

## Press release

24 August 2004

### Umicore develops new generation of battery materials

Umicore has successfully developed a new generation of lithium-compounds based on nickel, cobalt and manganese to meet the demand from the rechargeable battery industry, and specifically from lithium-ion battery manufacturers, for products containing less cobalt.

The new compounds, developed at Umicore's research laboratories in Canada, contain up to three times less cobalt but provide an energy density comparable to lithium cobalt dioxide. Umicore is in the process of deciding on a location for the production of these compounds which will likely be at its plant in Cheonan, South Korea. It is anticipated that initial production of these products will start during the second half of 2004 and full scale production during 2005.

The production and commercialization of these products will add to the choice available to Umicore's customers and has the potential to lower total production cost without compromising on battery performance. It will also mean that metal availability is less of a limiting factor in the use of lithium-ion technology in new applications like power tools or hybrid vehicles.

With its successful Cellcore<sup>®</sup> line of products, Umicore is one of the world's leading producers of lithium cobalt dioxide used as cathode material in rechargeable lithium ion (Li-ion) batteries and has been working for several years on the development of improved products based metals other than cobalt.

Lithium-ion batteries are used primarily in portable electronic devices such as mobile phones, laptop computers, digital and video cameras, personal data assistants and music players. The superior performance of lithium-ion also makes it a desirable technology in many other applications where energy must be stored in the lightest and most compact form.

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## PROFILE

Umicore is an international metals and materials group. Its activities are centred on five business areas : Precious Metals Services, Precious Metals Products and Catalysts, Advanced Materials, Zinc and Copper. Each business area is divided into market-focused business units.

Umicore focuses on application areas where it knows its expertise in materials science, chemistry and metallurgy can make a real difference, be it in products that are essential to everyday life or those at the cutting edge of exciting, new technological developments. Umicore's overriding goal of sustainable value creation is based on this ambition to develop, produce and recycle metals in a way that fulfils its mission: materials for a better life.

The Umicore Group has industrial operations on all continents and serves a global customer base; it generated a turnover of EUR 4.7 billion in 2003 and currently employs some 11,500 people.

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