بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

MONA MAGHRABY

Ain Shams University
Faculty of Science
Chemistry Department

Design, Synthesis and electronic structural studies of some symmetrical and unsymmetrical phthalocyanines for photo-electrochemical applications

A thesis submitted for the Degree of Doctor of Philosophy of Science in Chemistry

Presented by

Basma Salah Mohamed Ghazal

M.Sc. Organic Chemistry, 2012

Assistant Researcher, National Research Centre

Submitted to

Chemistry Department

Faculty of Science

Ain Shams University

(2020)

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Under the supervision of

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APPROVAL SHEET

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Table of Contents

List of Figures: