

# The Fraunhofer Project Centre @ Western

Western University and the Fraunhofer Institute of Chemical Technology (ICT) in Pfnitztal, Germany have launched a long-term research collaboration related to composite technologies for manufacturing of lightweight materials. This joint venture – the Fraunhofer Project Centre @ Western – anticipates making London the leading site for advanced composite materials research and testing at a manufacturing scale for several North American Industrial sectors.

## About the FPC @ Western

- Europe's largest R&D organization's first presence in Canada
- Develops, tests, validates and characterizes new lightweight materials and advanced manufacturing processes at industrial scale
- Accelerates adoption of advanced composite technologies and processes by North American industry
- Bridges a gap in the knowledge chain between research and industry
- Increases competitiveness with lighter, energy efficient materials that reduce a product's carbon footprint
- Primary industry sectors: transportation (automotive and aerospace), renewable energy and construction

## Capacity

- Trials at an industrial scale
- Material and formulation development
- Manufacturing process investigation and development
- Part development
- Workshops for know-how transfer into industry
- Training of personnel and students
- Access to a cluster of other research facilities and services

## Technological Highlights

- Full industrial-scale shop floor for processing of fiber composites
- Global-first LFT-D line for carbon fiber processing
- Global-first HP RTM line for processing unsaturated polyester resins, epoxy resins and polyurethane resins
- Global-first injection moulding machine for direct heating/co-moulding of local reinforcements with foamed polymers
- North America's first Direct SMC line

## Areas of Research

- Automated preforming technology
- Compressing moulding technology
- Injection moulding of long fibre reinforced thermoplastics
- High Pressure Resin Transfer Moulding (HP-RTM)
- Thermoplastic tape laying
- Direct Thermoset Sheet Moulding Compound (SMC)
- Direct Long Fiber Thermoplastics (D-LFT)

## How to engage with FPC @ Western

- Press centre trials
- Analytical testing services
- Scientific and engineering services
- Training and educational services

**For more information:** <http://www.eng.uwo.ca/fraunhofer/>



*By combining strengths in composite materials, the FPC @ Western proactively anticipates needs of the region's industry partners.*

## Highlights:

- Not-for-profit partnership with Europe's largest R&D organization
- Offers Canada's only open-access, full-scale press and manufacturing capacity
- Houses a compression moulding press with a maximum clamping force of 2,500 tonnes
- Located at Western's Advanced Manufacturing Park (AMP), with space for co-location and new business incubation
- Attracted Dieffenbacher and Hexion to AMP
- Leverages Western's established research strengths in surface technologies and materials



**Western**  
Research

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