

# ERNA NORMAYA BINTI ABDULLAH



- KULLIYAH OF SCIENCE
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## ACADEMIC QUALIFICATION

- Doctor of Philosophy (Chemistry)
- Master of Science ( Chemistry )

## TEACHING RESPONSIBILITIES

ADVANCE ANALYTICAL METHODS FOR HALAL HARAM PRODUCTS	2018/2019
CHEMISTRY OF FATS AND OILS	2015/2016 2016/2017 2017/2018
EMULSIFIERS AND SURFACTANTS	2016/2017 2017/2018
FLAVOURS AND FRAGRANCES	2016/2017 2017/2018 2018/2019 2020/2021
FOOD CHEMISTRY & BIOTECHNOLOGY	2019/2020
HALAL AND HARAM IN FOOD INGREDIENTS AND PROCESSING	2018/2019 2019/2020
HALAL FOODS AND RELATED PRODUCTS	2016/2017 2017/2018
INDUSTRIAL TRAINING/INTERNSHIP	2016/2017 2017/2018
INORGANIC CHEMISTRY I	2015/2016 2019/2020
INORGANIC CHEMISTRY II	2015/2016 2016/2017 2017/2018 2018/2019 2019/2020 2020/2021
ORGANOMETALLIC & BIOINORGANIC CHEMISTRY	2015/2016 2016/2017 2017/2018 2018/2019 2019/2020
PROJECT SEMINAR	2017/2018
RESEARCH METHODOLOGY	2017/2018 2020/2021

## RESEARCH PROJECTS

### In Progress

**2019 - Present**

Analysis of Blackwater Treatment of the Green Toilet System in Auto-City, Penang

- 2019 - Present** Optimizing and Mechanistic Interaction Studies of a Fluorescent Chemosensor for Metal-Ion Recognition in Aqueous Media and Living Cells using Linked Thiosemicarbazone-PAHs: Experimental and Theoretical Approaches
- 2019 - Present** Chemosensor Development for Metal Ions Recognition in Lake and River Water Samples
- 2016 - Present** Synthesis, Characterization and Reaction Mechanism Study of a Novel HIV Protease Inhibitor from a Sugar-based Thiosemicarbazone Series using Density Functional Theory
- 2015 - Present** Supercritical Fluids Extraction Method Development for Extraction of a New Potential Halal Protease from Anacardium occidentale Fruit

### Completed

- 2016 - 2020** Synthesis, Characterization and Reaction Mechanism Study of a Novel HIV Protease Inhibitor from a Sugar-based Thiosemicarbazone Series using Density Functional Theory
- 2015 - 2019** Supercritical Fluids Extraction Method Development for Extraction of a New Potential Halal Protease from Anacardium occidentale Fruit
- 2015 - 2019** Density Functional Theory Studies on Synthesis, Characterization and Antibacterial Activity of Heteroaromatic Substitution on 4N-Sulfonamide Thiosemicarbazones

## PUBLICATIONS

### Article

- 2020** [Artocarpus altilis extracts as a foodborne pathogen and oxidation inhibitors: RSM, COSMO RS, and molecular docking approaches.](#) Scientific Reports , 10 pp.1-14
- 2020** [Inhibitory effects of Manihot esculenta extracts on food-borne pathogens and their antioxidant properties: supercritical fluid extraction, statistical analysis, and molecular docking study.](#) Journal of Food Process Engineering , e13452
- 2020** [The applicability of using a protease extracted from cashew fruits \(Anacardium occidentale\), as possible meat tenderizer: an experimental design approach.](#) Journal of Texture Studies
- 2020** [Silver\(I\) dicyanonitrosomethanide, Ag\[ONC\(CN\)2\] complex as catalyst for the selective oxidation of styrene to benzaldehyde.](#) Science Letters , 14 (2) pp.74-87
- 2020** [Synthesis of thiosemicarbazone-based colorimetric chemosensor for Cu<sup>2+</sup> ions' recognition in aqueous medium: Experimental and theoretical studies.](#) Journal Of Molecular Structure , 1212 pp.1-10
- 2020** [Optimization of a protease extraction using a statistical approach for the production of an alternative meat tenderizer from Manihot esculenta roots.](#) Journal of Food Science and Technology , 57
- 2020** [DFT/TD-DFT study on development and optimization of 1- anilino-3-phenyliminourea as a colorimetric chemosensor for Hg<sup>2+</sup> recognition in aqueous medium.](#) Journal of Molecular Structure , 1206 pp.1-7

- 2019 [Chemosensor development of Cu<sup>2+</sup> recognition using 1,5-diphenylthiocarbazone: optimization, COSMO-RS and DFT studies.](#) Journal of The Brazilian Chemical Society , 30 (9) pp.1850-1859
- 2019 [COSMO-RS and DFT studies on development and optimization of quercetin as a chemosensor for Fe<sup>3+</sup> recognition in aqueous medium.](#) Journal Of Molecular Structure , 1184 pp.538-545
- 2019 [Optimization of a protease extraction using a statistical approach for the production of an alternative meat tenderizer from Spondias cytherea roots.](#) Journal of Food Processing and Preservation , 43 (11) pp.1-14
- 2019 [The effect of vanillin on the oxidative stability of palm olein.](#) Malaysian Journal Of Analytical Sciences , 23 (5) pp.861-869
- 2019 [Adsorption study on the removal of copper ions from aqueous solution using sodium hydroxide-modified Carica papaya peels.](#) Malaysian Journal of Analytical Sciences , 23 (6) pp.926-937
- 2018 [Synthesis, characterization and preliminary study on acetylpyrazine N\(4\)butylthiosemicarbazone as a potential CDK2 inhibitor combined with DFT calculations.](#) Journal of Brazilian Chemical Society , 29 (10) pp.2197-2206
- 2018 [Synthesis, structural, density functional theory, and X-ray diffraction study Of ZN\(II\) N-isopropylbenzylidithiocarbamate: anti-corrosion screening in acid media.](#) Indonesia Journal of Chemistry , 18 (4) pp.755-765
- 2013 [Density functional theory studies on vibrational spectra \(E\)-N-\(4-carboxylphenyl\)-2-\(1-\(pyrazin-2-yl\)ethylidene\) hydrazinecarbothioamide.](#) Malaysia Journal of Chemistry , 15 (1) pp.033-040
- 2011 [3-\(2-Hydroxyphenyl\)-1-\[\(E\)-\[1-\(pyrazin-2-yl\)ethylidene\]amino\]thiourea monohydrate.](#) Acta Crystallographica Section E: Crystallographic Communications , 67 (4) pp.o943-o944

#### Conference or Workshop Item

- 2019 [2-acetylthiophene thiosemicarbazone as mushroom tyrosinase inhibitor: insights from kinetic, RDG, molecular docking, and DFT studies.](#) In: **International Conference in Organic Synthesis 2019 (ICOS2019)**
- 2019 [Preliminary study in discovering 2-geranylphenol from Lansium domesticum leaves as oxidation and tyrosinase inhibitor for anti-aging and skin whitening agents: experimental and theoretical study.](#) In: **The 32nd Symposium of Malaysia Analytical Sciences : Simposium Kimia Analisis Malaysia (SKAM 32)**
- 2019 [Salasa adulis as a novel dual-functional food additive for antimicrobial and antioxidant properties: experimental and theoretical approach.](#) In: **The 32nd Symposium of Malaysia Analytical Sciences : Simposium Kimia Analisis Malaysia (SKAM 32)**
- 2019 [Preliminary study in discovering 2-propen-1-one, 1-\(2,4-dihydroxyphenyl\)-3-\(4-methoxyphenyl\)- from syzygium aqueum leaves as a tyrosinase inhibitor in food product: experimental and theoretical approach.](#) In: **International Conference on Clean Water, Air and Soil (CLEANWAS 2019)**
- 2019 [Chemosensor development for cobalt ion recognition using 2-acetylpyrazine thiosemicarbazone: experimental and theoretical approach.](#) In: **32nd International Conference of Analytical Sciences (SKAM32)**

- 2019 [Preliminary study on developing 1,5-Diphenylcarbozone as a chemosensor againsts Hg<sup>2+</sup> ions recognition in aqueous media.](#) In: **International Conference on Clean Water, Air and Soil (CLEANWAS 2019)**
- 2019 [Thermal stability of melt-blended poly \(lactic acid\) \(PLA\)/polyamide 66 \(PA66\)/graphene nanoplatelets \(GnP\).](#) In: **1st Process Systems Engineering & Safety (ProSES) Symposium 2019**
- 2018 [Discovery and development of halal protease from \*Spondias cytherea\* for meat tenderization.](#) In: **International Conference of Analytical Sciences (SKAM31)**
- 2018 [Chemosensor development of cu<sup>2+</sup> recognition using 1,5-diphenylcarbazone: optimization, cosmo-RS and DFT studies.](#) In: **International Conference of Analytical Sciences (SKAM31)**
- 2018 [Chemosensor development using 2-acetylpyrrole thiosemicarbazone for cu<sup>2+</sup> ion recognition in aqueous medium: experimental and theoretical studies.](#) In: **International Conference of Analytical Sciences (SKAM31)**
- 2018 [Synthesis, characterization, reaction mechanism and theoretical study of antimicrobial inhibitor from heteroaromatics based thiosemicarbazone.](#) In: **International Conference of Analytical Sciences (SKAM31)**
- 2018 [Statistical analysis and molecular docking study on halal potential antioxidant from \*Anacardium occidentale\* fruits.](#) In: **International Conference of Analytical Sciences (SKAM31)**
- 2017 [Adsorption study on the removal of cu ions from aqueous solution using NAOH-modified \*Carica papaya\* peels.](#) In: **International Conference of Analytical Sciences (SKAM30)**
- 2017 [Extraction of protease from \*Anacardium occidentale\* \(Cashew\) fruit using response surface methodology.](#) In: **6th International Conference on Advancement in Science and Technology (iCAST 2017)**

#### Book

- 2014 [Protease extraction from Horse mango \(\*Mangifera foetida\* Lour\) kernels.](#) LAP Lambert Academic Publishing . ISBN 978-659-58540-1

#### Book Section

- 2019 [Optimization of research and manufacturing processes in product and service.](#) In: **Industrial Revolution 4.0 : a future outlook** Universiti Malaysia Pahang . ISBN 9789672226505 , pp.128-141