Cryogenic Cooling of YBCO creates Superconductivity

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Any Electronic Device runs on Electricity

Source: Phys.org
Superconductors can make our Technology more Efficient
Superconductors usually require super cold temperatures.

Liquid Nitrogen
Source: CalOx

Liquid Helium
Source: Thoisoi - Chemical Experiments
Reactants form YBCO upon heating

Yttrium Nitrate
Barium Nitrate
Copper Nitrate
Citric Acid

Heating → Chemical Reaction → YBCO

YBCO: $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$
Superconductivity Repels Magnetic Fields

 Cooling via liquid nitrogen

 YBCO reaches superconductive state

 Test how the YBCO repels magnetism
Electromagnetic Units Are Negative Around 85 K and Below

When Electromagnetic units is negative, the metal superconducts

At approximately 85 K the YBCO begins to repel magnetism
YBCO Reaches Zero Resistance at around 85 K and 90 K and Below

Energy passes through superconductors without crashing into atoms.

When in a superconductive state, the YBCO repels opposing magnetic fields.

Source: Shatha H. Mahdi

Source: University of Rochester - News Center
Superconductivity can be our main source of Energy
Transportation

Source: SmartShanghai
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ANY QUESTIONS?