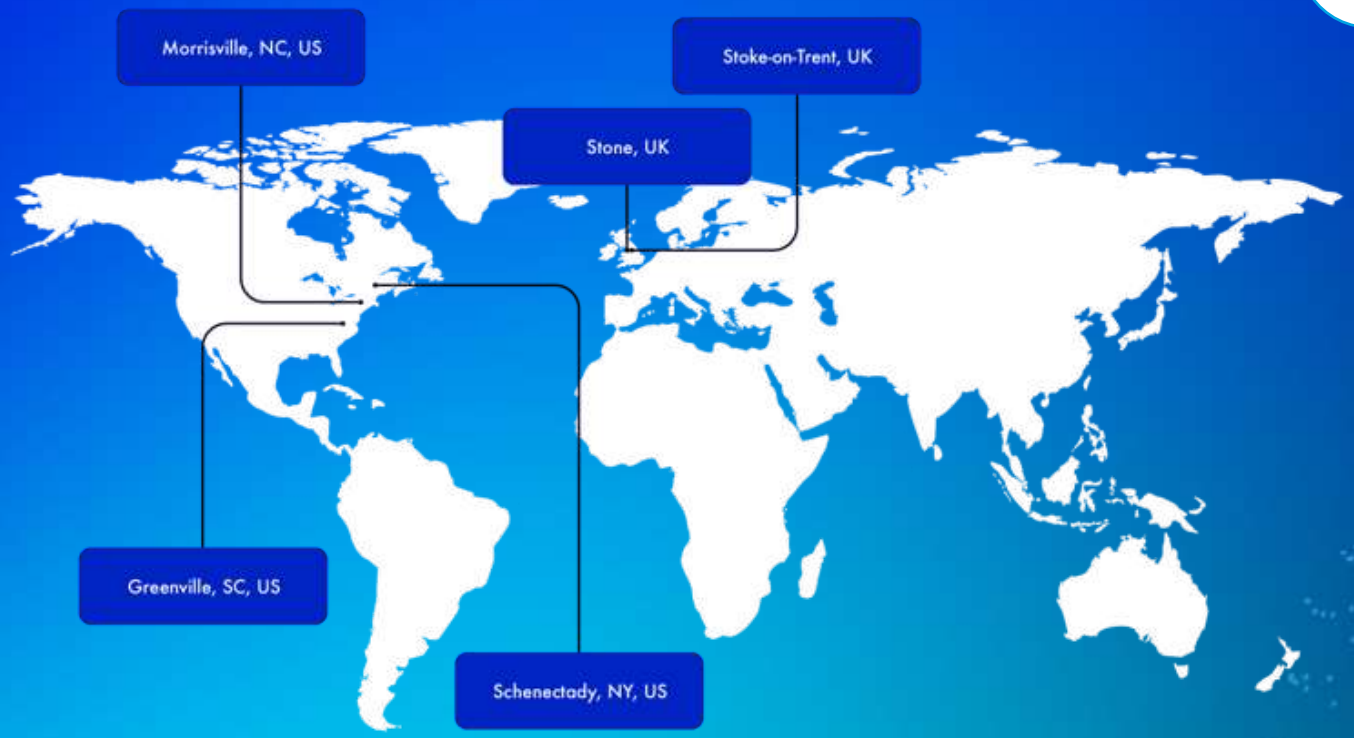
LUCIDEON

providing material solutions

From Detection to Prevention: Enabling Zero-Defect Ceramics

Jamie Scaglione, PhD
Market Development Manager

The AMRICC Centre



- International materials technology business with 5 global locations
- Materials R&D supported by wide range of testing & characterisation capabilities
- Advanced Materials & Processes supporting Manufacturing Innovation
- >240 Employees, >40 PhD's
- Proven track record supporting highly regulated industries
- Bridging the gap between academia and industry

Commercial in Confidence

Applications and industries

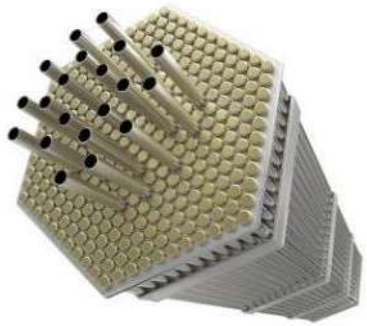
Crucibles and refractories



Casting cores



Advanced nuclear fuels



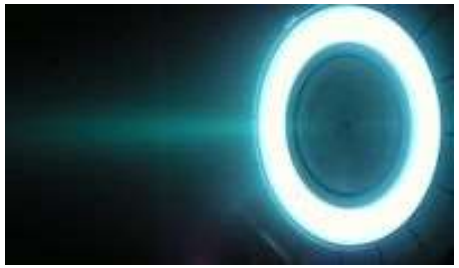
Fusion energy



Spacecraft heat shield



Ion drive



More efficient engines



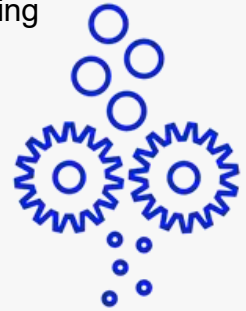
Next-generation defence



End-to-end ceramic processing

Powder processing & formulation

- Material selection
- Milling – variable speeds, temperatures & sizes
- Mixing – in air & under vacuum
- Granulation & spray drying



Forming

- Powder compaction
- Slip casting
- Extrusion
- Injection moulding
- Tape casting
- 3D printing



Drying & de-binding

- Drying oven suite - 20°C to 300°C
- Furnaces with de-bind function
- Autoclave - 300°C 14 bar



Sintering

- Furnaces up to 3000°C – in ambient or controlled atmospheres
- Ability to do PIP & LSI
- HIP
- Hot Press



Defect-free performance requires control across the entire process chain