LUCIDEON

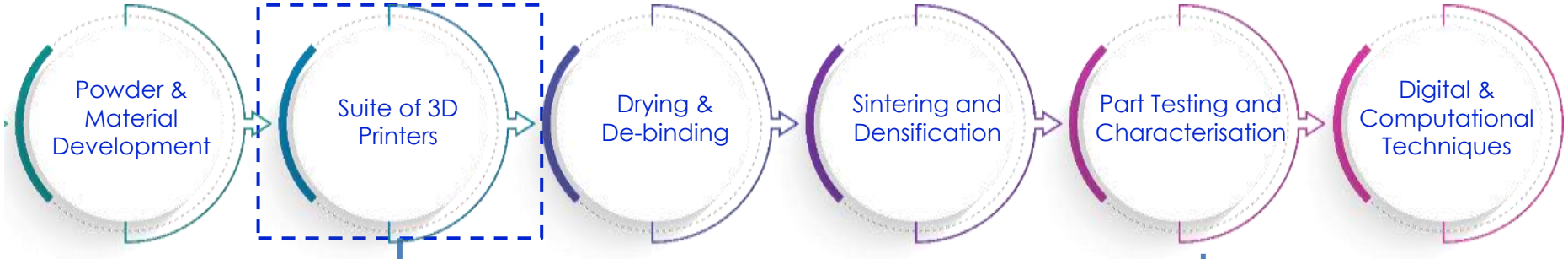
providing material solutions

Ceramic AM: Defect control for scalable, high-density ceramic AM

Jamie Scaglione, PhD
Market Development Manager

The AMRICC Centre

Ceramic AM facilities





Equipment offering:

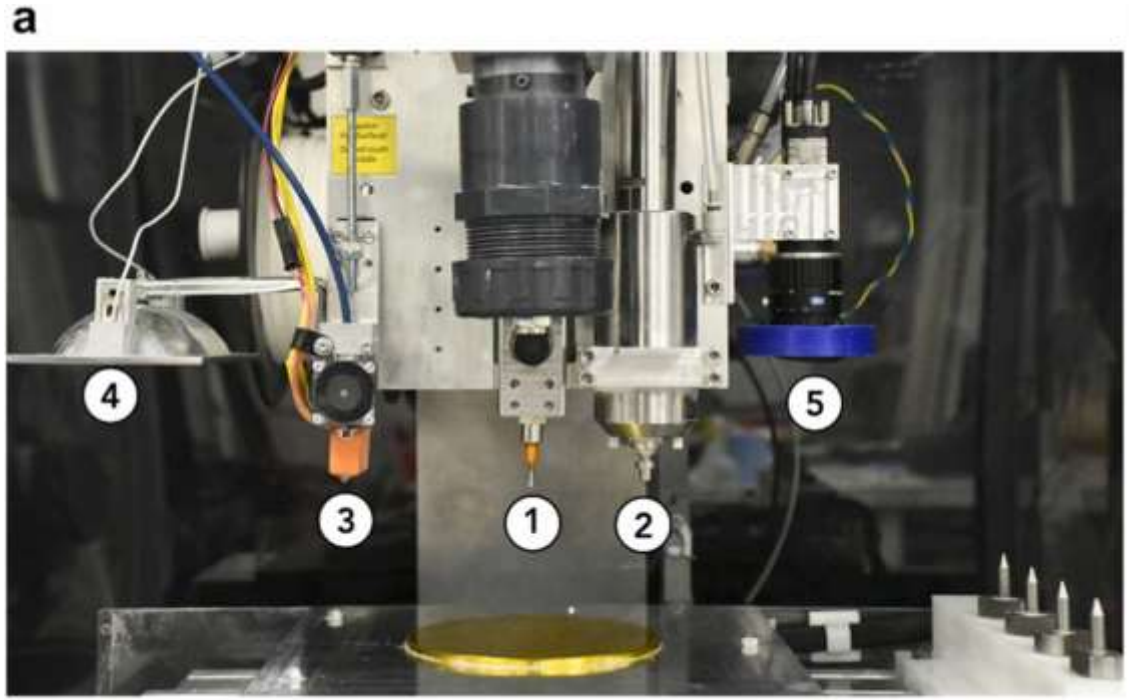
- Robocasting for rapidly iterating parts
  - Ideal for kiln furniture & refractories
- Vat Polymerisation techniques: SLA & DLP
  - Ideal for high resolution complex parts
- **Robocasting for combining AM with in-situ green machining**
  - **Enables production of high-density parts with increased product complexity**

Information Classification: General

Hydra **C**eramic **H**ybrid **A**dditive **M**anufacturing **P**latform (CHAMP)



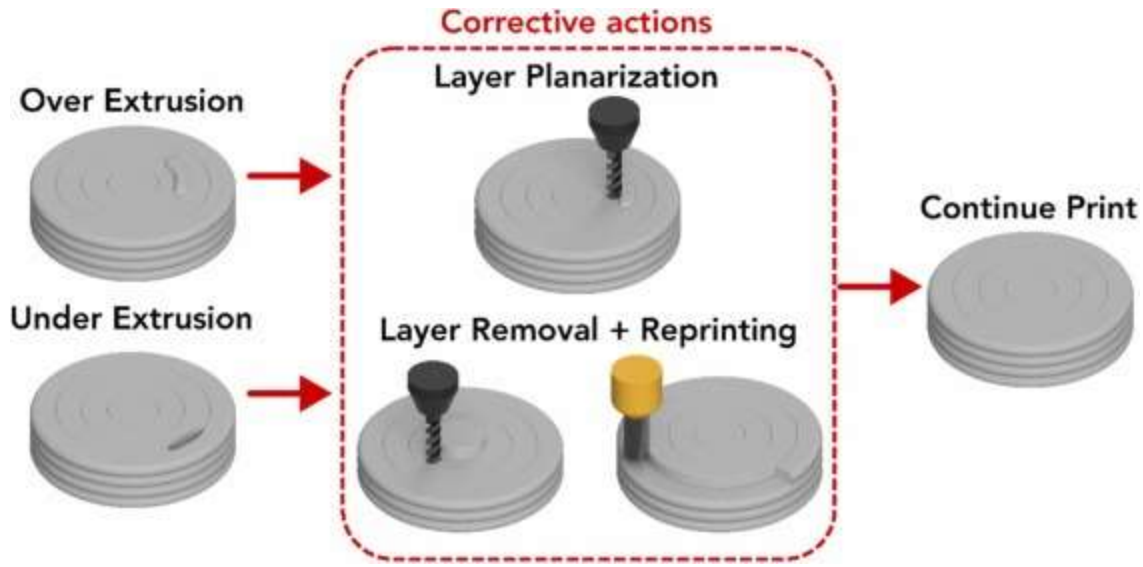
Build Volume	300 x 300 x 200 mm (11.8 x 11.8 x 7.9 in)
Max Traverse Speed	110 mm/s (4.3 in/s)
Machining resolution	1 µm

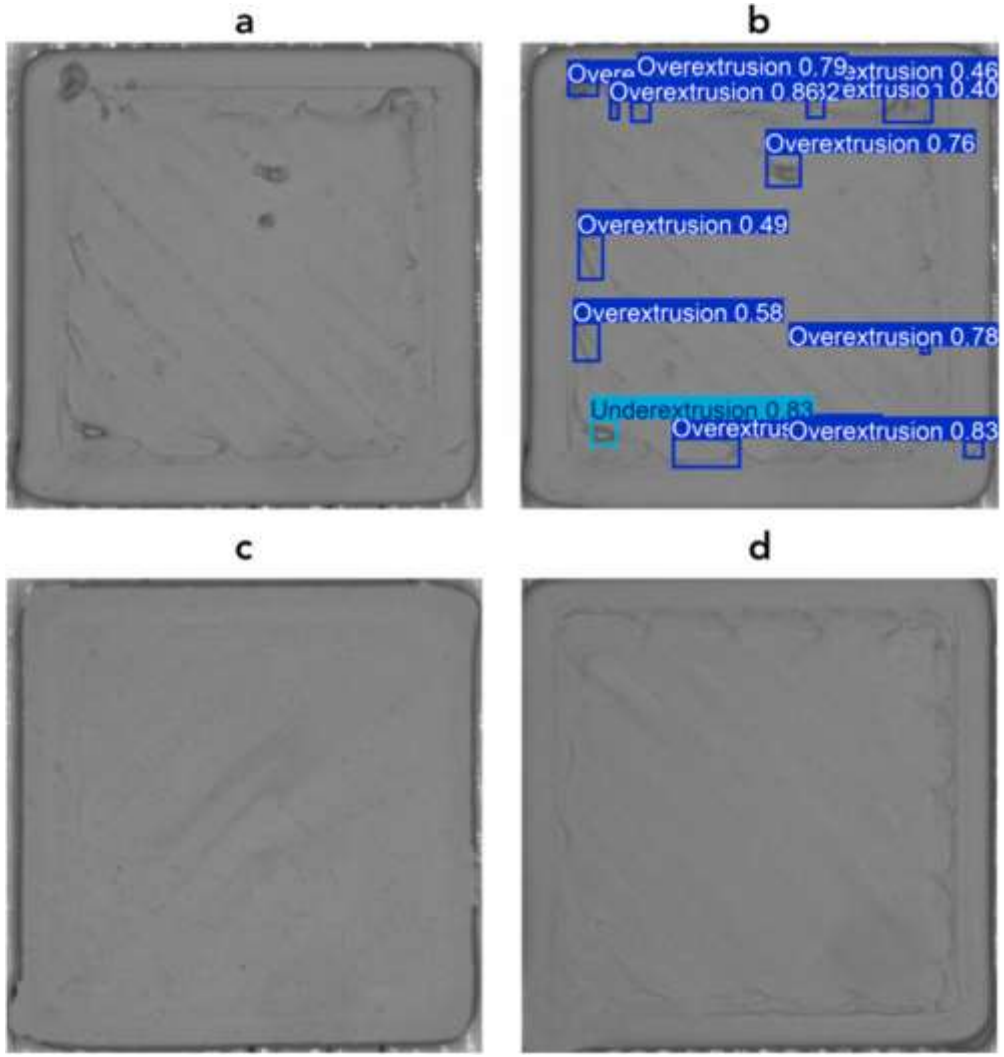


1) Ceramic paste extruder, 2) Micromachining spindle with automatic tool changer, 3) Polymer extruder, 4) IR lamp, 5) In-situ monitoring system.

Masters *et al.*, 2025, *Addit. Manuf.* 102: 104752. DOI: 10.1016/j.addma.2025.104752

Defect Detection – Computer Vision and Deep Learning





Masters *et al.*, 2025, *Addit. Manuf.* 102: 104752. DOI: 10.1016/j.addma.2025.104752

AMRICC INSIDE

UNIVERSITY OF LEEDS

Strategic Layer Reworking using Hybrid Additive Manufacturing for Defect-free Ceramic Parts

Louis Masters

Masters *et al.*, 2025, *Addit. Manuf.* 102: 104752. DOI: 10.1016/j.addma.2025.104752