Alberta Government

GERMAN-CANADIAN CENTRE FOR INNOVATION AND RESEARCH

ALBERTA-EUROPE TECHNOLOGY COLLABORATION FUND

Success Stories

NMR Spectrometers

New integrated continuous-flow analytical method, pulsed field gradients, software, and server support platform for NMR Spectrometers.

Nuclear Magnetic Resonance (NMR) spectroscopy is an analytical chemistry technique used in quality control and research for determining the content and purity of a sample, as well as its molecular structure. In two projects Nanalysis Corporation (Alberta) collaborated with partners in Germany to improve the analytical capabilities of their benchtop NMR spectrometers. In their first project, Nanalysis Corp. collaborated with Hansa Fine Chemicals GmbH and the Fraunhofer ICT-IMM Institute to develop an integrated continuous-flow analytical method based on a low-field NMR spectrometer. The method is now used to analyse and control the flow output from a lab plant designed to produce industrially revelant fluoro-chemicals. In a second project, the company worked with Voxalytic GmbH and the Light Technology Institute at the Karlsruhe Institute of Technology to develop pulsed field gradients and a software and server support platform for the autonomous data collection of aqueous samples by a low-field NMR spectrometer. Currently, Nanalysis is working with RS2D (France) in a third project to build an advanced hardware system capable of handling diverse sample input methods and providing reliable autonomous operation. Nanalysis has grown it's international reputation and ability to collaborate with multiple international projects on the basis of the experience gained in GCCIR projects.

Positive outcomes for Nanalysis so far:

- 1 new patent filed
- 9 new trade secrets
- 31 new employees hired
- significant 6x increase in revenue
- continues working with German partners in a new four partner international project
- opened a new German registered company Nanalysis GmbH

nanalysis HFC HANSA FINE CHEMICALS Fraunhofer voxalytic LTI RS²D

The Alberta-Europe Technology Collaboration Fund is a program developed by the Alberta Government's Ministry of Economic Development, Trade and Tourism and delivered by the German-Canadian Centre for Innovation and Research.