Applications of Superconductivity

To date, applications have mostly been specialized. In particular, it is much cheaper to operate high field (high current) electromagnets if the wire is superconducting.

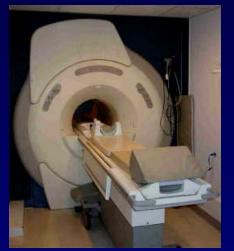
MRI

LHC accelerator

Superconducting Quantum Interference Devices (SQUIDs) are also used to make very sensitive magnetic field measurements (*e.g.*, to make part in 10^{12} measurements of magnetic susceptibility).

http://rich.phekda.org/squid/technical/part4.html





The holy grail of SC

technology is electrical

lost in the power grid). This is one reason HiT_c

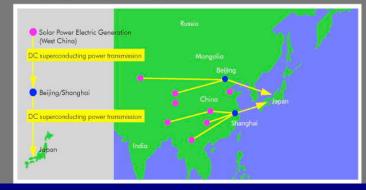
superconductors are important, but it's not

yet competitive.

power distribution (7% is



http://www.nano-opt.jp/en/superconductor.html China-based Power Generation Project



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