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Research Interests

- Compounding of polymer composites using nanoclays, nanocrystalline cellulose, sisal fiber, carbon fibers, glass fibers (short), carbon black, and other inorganic fillers.
- Foaming of polymers using chemical and physical blowing agents
- Polymer rheology
- Wet granulation extrusion for pharmaceutical oral solid forms
- Aqueous dispersions using twin screw extrusion machinery
- Solids mechanics in extrusion machinery
- Reactive extrusion, using synthetic polymers and biopolymers
- Co-injection molding

Biography

Prof. Michael Thompson): Associate Professor in Chemical Engineering at McMaster, holding degrees in Chemistry and Chemical Engineering. His research involves understanding and controlling morphological features within polymeric products through attributes of machinery design and processing conditions. He has substantial industrial background in polymer applications through his previous position at Davis-Standard Corporation (world leading manufacturer of extrusion machinery) where he worked as a Senior Process Engineer in charge of the company's research and development program. His expertise includes polymer processing machinery (i.e. extruders, injection molding machines, and thermoformers), particle dispersion within plastics, degradation of polymers, polymer rheology and chemical modification of polymers.

Selected references

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