WHO'S WHO IN NANOTECH

Integran Focuses on Better Materials

Gino Palumbo is the founder, president, and CEO of Integran Technologies Inc. In a professional career spanning over 20 years, he has been involved in all aspects of metallurgical technology development, intellectual property protection and technology commercialization. Palumbo received his B.A.Sc., MA.S.c. and Ph.D. in Metallurgical Engineering at the University of Toronto.

NN: Tell us about the history of Integran Technologies.
Palumbo: Integran's nanotechnology platform originated from fundamental research and development carried out at the University of Toronto and Queen's University commencing in the early 1980's. This research activity was coordinated by Professors Uwe Erb and Karl T. Aust, both of whom continue to play an active role with Integran. By the early 1990's, Nanometals Corp. was founded to capitalize on some of the nanostructured materials technologies that had been developed. Also during this period a strategic partnership with Ontario Hydro was formed which resulted in the development of one of the first large-scale industrial applications for nanostructured materials, the electrosleeve process for nuclear steam generator repair. In 1999, Nanometals Corp. and Ontario Hydro merged their respective intellectual property portfolios and partnered with Babcock and Wilcox to launch Integran. In October of 2003, with the financial backing of Mosaic Capital Partners, Integran underwent a management/employee buyout of its previous major shareholders.

NN: What about Integran's technology and product portfolio?
Palumbo: Integran's nanotechnology platform is based upon engineering the internal structure of metals, alloys and metal-matrix composites on the nanoscale, to achieve enhanced/desired functional and structural properties. Integran has focused on producing its nanostructured materials using conventional, established metallurgical processing methods. Integran can produce fully consolidated, nanostructured material components in a single step process using cost-effective electroforming technology. Current products/technologies include an environmentally-benign replacement technology for hard chrome electroplating, nanostructured catalysts for ozone production, and a soft magnetic coating process technology.

NN: What goals do you have for Integran in the short-term and over the longer term?
Palumbo: Our near term goals are to establish strategic partnerships with organizations that have significant domain expertise in key vertical markets where the adoption cycle for new materials is relatively short, and where the value proposition to the customer is compelling. With these partners, we intend to develop high performance products using our materials. We also intend to raise awareness in the marketplace about our company, and the fact that our materials can produce dramatic performance improvements for the same or lower cost than conventional materials.

NN: How does Integran distinguish itself from other nanotechnology start-ups?
Palumbo: Integran's business focus and core competency are not nanotechnology per se, but rather, the engineering of better materials. This is reflected in our extensive intellectual property portfolio (over 100 patents and patent cases) which focuses on fundamental material products and processes. Also, unlike other nanotech startups in the materials sector, Integran can supply its nanomaterials in a multitude of product forms (powder, foam, sheet, plate etc.) and in significant quantities.

NN: Where are the most promising markets for your products?
Palumbo: Our most promising markets are those for which material performance is critical to product effectiveness; these include the defense, aerospace, sports equipment and biomedical sectors.

NN: How has the company been funded?
Palumbo: Integran has been largely funded through revenue from its operations. These revenues have been derived from contract manufacturing, licensing and contract R&D.

NN: What is the biggest challenge you've faced as company CEO?
Palumbo: Being a scientist by training, the biggest challenge that I have faced as president and CEO has been ensuring that Integran's technical development efforts remain focused on near-term revenue-generating opportunities.