بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

قُلْ مَن رَّبُّ السَّماوتِ وَالْأَرْضِ قُلِ اللَّهُ ۚ قُلْ أَفَاتَّخَذْتُم مِّن دُونِهِ أَوْلِيَاءَ لَا يَمْلِكُونَ لِأَنفُسِهِمْ نَفْعًا وَلَا ضَرًّا ۚ قُلْ هَلْ يَسْتَوِي الْأَعْمَىٰ وَالْبَصِيرُ أَمْ هَلْ تَسْتَوِي الظُّلُمَاتُ وَالنُّورُ ۗ أَمْ جَعَلُوا لِلَّهِ شُرَكَاءَ خَلَقُوا كَخَلْقِهِ فَتَشَابَهَ الْخَلْقُ عَلَيْهِمْ ۚ قُلِ اللَّهُ خَالِقُ كُلِّ شَيْءٍ وَهُوَ الْوَاحِدُ الْقَهَّارُ(16)

صدق الله العظيم

سورة الرعد

Dedication

To those who smelt themselves to light the way for others…

My father

My mother

To anyone who had made an effort to teach others….

Teachers and professors

Acknowledgment

I would like to thank Allah for providing me the ability to finish this research. Also I would like to thank my family members and my friends for supporting me and providing me with their advice, and for encouraging me to achieve what I have done.

I would like to express sincere thanks towards my supervisor ***Dr. Sawsan Ahmed Elhouri*** *who devoted their time and knowledge in the implementation of this project also for the useful comments, remarks.*

Finally I place on record, my sense of gratitude to one and all, who directly or indirectly, have lent me their hands or any valuable advice that help me to complete the work in this research.

Abstract

The study presented the magnet and its properties, its different types and also the general and specific applications of it.

Also the research explained in details the Ferrite magnet form the structure, and the properties. It is found that it's consisting of non metallic material such as ceramic, and it is a compound of iron oxide with other different oxides characterized by extremely high electrical resistance and resistance, for corrosion and oxidation. The study also showed two types of ferrites, hard ferrite and soft ferrite, and study of basic structure and characteristics. Also the applications of the two types were presented.

المستخلص

قامت الدراسة علي التعرف علي ماهية المغنطيس و خصائصة كذلك الانواع المختلفة للمواد المغنطيسية. كما ابرزت الاستخدامات العامة و الدقيقه له.
ايضا تم التعرف علي مركب الفريت المغنطيسي و فصلت الدراسة التركيب الاساسي لهذه المادة و خصائصها حيث اظهرت الدارسة ان مركب الفريت مكون من مجموعة من المواد غير المعدنية مثل السيراميك، و عادة ما يتكون المركب من اكسيد الحديدك مع اكاسيد اخري متنوعة تتميز بمقاومة كهربية عالية للغاية ومقاومة للتاكل والاكسده.
كذلك اظهرت الدراسة نوعين من مركب الفريت هما الفريت الصلب و الفريت الهش ودراسة التركيب الاساسي لهما وخصائصهما والاستخدامات المتعدده لكلاً منهما.