



NEWS RELEASE

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NSERC/FPInnovations Industrial Research Chair in Forest Biorefinery

London, Ontario, October 3, 2011 – The Natural Sciences and Engineering Research Council of Canada (NSERC), The University of Western Ontario (Western) and FPInnovations have joined forces to establish the NSERC/FPInnovations Industrial Research Chair in Forest Biorefinery, which will drive several projects related to pyrolysis oil, forest residues, black liquor, lignin, bio-phenols, resins, hydrogen production, hydro-de-oxygenation, and liquid transportation fuels.

The Chair, valued at more than \$2.5 million over five years, will be held by Western chemical engineering professor Charles Xu.

The new Chair program will create new opportunities and synergies between the forest and chemical process industries by developing the following key new knowledge and technologies, and transferring them to the Canadian forest and chemical industry:

- cost-effective approaches to depolymerize lignin into bio-phenols;
- methods to produce bio-resins and adhesives products using monomeric bio-phenols derived from bio-oils or black liquor or lignin;
- novel supercritical water gasification process and catalysts for on-site hydrogen generation from the bio-oil-derived aqueous products; and
- novel catalysts and processes employing a supercritical solvent for hydro-de-oxygenation of bio-crude into liquid transportation fuels (gasoline, diesel or jet fuels) or alternative feedstock for a conventional petroleum refinery.

Forest biomass and residues (such as harvesting residues, sawdust, wood waste and bark) and pulp and paper by-products (such as black liquor and lignin) can be promising renewable sources for energy utilities and chemical feedstock if novel economically viable processes and technologies, such as forest bio-refining technologies, are developed.

This program will also offer nine graduate students (six PhD and three MEng students) and 4-6 summer students unique opportunities in the broad disciplines of chemical engineering, polymer science/engineering, fuel technology, wood science and engineering. These students will gain valuable work experience by spending time at industrial partner facilities, including FPInnovations, the Bioindustrial Innovation Centre and Arclin). In addition, they will gain unique skills related to technology transfer and commercialization activities with which they will be directly involved throughout the research program.

"The strength of this Chair rests not only in the advances it enables in green energy and environmental sustainability research, but in the training of highly qualified personnel who will be better prepared to meet the needs of existing and emerging commercial applications for bio-energy and forest bio-refinery," says Ted Hewitt, Western's Vice-President (Research & International Relations).

"NSERC wants to make Canada a country of discoverers and innovators," said Suzanne Fortier, President of NSERC. "Dr. Xu is conducting leading-edge research that is creating new opportunities in forestry, one of Canada's oldest industries. His focus on bio-based materials will open the doors for new products and lead to considerable progress in what is still a very young area of research."

"The strong partnership between FPInnovations and industrial partners, Sarnia BioIndustrial Innovation Centre and Arclin, is a new bridge between the forest product and chemical industries that will greatly facilitate the development and implementation of new technologies and products from this research program," stated Jean Hamel, Vice-President at FPInnovations. "A successful technology implementation to industrial sites would help re-invigorate Canada's forest and chemical processing industries by producing value added bio-products (green fuels and chemicals) from forest resources using renewable and sustainable feedstock."

About The University of Western Ontario

The University of Western Ontario is committed to its mission of providing the best student experience among Canada's leading research-intensive universities. A vibrant centre of learning, Western is home to approximately 3,500 full-time faculty and staff members and approximately 30,000 undergraduate and graduate students. With annual research expenditures of more than \$240 million and an international reputation for success, Western ranks as one of Canada's top 10 research-intensive universities.

About FPInnovations

FPInnovations is a not-for-profit world leader that specializes in the creation of scientific solutions in support of the Canadian forest sector's global competitiveness and responds to the priority needs of its industrial and government members. It is ideally positioned to perform research, innovate and deliver state-of-the-art solutions for every area of the sector's value chain, from forestry operations to consumer and industrial products. FPInnovations' staff numbers more than 500. Its research laboratories are located in Québec City, Montréal, Thunder Bay and Vancouver, and it has technology transfer offices across Canada. For more information about FPInnovations, visit: www.fpinnovations.ca

About NSERC

NSERC is a federal agency that helps make Canada a country of discoverers and innovators for all Canadians. The agency supports some 30,000 postsecondary students and postdoctoral fellows in their advanced studies. NSERC promotes discovery by funding more than 12,000 professors every year and fosters innovation by encouraging more than 1,500 Canadian companies to participate and invest in postsecondary research projects.

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