

الآية

قال تعالى :

﴿قُلِ ادْعُوا الَّذِينَ زَعَمْتُمْ مِنْ دُونِ اللَّهِ لَا يَمْلِكُونَ مِثْقَالَ ذَرَّةٍ فِي السَّمَاوَاتِ

وَلَا فِي الْأَرْضِ وَمَا لَهُمْ فِيهِمَا مِنْ شِرْكَ وَمَا لَهُمْ مِنْهُمْ مِنْ ظَهِيرٍ﴾ ﴿96﴾

»صدق الله العظيم«

سورة الكهف

DEDICATION

This research to the great **prophet Mohammed** “Peace & prayers be upon him” Whom we love for their Encouragement and Support... To those who are the reasons for my presence in life ... **My parents...**
To the friends of the road...

Greetings

Acknowledgement

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Abstract

This study shed light on the state of the material and the nature of its presence in nature, and how electricity was transferred through it. Electrical properties were studied through electrical conductivity. The classical theory of free electrons was also discussed and its successes and failures were explained. Electrical conductivity was calculated in copper is $\sigma_{Al} = 0.029 \times 10^4 (\Omega\text{m})^{-1}$ $\sigma_{Cu} = 0.583 \times 10^4 (\Omega\text{m})^{-1}$ compare with the theoretical method.

المستخلص

هذه الدراسة أُلقت الضوء على حالات المادة وشكل توأجدها في الطبيعة وكيفية إنتقال الكهرباء من خلالها , تمت دراسة الخواص الكهربائية من خلال الموصلية الكهربائية. وأيضاً تم التطرق إلى النظرية الكلاسيكية للإلكترونات الحرة وتوضيح أوجه نجاحها وكذلك إخفاقاتها.

ومن ثم تم حساب الموصلية الكهربائية في مادتي النحاس والألمونيوم تساوي $0.029 \times 10^4 (\Omega m)^{-1}$ و $0.583 \times 10^4 (\Omega m)^{-1}$.

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