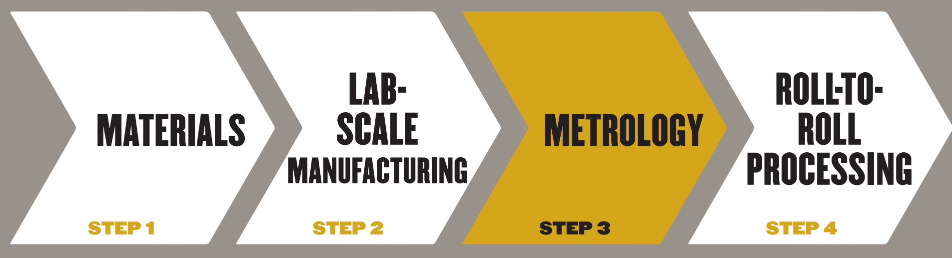
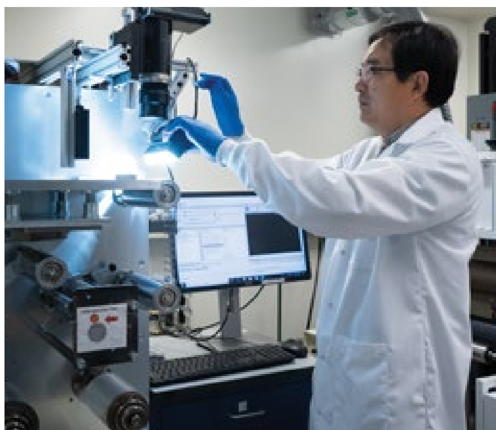
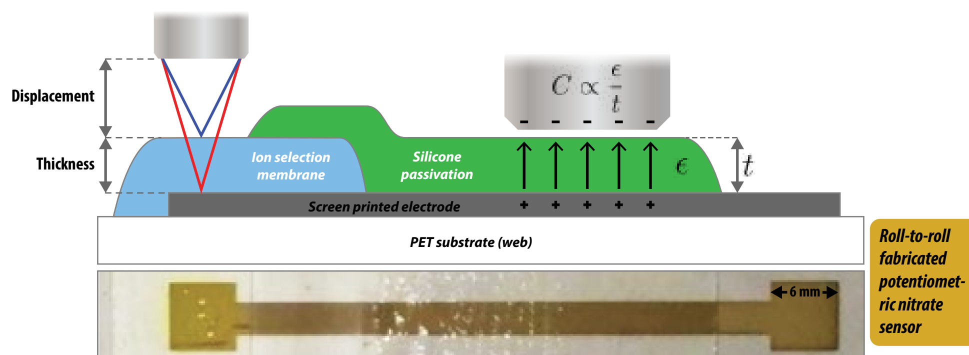
IN-LINE NON-CONTACT METROLOGY OF ROLL-TO-ROLL THIN FILMS AND DEVICES

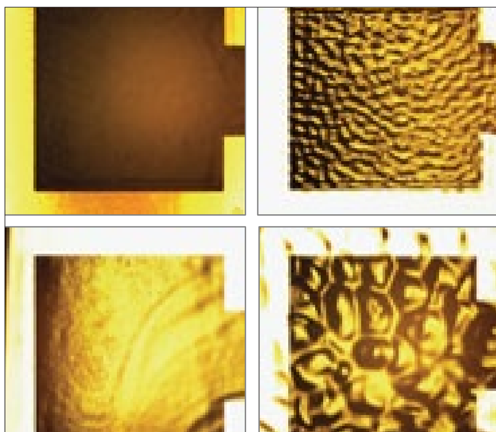




OVERVIEW

In-line metrology methods in the Birck Nanotechnology Center Roll-to-Roll processes automatically capture physical property data on coated or printed materials, as they are processed. This data provides real-time feedback to operators for process tuning and can be saved for more detailed off-line analysis. High resolution and high sampling rates are available in most methods.





CONFOCAL THICKNESS OF TRANSPARENT COATINGS

- High speed inline sampling
- 0.22 µm resolution

CAPACITIVE THICKNESS/PERMITTIVITY OF DIELECTRIC COATINGS

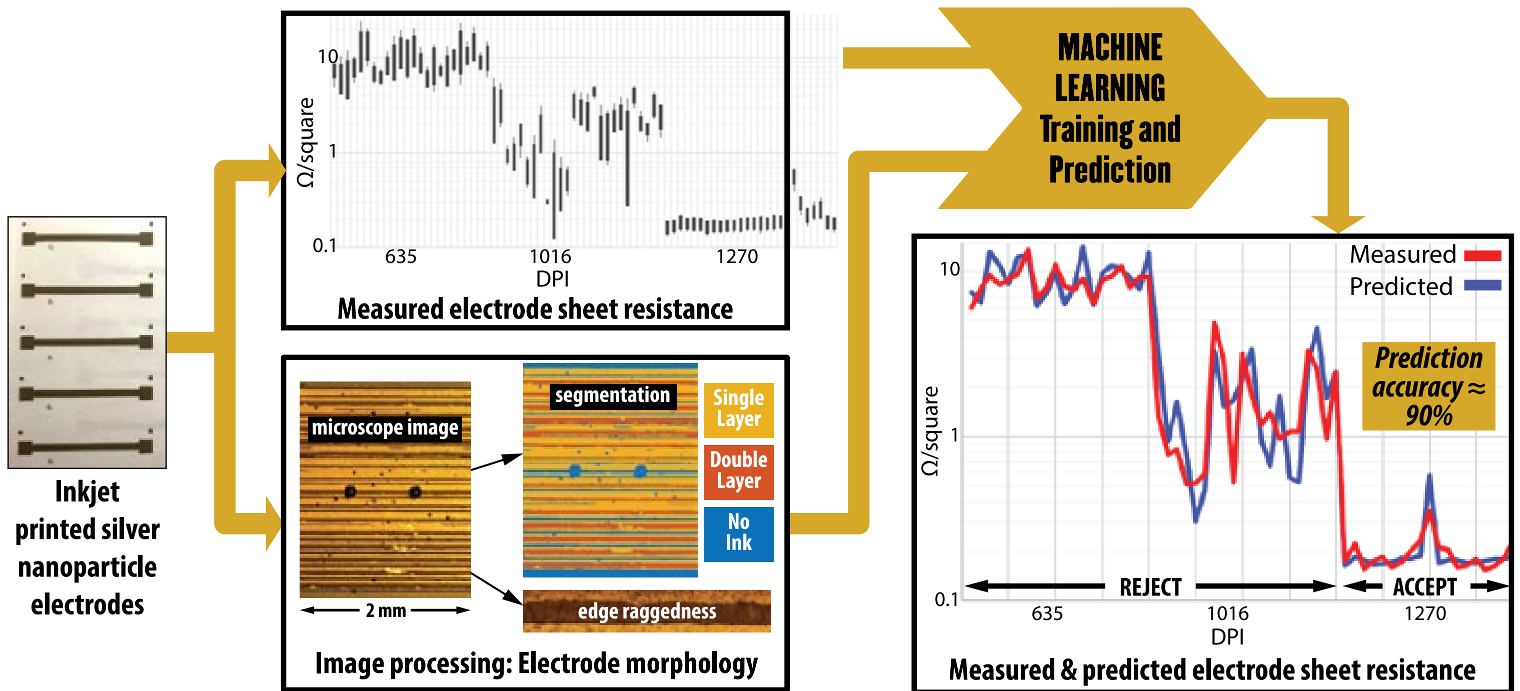
- High speed inline sampling
- Submicron resolution

LINE SCAN IMAGING

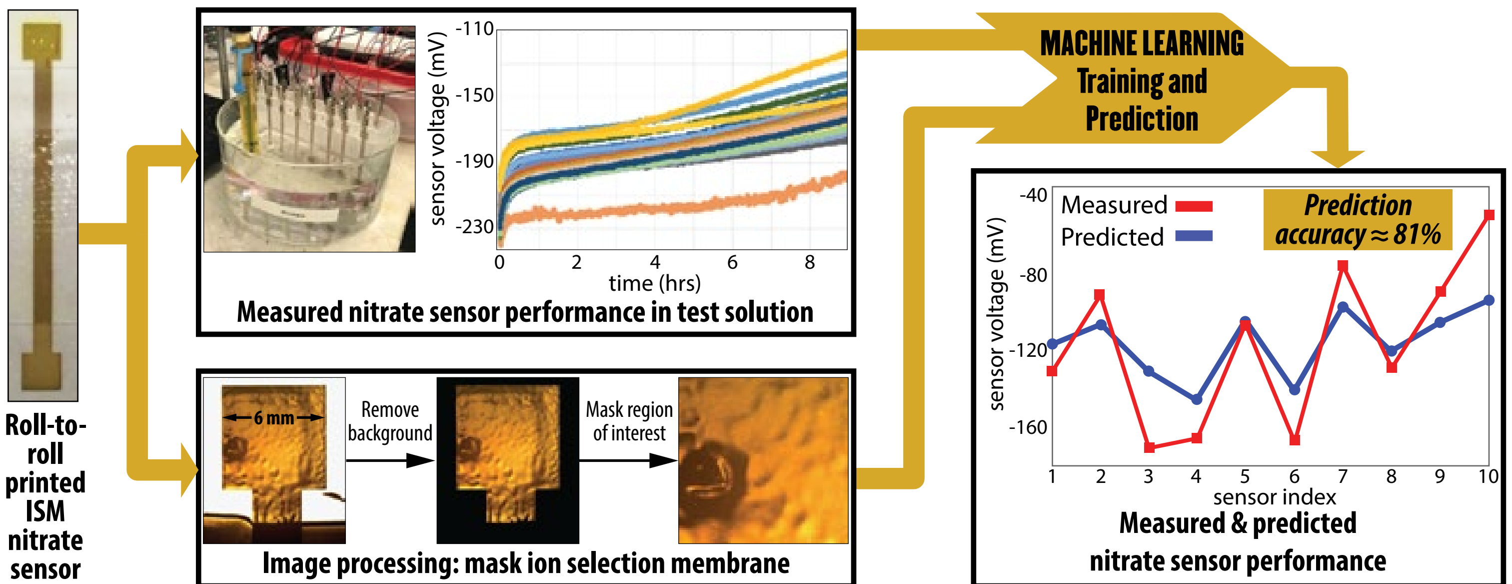
- Real time visual inspection of printed devices on flexible substrates up to 8" wide
- Quality control for high yield
- 10 µm spatial resolution

IMAGE-BASED MACHINE LEARNING QUALITY PREDICTION

Predicting printed electrode sheet resistance



Predicting printed nitrate sensor performance



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CONTACT INFORMATION

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