

Towards commercialization of high-temperature superconductors

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As high-temperature superconductors (HTS) enter their third decade, the commercialization of reliable and energy-efficient HTS-technology is close to becoming a reality. This is the conclusion of a series of articles published in the September issue of *Nature Materials*.

HTS can carry electrical current without loss of energy when their temperature is below about -200 degrees Celsius. This property has fuelled dreams of highly efficient and economical electrically powered devices since their discovery in 1986.

The excitement in the months following the breakthrough is revisited in interviews with two eminent scientists in the field, J. Georg Bednorz and Paul Ching-Wu Chu.

In the same issue, Steve Foltyn (LANL) and colleagues review the materials science efforts aimed at improving the performance of HTS in terms of the amount of dissipation-free current transported; in his commentary, Alexis Malozemoff highlights the existing prototypes of HTS applications and the efforts to reduce production and running costs on the way to commercialization.

References:

DOI: [10.1038/nmat1997](https://doi.org/10.1038/nmat1997) (Bednorz interview)

DOI: [10.1038/nmat1989](https://doi.org/10.1038/nmat1989) (Review)

DOI: [10.1038/nmat1990](https://doi.org/10.1038/nmat1990) (Commentary)

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