

Superconductivity Encyclopedia Article

Superconductivity

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Superconductivity Encyclopedia Article.....	1
Contents.....	2
Superconductivity.....	3

Superconductivity

In 1911, Dutch physicist Heike Kamerlingh-Onnes discovered that some materials, when cooled to very low temperatures—within a few degrees of absolute zero—become superconductive, losing all **resistance** to the flow of electric current. Potentially, that discovery had enormous practical significance because a large fraction of the electrical energy that flows through any appliance is wasted in overcoming resistance.

Kamerlingh-Onnes's discovery remained a laboratory curiosity for over 70 years, however, because the low temperatures needed to produce superconductivity are difficult to achieve. Then, in 1985, scientists discovered a new class of compounds that become superconductive at much higher temperatures (about -74°F [-170°C]). The use of such materials in the manufacture of electrical equipment promises to greatly increase the efficiency of such equipment.