بسم الله الرحمن الرحيم

صدق الله العظيم
سورة طه الآية (114)
Dedication

I dedicate this research to the foundation that does not tire of giving to those who have woven my happiness with woven threads from her heart to my dear mother.

To those who sought and did well to enjoy the comfort and joy that did not spare anything to push me in the way of success, which taught me to rise the ladder of life with wisdom and patience to my dear father.

To those who love them in my veins, to my sister and brothers.

To whom we have traveled together, as we make the road together towards success and creativity to whom we are hand-in-hand, as we gather flowers and teach us to my friends and colleagues, to those who taught us letters of gold and words of derricks and phrases of the highest and most beautiful expression in science to those who teach us a letter and light that enlightens us.
Acknowledgment

Thank you to God and my parents to all those taught me a letter and thank you very much to Dr. Sawsan Ahmed Alhori she supervising this research and guidance me, which did not spare me the time I told her, and thank you for the faculty of Graduate studies Department of Physics, University of Sudan for Science and Technology.
Abstract

In this research, a comprehensive study of a superconductor materials has been studied since its discovery and how it was obtained, as well its importance, and classification according to certain bases and the factors influencing it as well as the theories related thereto and how they can be utilized through several important applications in our daily lives.
المستخلص

في هذا البحث تم دراسة متكاملة وشاملة للمواد فائقة التوصيل حيث تم تناول تاريخ المواد فائقة التوصيل منذ اكتشافها وكيف تم الحصول عليها وكذلك أهميتها وخصائصها وتصنيفاتها حسب أساس معينة والعوامل المؤثرة عليها وكذلك النظريات المتعلقة بها وكيف يمكن الاستفادة منها عبر عدة تطبيقات مهمة في حياتنا اليومية.