

## Chemical Co. Solvay Leads \$20M Financing For Plextronics

By VentureWire Staff Reporters  
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Dresden, Germany -- Plextronics Inc., has raised \$20 million in its second round of financing as it looks to commercialize its organic photovoltaic and printed electronics technologies. The round was led by Solvay North America Investments LLC, a subsidiary of the Brussels-based Solvay Group. The minority stake Solvay has taken in the Pittsburgh-based start-up compliments other research and development agreements the firm has undertaken, the company said in a statement announcing the round. Solvay has only recently begun its push into solar. Solvay Solexis, a subsidiary of the Solvay Group focusing on fluorinated specialty products, recently partnered with the Oslo-based Thin Film Electronics ASA to develop polymer links for manufacturing printed circuits, and Solvay has entered into a research agreement with the Georgia Institute of Technology's Center for Organic Photonics and Electronics, the company said. At Plextronics, the financing will be used to pursue commercialization of the company's printed electronics technology in three distinct businesses: the manufacture of organic light emitting diodes; the development of radio frequency identification devices; and the development of printed organic solar cells, according to Chief Executive Andy Hannah. The company had previously raised \$13.1 million in Series A funding from investors including Firelake Capital Management, Birchmere Ventures, Draper Triangle Ventures and Newlin Investment Company. Over the past five years, Plextronics has raised a total of \$37 million. With the new capital in the bank, Hannah expects to reach commercialization with his organic lighting and radio frequency products within the next 18 months. "OLED was the one that was focused on first. It's a more mature technology, and that's why you're going to see OLED and this RFID get to market first," Hannah said. The first applications for OLED technology will be in the mobile technology market, where the display technology offers advantages on price, performance and improved battery life for manufacturers. "It's less drain on the battery," Hannah said of the OLED technology. "If you think about LCD technology, you're always having a white light on. What happens with the OLED is that if you're not emitting light with a pixel, it's off. You get better battery performance, which is really critical for mobile devices," Hannah said. In addition to the energy-saving OLED technology, Plextronics is also working on organic photovoltaics, which have already won accolades from the Department of Energy. Though not in commercial production, the company's organic solar cells have achieved efficiencies of 5% in the lab, the highest of any organic photovoltaic manufacturer. These efficiencies are much lower than that of crystalline, concentrated, or thin-film photovoltaic technologies, but organic solar cells are ostensibly much cheaper to manufacture and are more versatile than the other technologies, Hannah said. "What's really important is form-factor," Hannah said. "With organics you can ultimately have flexible, solar cells, lightweight solar cells, semi-transparent solar cells. You can think about turning windows into solar cells," he said. The attraction of organic photovoltaics isn't lost on the broader solar market, either. In July 2007, German industrial giants Stuttgart-based The Bosch Group and Ludwigshafen-based BASF AG announced a EUR3.2 million (\$4.3 million) investment in Heliatek GmbH. The Dresden-based company, which is also backed by German venture firms Wellington Partners and the High-Tech Gruenderfonds, has developed a process for the manufacturing of organic solar cells. Its technology is similar to that of Watertown, Mass.-based Konarka Technologies Inc., which recently enlisted an investment bank to begin raising a \$40 million late-stage round. In Germany, the investment from Bosch and BASF is part of a broader push by several leading German industrial firms into the production of organic photovoltaics alongside the German government. Together, BASF, Bosch, along with Darmstadt, Germany-based pharmaceutical and chemicals company Merck KGaA and Mainz-based glass manufacturer Schott AG, have pledged to spend EUR300 million (\$406 million) on research to promote organic photovoltaics. The German government is providing an additional EUR60 million. Hannah is aware of the other companies in the market, but views them as collaborators rather than competitors. "Our vision is that we all have to work together to get these products to market," he said.

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