



بسم الله الرحمن الرحيم

Sudan University of Science and Technology

College of Graduate Studies



**Effect of temperature on some Optical and Electrical
Properties of Carbon Nanotube Doped by: TiO₂, CuO, ZnO
and MgO**

تأثير درجة الحرارة على بعض الخصائص البصرية والكهربية للأنايبب الكربونية
المطعمة بـ MgO و ZnO و CuO و TiO₂

*Thesis submitted for fulfilment of the requirements for degree
of Doctor of Philosophy in Physics*

Submitted by:

Azza Abdalwahab Abdalla Bilal

Supervisor

Associate Prof. Rawia Abdelgani Elobaid Mohammed

Co-Supervisor

Professor: Mubarak Dirar Abdullah

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