

Reading Passage

Superconductivity is the ability of certain materials to conduct electrical current with no resistance and extremely low losses. This ability to carry large amounts of current can be applied to electric power devices such as motors and generators, and to electricity transmission in power lines. For example, superconductors can carry as much as 100 times the amount of electricity of ordinary copper or aluminum wires of the same size.

Scientists had been intrigued with the concept of superconductivity since its discovery in the early 1900s, but the extreme low temperatures the phenomenon required was a barrier to practical and low-cost applications. This all changed in 1986, when a new class of ceramic superconductors was discovered that "superconducted" at higher temperatures. The science of high-temperature superconductivity (HTS) was born, and along with it came the prospect for an elegant technology that promises to "supercharge" the way energy is generated, delivered, and used.

Questions

1. According to the passage, which of the following discoveries will enable superconductivity to become a more practical energy source which can be utilized outside of the laboratory?
 - a. The discovery of ceramic tiles which can be super-heated to produce abundant heat
 - b. The discovery of ceramic superconductors which can superconduct at non-extreme low temperatures
 - c. The discovery of super-heated aluminum wires that can conduct immense amounts of electricity
 - d. The discovery of copper wires with zero resistance
 - e. The discovery of HTS materials which previously had been used improperly

2. Which of the following would be the best title for this passage?
 - a. Economic incentives for Superconductivity
 - b. 1986 -- A Year of Great Discoveries
 - c. Copper and Aluminum Wires
 - d. Electrical Currents
 - e. High-temperature Super Conductivity and Prospects for Energy Generation, Delivery, and Utilization

3. In which of the following publication types would this article most likely appear in?
 - a. A scholarly journal read by specialists and scientists who work directly with superconductivity
 - b. A modern science magazine intended for leisure reading
 - c. A book chapter in an advanced chemistry textbook
 - d. A magazine intended to be dispersed at home craft fairs
 - e. A trade show magazine which focuses on super-cooled refrigeration units