

# الآية

قال تعالى:

خَلَقَ الْإِنْسَانَ مِنْ  
أَصْلَصالٍ كَالْفَخَّارِ

صدق الله العظيم

سورة الرحمن الآية 14

# Dedication

Dedicate this thesis

To my father soul

To my mother

To my son and friends

To my brothers and sisters

# Acknowledgment

I would like to express my gratitude to my supervisor Mubarak Dirar Abdo-Allah. Thanks extend also to Sudan University of Science and Technology, Graduate College, college of Science and Department of physics.

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# Abstract

In this work the energy gap of rabbit and caw were obtained by using ultraviolet spectrometer, the energy gap for rabbit was found to be 4.22 ev while that of the caw is 5.3 ev. These band gaps mean that they are semi conductors with wide band gap.

However the electrical techniques shows that the conductivity of rabbit starts to increase considerably above voltage of about 20  $\mu V$  , while that of the cow is about 15  $\mu V$  . This discrepancy can be resolved by bearing in mind that the ultra violet ray cannot easily excite impurities which contribute to conductivity considerably, while the electric can excite them to produce large amounts of free electrons.

## ملخص البحث

في هذا العمل تحصلنا على قياس فجوة الطاقة لكل من الأرنب والبقر بينما  $ev$  فوجدنا أن فجوة الطاقة للأرنب  $4.22\text{ UV}$  باستخدام جهاز الـ ومنه تحصلنا أن الأرنب شبه موصل بينما البقر عازل  $5.3\text{ ev}$  للأبقار.

أما بالنسبة للطريقة الكهربائية وجدنا أن الموصلية تبدأ بالزيادة عند  $\mu v$   $20$  بينما تبدأ الزيادة للأبقار عند  $15\text{ }^{\mu v}$ .

لا يمكنه قياس الشوائب بدقة بينما الطريقة  $UV$  وهذا يعني أن جهاز الـ الكهربائية يمكنه من قياس الشوائب والموصلية بدقة أكبر.

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