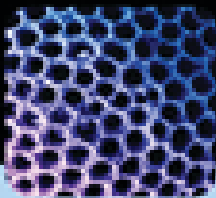


NORAM Engineering and Constructors Ltd. and FPinovations are collaborating in the development of radically new materials with well-defined porous structures for a variety of advanced industrial applications.



**"... ArberaNano is building "stretch" into Canadian innovation."**

"NORAM has built a global business in the chemical and resource sectors, and our work with early-stage technologies is often guided by insight into areas where existing synergies could open up new commercial opportunities. Our work with ArberaNano and our university partners provides us with an opportunity to go one step further, and extend our technology horizon to embrace even wider possibilities in those areas which we would deem to be our core competencies. In short, ArberaNano is building "stretch" into Canadian innovation."

George Cook  
CEO & President  
NORAM Engineering & Constructors Ltd.

# Impact

FPinovations is working with university researchers and chemical suppliers to develop a range of new products for the manufacture of advanced surface treatments for building materials.

Ball Helicopter Textron Ltd. and Nanoledge are collaborating with Network Members to explore the potential for forest nanomaterials in the production of advanced polymer composites suitable for application in the aerospace sector.

**"... we are encouraged by this new approach for risk sharing in innovation represented by the BL-NCE program."**

Marquis Alliance Energy Group Inc. is a leading Canadian manufacturer of drilling fluids used throughout the oil and gas industries. Its competitive position in Canadian and global markets is critically linked to its ability to develop new products that will keep it ahead of the competition. Via applied the BL-NCE program initiative and the ArberaNano network, he created the opportunity for Marquis Alliance to work together with the University of Alberta and other partners to develop some innovative new products using a new nanomaterial derived from forest biomaterials.

ArberaNano has facilitated collaboration between university and industry and between two very different industry sectors that are both very important to the Alberta economy. In addition, it has brought together funding from industry as well as federal and provincial sources. Bridging all of these gaps within the framework of this new funding initiative was a remarkable accomplishment. We are excited by the opportunities we see for the products we are developing under this program, and we are encouraged by the new approach for risk sharing in innovation represented by the BL-NCE program.

Jay Brodthof  
VP Technical Services  
Marquis Alliance Energy Group Inc.

Woodbridge Foam Corporation has partnered with a Network Member to explore the use of forest nanomaterials for the manufacture of advanced materials used in the manufacturing of automotive and construction products.

Marquis Alliance Energy Group Inc. is working with the University of Alberta, National Institute for Nanotechnology, Alberta Innovates - Technology Futures, and Alberta Innovates - Bio Solutions to develop new drilling fluids that derive advanced performance from the addition of NCC.

FPinovations and Cellulose are working on commercialization of NCC for advanced applications in a variety of products.

Université du Québec à Trois Rivières is working with an equipment supplier and a chemical supplier to explore uses of forest nanomaterials in the manufacture of high-value functionalized mechanical paper and board grades.

**"... an effective tool for bridging the gap between university discovery and commercial value creation."**

Kruger Inc. supported ArberaNano's application for BL-NCE funding in 2008. This program was well conceived, timely, and the proposed network addressed an urgent need in our industry to reach out and create new partnerships that will help us derive greater value from our forest resources. We have now made use of this program to develop a new high-value paper grades using nanocrySTALLINE cellulose to replace additives that are traditionally derived from petroleum sources. With the sharp downturn in the economy in 2009, the timing was right to undertake this development, but the resources to support this initiative were very scarce. The BL-NCE support for semi-commercial pilot trials, and the networking with BioFusion and NRC, provided the essential catalysts that enabled us to go ahead with this product development initiative at this critical time. Our experience confirms that this imaginative new program initiative, which is driven by industry needs, is an effective tool for bridging the gap between university discovery and commercial value creation.

Selwyn Sima  
Manager, Product Development  
Kruger Inc., Industrial Products Division

Kruger Inc. is working with BioFusion to develop new high-value paper grades using NCC to replace additives that are traditionally derived from petroleum sources.

## ArberaNano