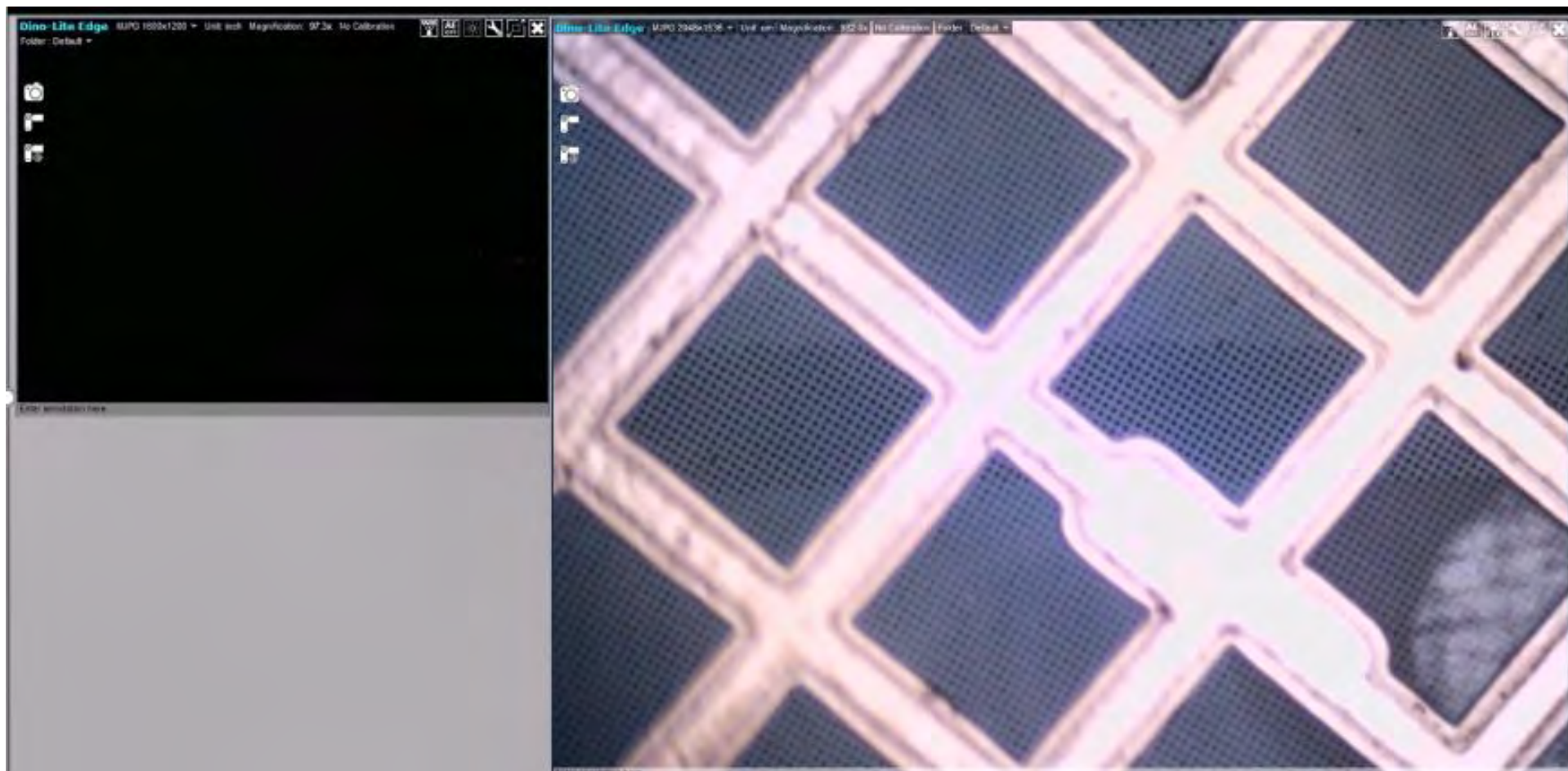


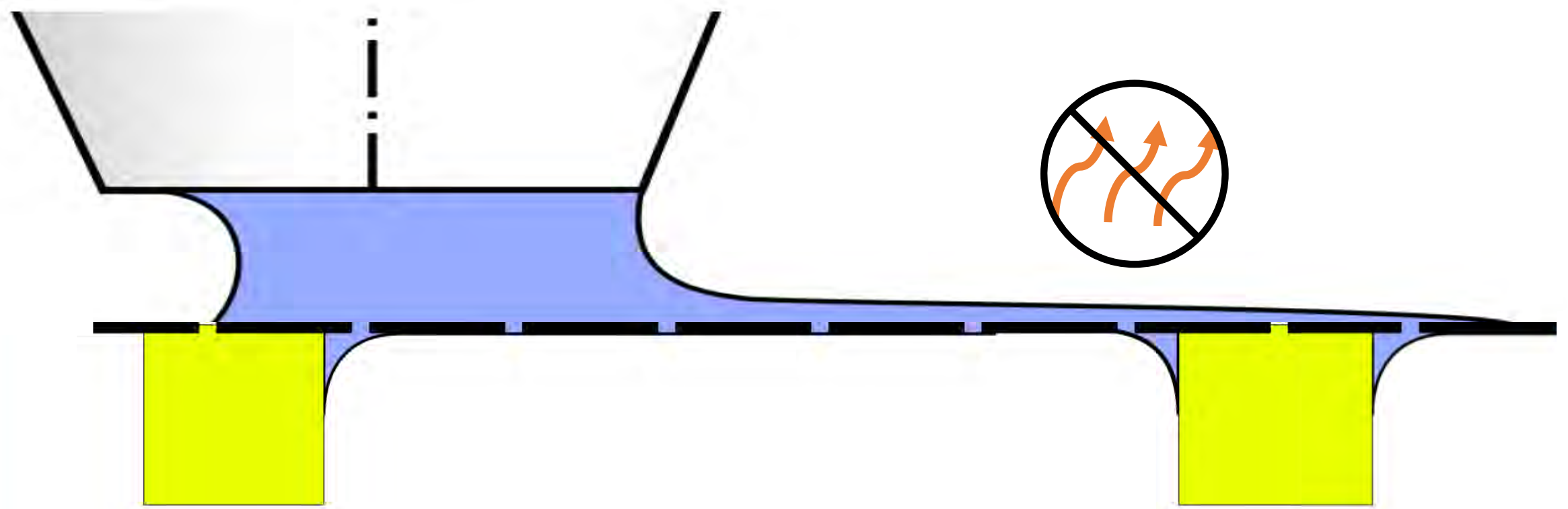
-  Gas molecules
-  Gas molecules (excited)
-   Ions
-  Free electrons
-  Molecule fragment (high-energetic)

Glow Discharge

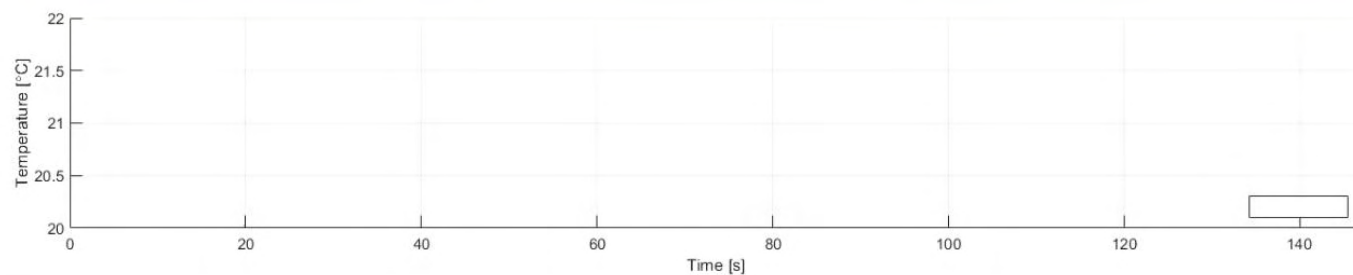
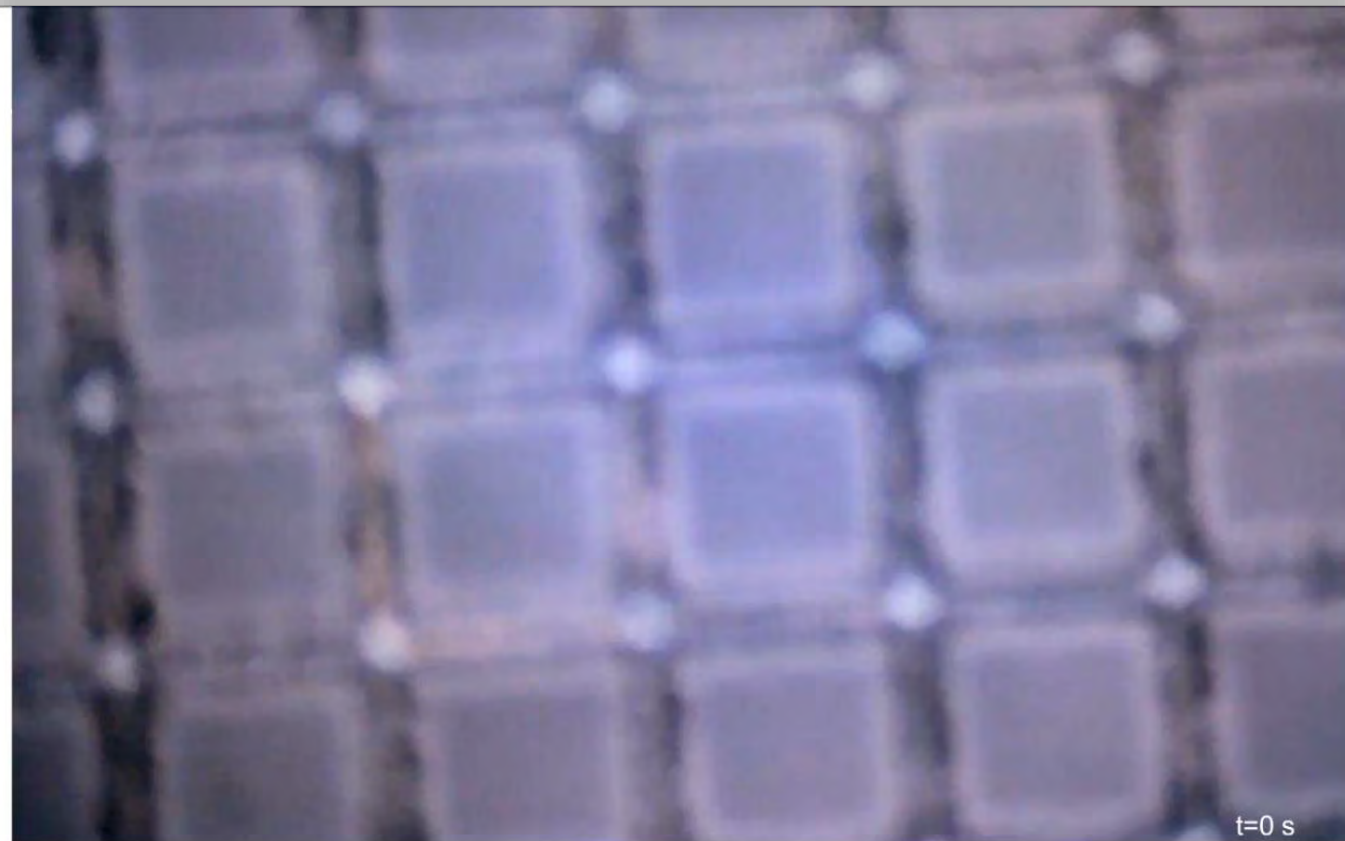


Plasma Cleaner

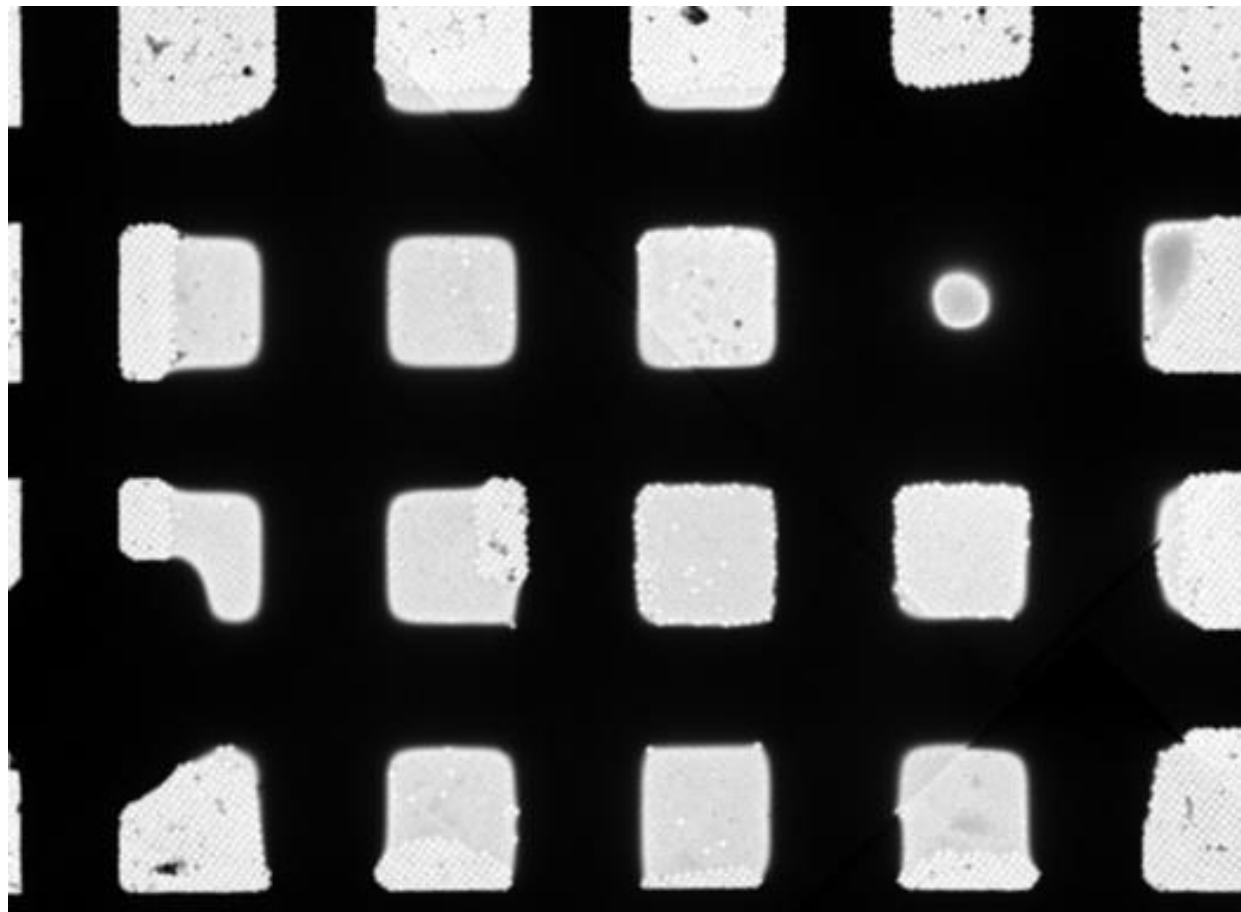
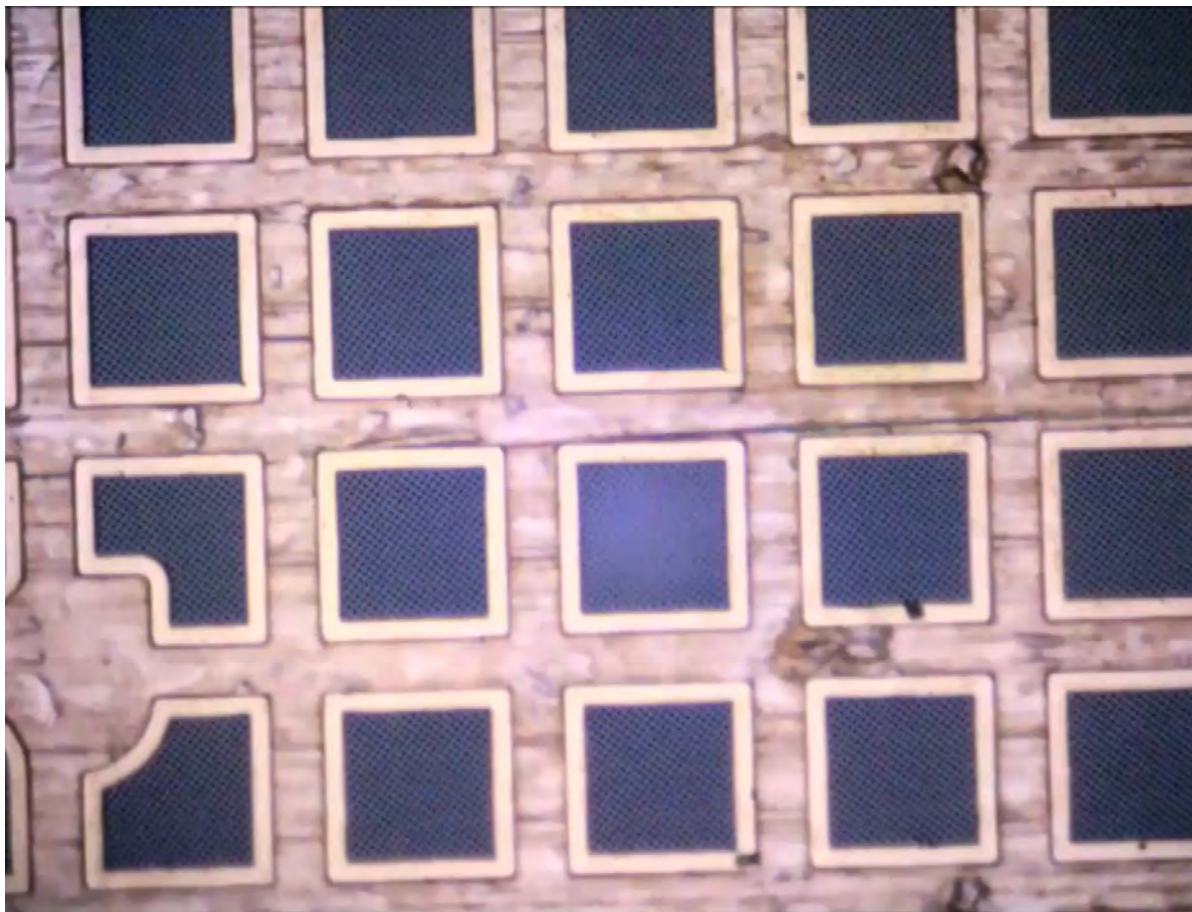




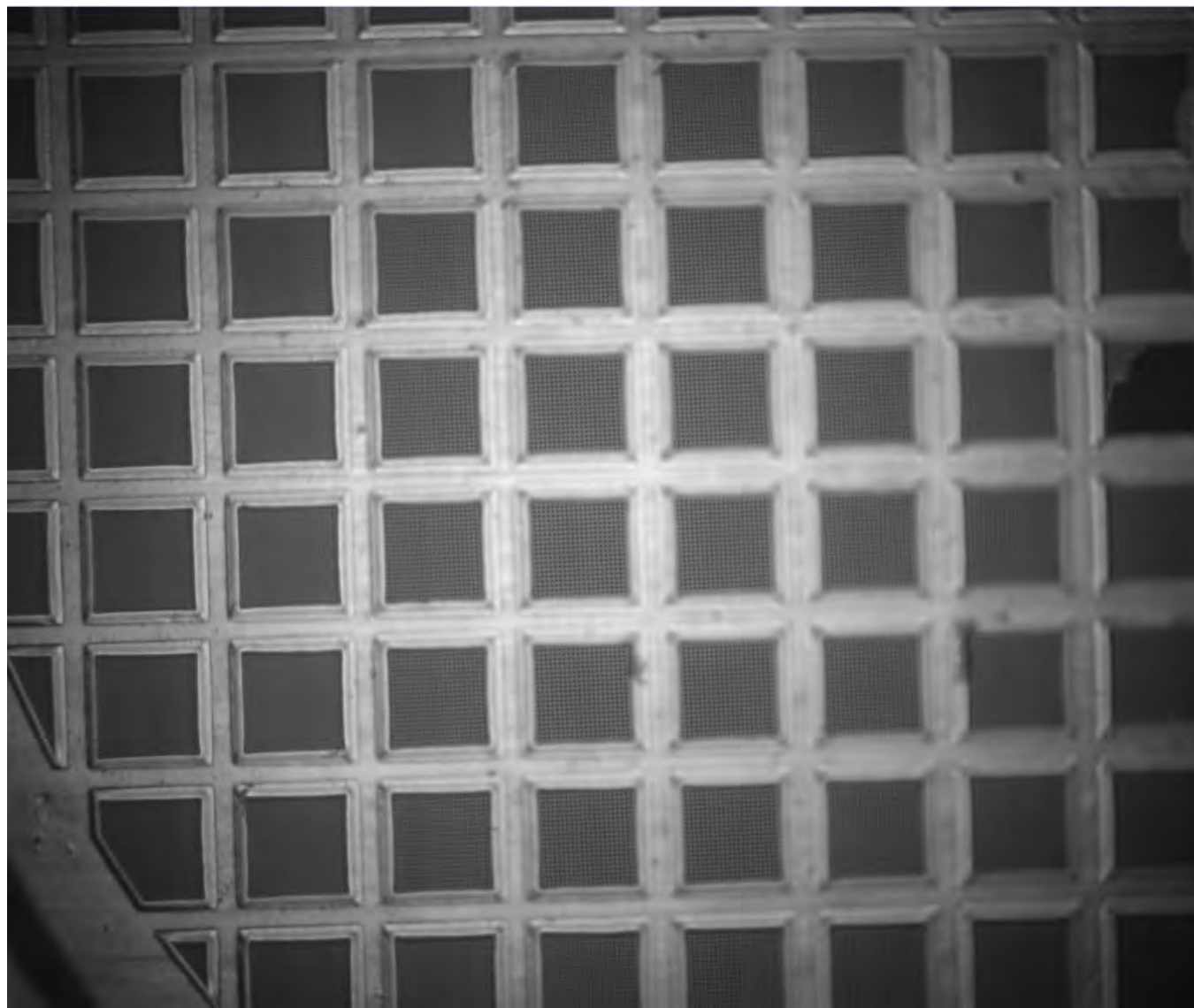
Dewpoint control



Visual Feedback



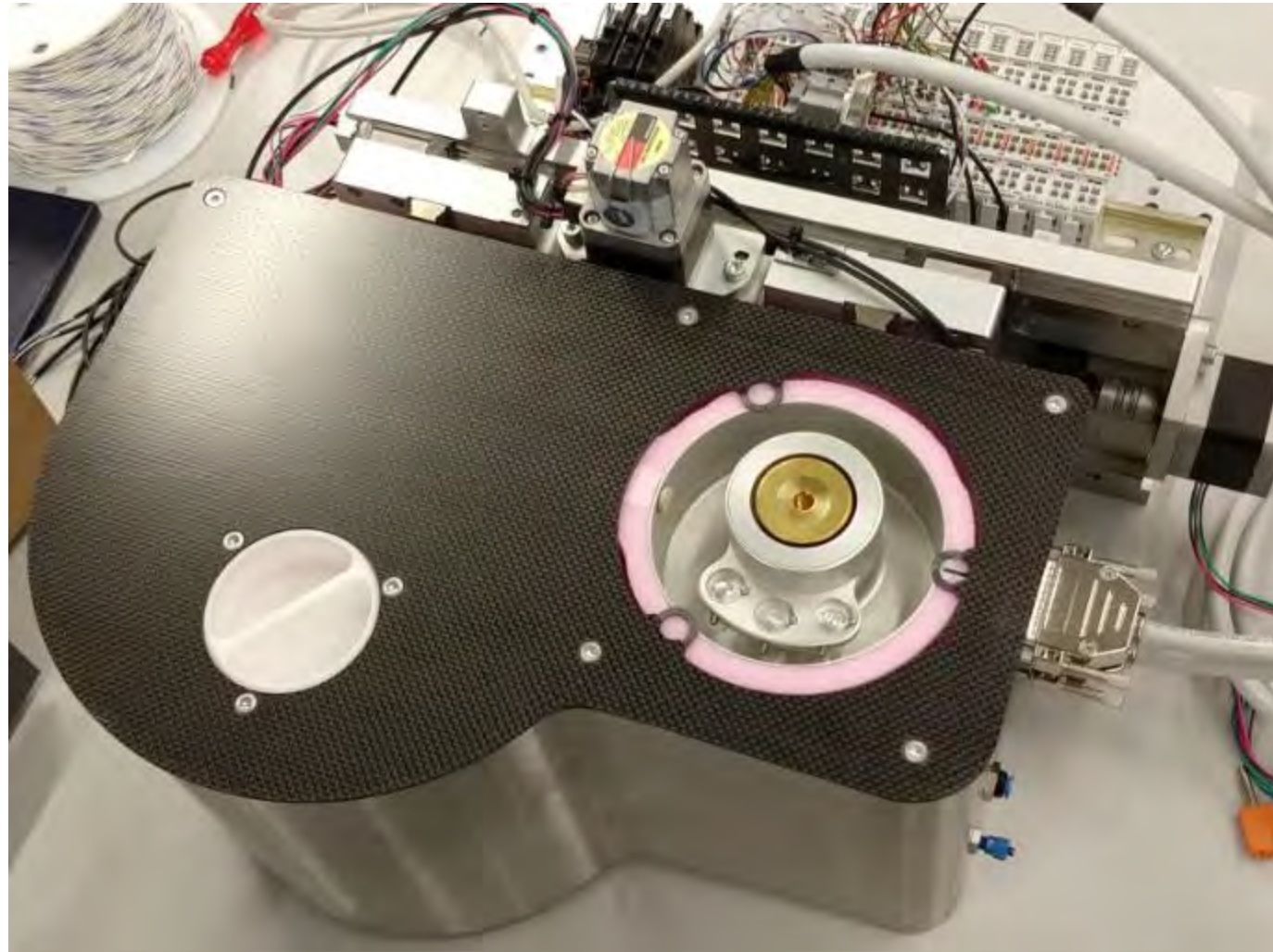
Autofocus and Larger Field of View



Jet Vitrification



Jet Vitrification



Contact

📍 CryoSol-World BV
Oxfordlaan 70
6229 EV Maastricht
The Netherlands

✉️ giulia.weissenberger@cryosol-world.com

☎️ + 316 1858 6606

🌐 www.cryosol-world.com

