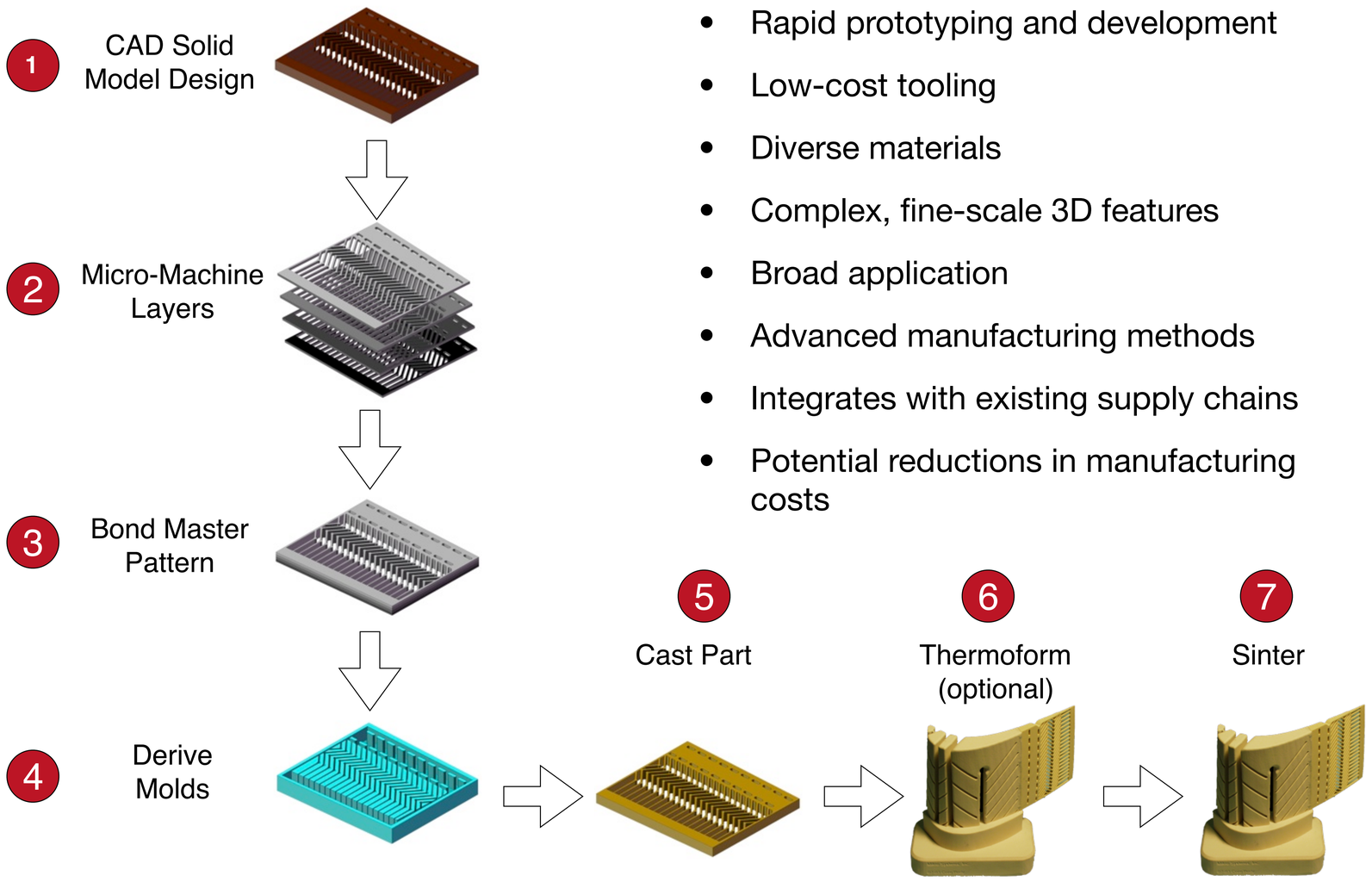
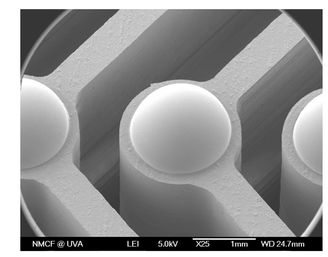
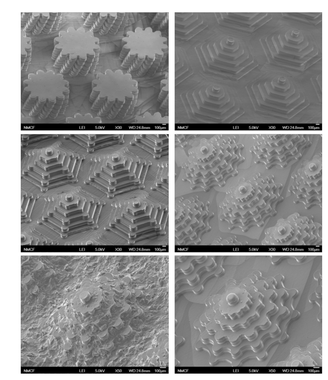
TOMO^{sm} Lithographic Molding for Turbine Blade Cooling



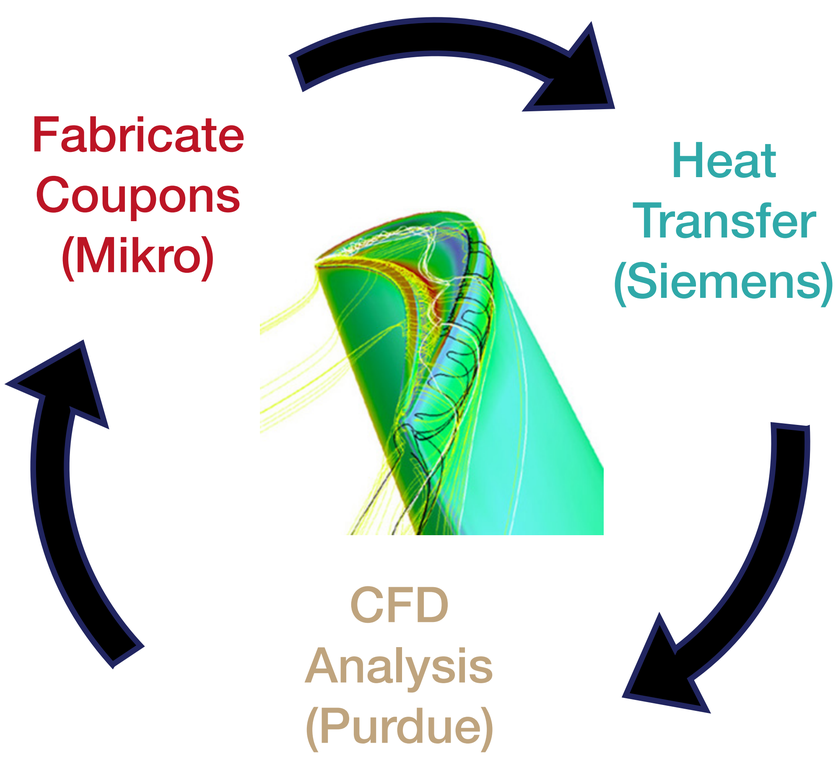
- Rapid prototyping and development
- Low-cost tooling
- Diverse materials
- Complex, fine-scale 3D features
- Broad application
- Advanced manufacturing methods
- Integrates with existing supply chains
- Potential reductions in manufacturing costs





DoE Phase II SBIR – Advanced Cooling for Turbine Engines

Year One



Design cycle developed in Year One will enable production of three advanced blade designs with TOMO-derived internal cooling geometries.

Year Two

Mikro

Using TOMO, Mikro will rapidly produce tooling and ceramic cores for casting Phase II turbine blades.

Siemens

Siemens will test Phase II blades and validate Year One cooling design and provide data inputs for CFD modeling.

Purdue

Continue CFD analysis of internal cooling geometries for Phase II turbine blades.

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