

WHO'S WHO IN NANOTECH

Nanomix Platform Technology Targets Key Sensor Uses

Nanomix Inc. based in Emeryville CA, is a leading nanoelectronic detection company launching a portfolio of devices based on **Sensation™** technology. These scaleable devices use ultra-sensitive carbon nanotube detection elements combined with proprietary chemistries. They can be deployed across a broad range of industrial and medical applications where valuable attributes—low power consumption, small size, and high sensitivity—offer significant performance advantages and enable unprecedented access to critical information. David Macdonald, President and CEO, has 25 years of industrial product development and commercialization experience. He holds a BSBA degree from Northeastern University and a MBA degree from Babson College.

Nanoparticle news recently interviewed Macdonald.

NN: Briefly describe the evolution of Nanomix Inc.

Macdonald: Founded in 1997, Nanomix was originally a spin-off from the University of California, Berkeley. Co-founders Marvin Cohen and Alex Zettl, both from the Department of Physics, were developing nanomaterials for different applications.

NN: What do you believe are your organization's most important NT achievements and their commercial product viability?

Macdonald: Nanomix was the first company to bring a nanoelectronic detection device to market and currently is leading the development of detection solutions for respiratory, biomolecule and industrial applications. In diagnosing genetic and infectious diseases, the **Sensation™** platform enables unprecedented access to critical information via small, automated devices, moving testing out of the clinical laboratory. Nanomix is also in late-stage development of a respiratory monitor which is appropriate for hospital and pre-hospital settings, and has been optimized for Emergency Response personnel. Finally it has successfully commercialized a nanoelectronic hydrogen detection device for room monitoring. This product is a replacement for catalytic bead and metal oxide sensors to monitor dangerous build-ups of hydrogen gas that cause explosive situations.

NN: What are the initial niche markets of your carbon nanotube (CNT)-based electronic sensors and their projected market revenue/growth?

Macdonald: Industrial detection, respiratory/breath detection, and biomolecule detection applications. For the chosen applications in these three areas, the Nanomix Total Accessible Market (TAM) is \$3.1 billion, and the end-user TAM is \$11.6 billion, with an average CAGR of 13%.

NN: Recently Nanomix Inc. has made several public announcements concerning exciting product/prototype developments. Briefly update us on progress.

Macdonald: Nanomix continues to make excellent progress in its productization efforts. We are in late stage development on our Emergency Respiratory Monitor for CO₂ detection in an emergency setting, we are in product development on a high-value environmental monitoring application, and launched our hydrogen detection device in June of 2005. We have signed multiple product development relationships with large collaboration partners.

NN: What is Nanomix's capitalization? Do you plan a future IPO in the future?

Macdonald: We are fortunate to have a very strong investor syndicate. Nanomix will close its next round of financing in 2007, and all options remain open at this point.

NN: As CEO of Nanomix Inc. what are some of your current challenges?

Macdonald: The curse of a versatile technology platform is maintaining focus. Our biggest challenge has been to select applications for our platform technology. By applying a rigorous product selection process we have made excellent choices for our initial product applications.

NN: Do you think the fields of nanomaterials and nanotechnology are over-hyped?

Macdonald: Not at all. Overall funding for NT is increasing rapidly worldwide. These are still early days in the overall field. NT will persistently become pervasive over time. It will touch many facets of our lives—like the internet, or electricity. In terms of nanoelectronic detection, there is no doubt that due to size compatibility with biomolecules and other unique attributes, this is the wave of the future. Demand for high-value detection solutions is being fueled by our aging patient population; governmental initiatives related to national defense requirements or environmental, health and safety regulations; and a general need to simplify complex testing protocols associated with clinical diagnostics, drug discovery, continuous monitoring, and biomedical research.