

Michigan

Lightweighting vehicles through composites technologies

Supporting the automotive industry, IACMI – The Composites Institute calls Michigan home to our Vehicles Technology Area. A focal point of research and development in this area are composites technologies that offer both significant weight savings and high-volume manufacturing.



Michigan is home to more IACMI members than any other state. These members and our Vehicles Technology Area are helping to grow the state's manufacturing economy for the increasingly advanced automotive sector.

Facility Hosts and Partners

The **IACMI Scale-Up Research Facility (SURF)** is co-located with Lightweight Innovations for Tomorrow (LIFT), a fellow Manufacturing USA institute. Part of the Corktown neighborhood (Detroit) revitalization, SURF and LIFT offer a unique opportunity for multi-material collaboration.

SURF is managed by Michigan State University and supported by the Michigan Economic Development Corporation.

Key IACMI members involved in the Vehicles Technology Area include Dow, DuPont, ESI, Eaton, and Schuler.



Research Features

Key Equipment and Technology:

- Integrated molding cell with:
 - High-pressure resin transfer molding/liquid compression molding system
 - 4,000-ton compression molding cell
- Automated tape laying (ATL) machine
- 3,000-ton injection molding/overmolding cell
- Prepreg line for novel prepreg material production
- Rapid heat-cool system
- Plasma treatment
- Compounding
- Prepreg slitting, chopping, and laminating equipment

Recent projects:

- OEM-qualified epoxy resin system for high-volume automated manufacturing applications
- Injection molding with low-cost textile-grade carbon fiber
- Design and manufacture of lightweight composite liftgate including parts consolidation

Key Staff Member

Raymond Boeman, PhD
Director, SURF