

July 17, 2009

## **Alberta gains new research and product development centre for nanotechnology**

### ***Hitachi brings its expertise and next-generation electron microscopes to the new centre***

*Edmonton...* Alberta will be home to a new research and product development centre and state-of-the-art Hitachi microscopes thanks to support provided through the Western Economic Partnership Agreement between the governments of Canada and Alberta along with contributions from Hitachi High-Technologies.

The Hitachi Electron Microscopy Products Development Centre (HEMiC) at the National Institute for Nanotechnology (NINT) is made possible by a wider collaboration of the Alberta Ingenuity Fund's nanoWorks program (AIF), the National Institute for Nanotechnology of the National Research Council (NINT), the University of Alberta (U of A) and Hitachi High Technologies Canada Inc.

"Alberta's strength in nanotechnologies, and the province's coordinated strategy for nanotechnology made our decision to seek a partnership here easy," said John Cole, President of Hitachi High-Technologies Canada, Inc. "This initiative engages Hitachi with Alberta's nanotechnology community at the leading edge of research while contributing to commercial opportunities."

"Our government is proud to support this project that will continue to position Alberta as a leader in the nanotechnology sector," said the Honourable Rona Ambrose, Minister of Labour, on behalf of the Honourable Lynne Yelich, Minister of State for Western Economic Diversification. "Together, we're building a more competitive and innovative Canada that will create new opportunities and new jobs."

The Centre will house three new electron microscopes valued at \$7 million, including the first-ever Hitachi environmental transmission electron microscope Model H-9500 in operation outside of Japan.

"This new and advanced equipment will make NINT's electron microscope capabilities among the best in the world," said the Honourable Doug Horner, Minister of Advanced Education and Technology. "Our strategies and programs for nanotechnology are spurring exciting research and business opportunities. It's got the attention of Hitachi, another international company that sees the benefits of investing in Alberta."

One of the centre's first projects will evaluate and test the world's sharpest electron emitter, developed by the Molecular Scale Devices group at NINT for use as an electron source in

electron microscopes.

The \$14-million HEMiC project includes \$6.8 million in joint Canada - Alberta support through the WEPA, with the remainder provided by the collaborating public and private organizations.

“Working so closely with an industry leader, like Hitachi, will also improve our access to global markets for electron microscope innovations at the National Institute for Nanotechnology,” said Dr. Pierre Coulombe, President of the National Research Council. “This relationship with Hitachi will solidify NRC’s reputation for expertise in electron microscopy while allowing us to better meet the needs of Canadian industry.”

“Alberta Ingenuity plays a key role in fostering partnerships, like this with Hitachi, that enhance Alberta’s research capabilities,” said Dr. Peter Hackett, President and CEO of Alberta Ingenuity Fund. “Our goal is to ensure the quality of research in Alberta remains at a world-class level through support to place advanced equipment like this in the hands of talented Albertans.”

“Facilities and equipment like this are enhancing the University of Alberta’s stature as a leading research centre, both in Canada and internationally,” said Dr. Lorne Babiuk, Vice President of research, the University of Alberta. “It will help our province attract and retain even more of the world’s talented researchers and graduate students, as well as the increasing interest of public and private sector nanotechnology research centres.”

The HEMiC will house three new Hitachi-provided electron microscopes valued at \$7 million, including the first-ever Hitachi environmental transmission electron microscope (E-TEM) Model H-9500 in operation outside of Japan. This collaboration is expected to speed up commercialization of NINT microscope innovations by utilizing Hitachi’s product development and technical sales expertise.

The investments by the governments of Canada and Alberta are made through the Canada-Alberta Western Economic Partnership Agreement (WEPA). Both Canada and Alberta are contributing \$25 million each, over four years, to strengthen economic activity and improve quality of life in western Canadian communities.

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**Background:** New research and product development centre for nanotechnology

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## HEMiC Project Partners



Western Economic  
Diversification Canada

Diversification de l'économie  
de l'Ouest Canada

### **Western Economic Diversification Canada (WD)**

Western Economic Diversification works with the provinces, industry associations, and communities to promote the development and diversification of the western economy; coordinates federal economic activities in the West and represents the interests of western Canadians in national decision making.

## **Government of Alberta**

### **Alberta Advanced Education and Technology (AET)**

Investing in science and technology today is critical to ensure prosperity and a high quality of life tomorrow. AET focuses on the application of science and research and the innovative use of technology to shape the future of the province.



National Research  
Council Canada

Conseil national  
de recherches Canada

### **The National Institute for Nanotechnology (NINT)**

NINT is an integrated, multi-disciplinary research institution operated as a partnership between the National Research Council and the University of Alberta, and is jointly funded by the Government of Canada, the Government of Alberta and the university.



### **Alberta ingenuity Fund (AIF)**

Alberta Ingenuity supports science and engineering research excellence and is engaging Albertans in building a strong science culture in the province. Ingenuity aligns with provincial priorities to maximize the impact of research in Alberta by creating dynamic partnerships and helping recruit and support top talent.

**Hitachi High Technologies Canada Inc.** Hitachi High-Technologies Canada is the world leader in collaboration microscopy and semiconductor workflow solutions. In Canada, Hitachi provides sales and service of electron microscopes to the scientific, industrial and semiconductor manufacturing community.



**The University of Alberta (U of A)** The University of Alberta discovers, disseminates, and applies new knowledge through teaching and learning, research, creative activity and partnerships. The University of Alberta gives a national and international voice to innovation in Alberta.

**Public sector contributions to the Hitachi Electron Microscopy Products Centre**

<b>Contributor</b>	<b>\$ Million (Can)</b>		
<b>Government of Canada</b>			
- Western Economic Diversification Canada	3.4 M		WEPA*
- National Research Council	1.425M		
<b>Total</b>		4.825M	
<b>Government of Alberta</b>			
- Advanced Education and Technology	\$1.7M		
- Alberta Ingenuity	\$1.7M		
<b>Total</b>		\$3.4M	WEPA*
<b>University of Alberta</b>	\$1.5M		
<b>Total</b>		\$1.5M	
<b>Public Sector Contributions Total</b>		\$9.725M	

\*Western Economic Partnership Agreement (WEPA) between Western Economic Diversification Canada and the Government of Alberta.

### **The Canada - Alberta Western Economic Partnership Agreement**

The Canada-Alberta WEPA targets joint strategic priorities whereby Canada and Alberta will work together and with other interested stakeholders to help create innovative, entrepreneurial and sustainable communities.

#### Canada-Alberta Joint WEPA Priorities:

- Technology Commercialization - Create and/or grow the knowledge-based economy in Alberta by commercializing new products, technologies and services into domestic and international markets.
- Business Productivity and Competitiveness - Strengthen small business development, growth and competitiveness in the global economy.
- Trade and Investment - Expand access to international markets and investments.
- Value-Added Processing - Increase revenues of traditional industries by adopting new technologies and processes that transform low value outputs into high value products.

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