

## **High $T_c$ Superconductivity – after three decades A technology is ready to take off**

**J. Georg Bednorz  
IBM Fellow Emeritus**

**IBM Research – Zurich  
Säumerstrasse 4, 8803 Rüschlikon, Switzerland**

More than 100 years after the discovery of superconductivity and 30 years after the discovery of high- $T_c$  superconductivity the field is finally ready to present a broad spectrum of large-scale applications. Many of these have been envisaged since the early days of superconductivity. However, only with the new cuprate superconductors and as a result of a concentrated, worldwide scientific and engineering effort with efficient international collaborations over the past two decades, has it become possible to realize these ideas. Specific segments in applications for power generation, transportation and network reliability are gaining attraction because of the increased importance of using renewable energy. Energy-efficient solutions for industrial processes are being provided by new and surprising concepts that led to the realization of the first commercial high- $T_c$  superconductor products. Large-scale applications, which will need large quantities of superconducting wires, will however have to overcome the usual problems of a new technology – but superconductivity will definitively become a key technology for the 21st century.

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