1. Record Nr. UNINA9910703847603321

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| Titolo | The expanding cyber threat : hearing before the Subcommittee on Research and Technology, Committee on Science, Space, and Technology, House of Representatives, One Hundred Fourteenth Congress, first session, January 27, 2015 |
| Pubbl/distr/stampa | Washington : , : U.S. Government Publishing Office, , 2015 |
| Descrizione fisica | 1 online resource (iv, 122 pages) : illustratons |
| Soggetti | Information technology - Security measures - Government policy - United States<br>Computer security - Government policy - United States<br>Computer crimes - United States - Prevention<br>Legislative hearings. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Title from title screen (viewed on July 22, 2015).<br>Paper version available for sale by the Superintendent of Documents, U. S. Government Publishing Office.<br>"Serial No. 114-2." |
| Nota di bibliografia | Includes bibliographical references. |

2. Record Nr. UNINA9910830028803321

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| Autore | Ireson Gren |
| Titolo | Discovering superconductivity [[electronic resource] ] : an investigative approach / / Gren Ireson |
| Pubbl/distr/stampa | Chichester, West Sussex, : Wiley, 2012 |
| ISBN | 1-283-64508-4<br>1-118-34318-2<br>1-118-34321-2<br>1-118-34319-0 |
| Descrizione fisica | 1 online resource (187 p.) |
| Classificazione | TEC039000 |
| Disciplina | 537.6/23076<br>537.623076<br>621.35 |
| Soggetti | Superconductivity - Study and teaching (Higher) - Activity programs<br>Superconductors |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Discovering Superconductivity; Contents; List of Figures; List of Tables; Preface; Acknowledgements; To the Teacher; To the Student; SECTION I Introduction; 1 Resistivity and Conduction in Metals; 1.1 Introduction; 1.2 Resistivity; 1.3 Conduction in Metals; 1.4 Revisiting Ohm's Law; References; 2 A Brief History of Superconductivity; 2.1 Introduction; 2.2 The Beginning: Kwik Nagenoeg Nul; 2.3 1933 - Perfect Diamagnetism?; 2.4 The London Brothers; 2.5 1957 - The BCS Theory; 2.6 1962 - The Josephson Effect; 2.7 1986 - Bednorz and Muller and Oxide Superconductors<br>2.8 2003 - Abrikosov, Ginzburg and Leggett - and the Future2.9 Getting Cold Enough; References; SECTION II Superconductivity; 3 An Explanation of Superconductivity?; 3.1 Transition Temperature; 3.2 Two-Fluid Model; 3.3 Critical Field, Critical Current; 3.4 Schawlow and Devlin; 3.5 The London Equation; 3.6 BCS Theory; 3.6.1 The Isotope Effect; 3.6.2 The Energy Gap; 3.7 An Alternative Approach to the Energy Gap; 3.7.1 Electron-Electron Attraction; References; 4 The Meissner-Ochsenfeld Effect; References; 5 Diamagnetic Effects; 5.1 |

Diamagnetism, Paramagnetism and Ferromagnetism; References
6 Persistence of Current6.1 Quinn and Ittner; References; 7 Type I and Type II Superconductors; 7.1 Critical Magnetic Field; References; 8 Flux Pinning; 8.1 Vortex and Flux Lines; 8.2 The Original Abrikosov; References; SECTION III Superconducting Materials; 9 Low-Temperature Superconductors; 10 Organic Superconductors; References; 11 High-Temperature Superconductors; 11.1 Magnesium Diboride; 11.2 Transition Temperature of High-Tc Superconductors; References; SECTION IV Applications; 12 Superconducting Wire; 13 Medical Imaging; 13.1 Magnetic Resonance Imaging (MRI)
13.2 Magnetoencephalography13.2.1 The Josephson Junction Revisited; 13.2.2 Neuronal Currents; References; 14 CERN and the LHC; References; 15 Maglev Trains; Appendices; A The BCS Theory; B Flux Penetration; C The Josephson Junction and the SQUID; D MRI; Generating the MRI Signal; References; E A Note on Superfluidity; F A Note on Safety; Index

Sommario/riassunto

Superconductivity is a quantum phenomenon that manifests itself in materials showing zero electrical resistance below a characteristic temperature resulting in the potential for an electric current to run continually through such a material without the need for a power source. Such materials are used extensively in medical and power applications, e.g. MRI and NMR machines.  Discovering Superconductivity uses a series of practical and investigative activities, which can be used as tutor demonst