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BINTI MAT RADZI**

PENSYARAH UNIVERSITI DS14

**CONTACT**

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**Faculty:** Fakulti Sains Dan  
Teknologi

**SUPERVISION**

PhD - Completed: 0, Ongoing: 1  
Master - Completed: 11, Ongoing:  
0

**AREAS OF EXPERTISE**

Bio - Organic Chemistry

Enzyme Technology

Chemical Sciences

**ACADEMIC QUALIFICATION**

PhD in Kimia Sintesis (2006)

Bachelor in Kimia Industri (2001)

**RESEARCH**

1. MODIFICATION OF VEGETABLE OILS USING HYDROPHILIC AND LIPOPHILIC MOIETIES TO PRODUCE WAX ESTERS FOR COSMETIC FORMULATIONS

2022 GERAN PENYELIDIKAN USIM ON GOING MAIN RESEARCHER

2. EVALUATION OF TYROSINSE AND FREE RADICAL SCAVENGING ACTIVITIES OF KOJIC ACID (KA) KOJIC ACID MONOOLEATE(KAMO)

2016 GERAN PENYELIDIKAN TRANSLASIONAL COMPLETED MAIN RESEARCHER

3. A NEW DUAL BIOCATALYSTS SYSTEM IN IMPROVING THE REACTION SYNTHESIS OF KOJIC ESTER , A HALAL BIO BASED WHITENING AGENT

2012 GERAN KPT COMPLETED MAIN RESEARCHER

4. KINETIC MODELING AND OPTIMIZATION VIA RESPONSE SURFACE METHODOLOGY (RSM) FOR EFFICIENT PRODUCTION OF FERULATE ESTERS

2012 GERAN PENYELIDIKAN USIM COMPLETED MAIN RESEARCHER

5. OPTIMIZATION VIA RESPONSE SURFACE METHODOLOGY (RSM) FOR EFFICIENT PRODUCTION OF FERULATE ESTER

2011 GERAN PENYELIDIKAN FUNDAMENTAL COMPLETED MAIN RESEARCHER

# RESEARCH

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6. GREEN SYNTHESIS OF FLAVOUR ESTER VIA LIPASE-CATALYZED REACTION

2008 GERAN KPT COMPLETED MAIN RESEARCHER

7. ENZYMATIC SYNTHESIS OF PALM-BASED SPECIALTY ESTER AS RAW MATERIAL FOR COSMETIC

2007 GERAN PENYELIDIKAN FUNDAMENTAL COMPLETED MAIN RESEARCHER

## PUBLICATION

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### 1. PRELIMINARY STUDY ON THE USE OF MAGNETIZE FE<sub>3</sub>O<sub>4</sub>-ZRO<sub>2</sub> CATALYST FOR BIODIESEL PRODUCTION

SEMINAR ANTARABANGSA ISLAM DAN SAINS 2023

2023 PROCEEDING NON-INDEX MAIN AUTHOR

### 2. OPTIMIZATION OF THE BIODIESEL PRODUCTION VIA TRANSESTERIFICATION REACTION OF PALM OIL USING RESPONSE SURFACE METHODOLOGY (RSM): A REVIEW

2ND APPLIED SCIENCE RESEARCH INTERNATIONAL CONFERENCE 2022 (2ND ASRIC 2022)

2022 PROCEEDING MYCITE MAIN AUTHOR

### 3. HIGH PERFORMANCE OF LIPASE CATALYZED SYNTHESIS OF KOJIC ACID MONOOLEATE IN DUAL ENZYME SYSTEM

NACOSS VI 2021

2021 PROCEEDING NON-INDEX MAIN AUTHOR

### 4. HIGH PERFORMANCE OF LIPASE CATALYZED SYNTHESIS OF KOJIC ACID MONOOLEATE IN DUAL ENZYME SYSTEM

NACOSS VI 2021

2021 PROCEEDING NON-INDEX MAIN AUTHOR

### 5. SYNTHESIS AND ANTIMICROBIAL STUDY OF KOJIC ACID MONOOLEATE

VIRTUAL SYMPOSIUM ON SCIENCES 2021

2021 PROCEEDING NON-INDEX MAIN AUTHOR

### 6. EVALUATION OF CONSORTIUM ENZYME TOWARDS KOJIC ACID SYNTHESIS

MALAYSIAN JOURNAL OF SCIENCE HEALTH & TECHNOLOGY

2020 JOURNAL OTHERS DATABASE MAIN AUTHOR

### 7. LIPASE CATALYZED SYNTHESIS OF KOJIC ACID MONOOLEATE IN ORGANIC SOLVENT.

VIRTUAL SYMPOSIUM ON SCIENCES 2020 (VSOS 2020)

2020 PROCEEDING NON-INDEX MAIN AUTHOR

### 8. EVALUATION ON CONSORTIUM ENZYME TOWARDS KOJIC ACID SYNTHESIS

ADVANCES IN MATERIALS SEMINAR 2019 (AIMS2019)

2019 PROCEEDING NON-INDEX MAIN AUTHOR

### 9. EVALUATION OF TYROSINASE ACTIVITY AND RADICAL SCAVENGING ACTIVITY OF KOJIC ACID AND KOJIC ACID MONOOLEATE

ADVANCED SCIENCE LETTERS

2017 JOURNAL SCOPUS MAIN AUTHOR

### 10. OPTIMIZATION OF EUGENOL ESTER USING STATISTICAL APPROACH OF RESPONSE SURFACE METHODOLOGY

MATERIALS SCIENCE FORUM

2016 JOURNAL SCOPUS MAIN AUTHOR

### 11. ANTIBACTERIAL STUDY OF OLIVE-BASED FERULATE ESTERS

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES

2015 JOURNAL SCOPUS MAIN AUTHOR

### 12. IMPROVEMENT ON THE CATALYTIC PERFORMANCE USING DUAL LIPASES SYSTEM IN THE SYNTHESIS OF FERULATE ESTERS

APPLIED MECHANIS AND MATERIALS

2015 JOURNAL SCOPUS MAIN AUTHOR

### 13. DUAL LIPASES SYSTEM IN TRANSESTERIFICATION OF ETHYL FERULATE WITH OLIVE OIL: OPTIMIZATION BY RESPONSE SURFACE METHODOLOGY

ASIAN JOURNAL OF APPLIED SCIENCES

2015 JOURNAL SCOPUS MAIN AUTHOR

## PUBLICATION

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### 14. OPTIMIZATION OF OLEYL ESTER USING STATISTICAL APPROACH OF RESPONSE SURFACE METHODOLOGY

INTERNATIONAL INSTITUTE OF CHEMICAL, BIOLOGICAL & ENVIRONMENTAL ENGINEERING (IICBEE)

2015 PROCEEDING NON-INDEX MAIN AUTHOR

### 15. HIGH YIELD SYNTHESIS OF KOJIC ESTER USING DUAL ENZYMES SYSTEM AND THEIR ANTIBACTERIAL ACTIVITY

KEY ENGINEERING MATERIALS

2014 JOURNAL SCOPUS MAIN AUTHOR

### 16. ENZYMATIC SYNTHESIS OF OLIVE-BASED FERULATE ESTERS: OPTIMIZATION BY RESPONSE SURFACE METHODOLOGY

INTERNATIONAL JOURNAL OF CHEMICAL, NUCLEAR AND MATERIALS ENGINEERING

2014 JOURNAL SCOPUS MAIN AUTHOR

### 17. OPTIMIZATION VIA RESPONSE SURFACE METHODOLOGY (RSM) OF DUAL ENZYMES SYSTEM FOR THE PRODUCTION OF FERULATE ESTER

38TH ANNUAL CONFERENCE OF THE MALAYSIAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY

2013 PROCEEDING NON-INDEX MAIN AUTHOR

### 18. HIGH YIELD SYNTHESIS OF KOJIC ESTER USING DUAL ENZYMES SYSTEM AND THEIR ANTIBACTERIAL ACTIVITIES

2ND INTERNATIONAL CONFERENCE ON ADVANCE MATERIAL ENGINEERING @ TECHNOLOGY

2013 PROCEEDING NON-INDEX MAIN AUTHOR

### 19. BASICS OF CHROMATOGRAPHY TECHNIQUE AND ITS SAMPLE PREPARATION

HALAL SCIENCE AND TECHNOLOGY FOR PROFESSIONAL HALAL ANALYST PROGRAM

2013 CHAPTER IN BOOK MAIN AUTHOR

### 20. OPTIMIZATION VIA RESPONSE SURFACE METHODOLOGY (RSM) OF DUAL ENZYMES SYSTEM FOR THE PRODUCTION OF FERULATE ESTER

MALAYSIAN INTERNATIONAL CONFERENCE ON TRENDS IN BIOPROCESS ENGINEERING (MICOTRIBE 2012)

2012 PROCEEDING NON-INDEX MAIN AUTHOR

### 21. BASIC OF CHROMATOGRAPHY AND ITS SAMPLE PREPARATION

MODUL FOR KTP FLAGSHIP

2012 CHAPTER IN BOOK MAIN AUTHOR

### 22. GREEN SYNTHESIS OF BUTYL ACETATE, A PINEAPPLE FLAVOR VIA LIPASE- CATALYZED REACTION

WORLD APPLIED SCIENCE AND TECHNOLOGY JOURNAL

2011 JOURNAL WOS MAIN AUTHOR

### 23. OPTIMIZATION OF LIPASE CATALYZED SYNTHESIS OF NONYL CAPRYLATE USING RESPONSE SURFACE METHODOLOGY (RSM)

JOURNAL OF BIOTECHNOLOGY & BIOMATERIALS

2011 JOURNAL WOS MAIN AUTHOR

### 24. OPTIMIZATION OF LIPASE CATALYZED SYNTHESIS OF ETHYL VALERATE, A GREEN APPLE FLAVOR USING RESPONSE SURFACE METHODOLOGY (RSM)

JOURNAL OF ENVIRONMENTAL SCIENCE AND ENGINEERING

2011 JOURNAL WOS MAIN AUTHOR

### 25. GREEN SYNTHESIS OF BUTYL ACETATE, A PINEAPPLE FLAVOUR VIA LIPASE-CATALYZED REACTION

ICACCE 2011 : INTERNATIONAL CONFERENCE ON APPLIED CHEMISTRY AND CHEMICAL ENGINEERING

2011 PROCEEDING NON-INDEX MAIN AUTHOR

### 26. OPTIMIZATION OF LIPASE CATALYZED SYNTHESIS OF FLAVOR ESTER USING RESPONSE SURFACE METHODOLOGY (RSM)

THE 24TH REGIONAL SYMPOSIUM MALAYSIAN ANALYTICAL SCIENCES (SKAM-24)

2011 PROCEEDING NON-INDEX MAIN AUTHOR

## PUBLICATION

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**27. OPTIMIZATION OF LIPASE CATALYZED SYNTHESIS OF NONYL CAPRYLATE, A CITRUS AND ROSE FLAVOR USING RESPONSE SURFACE METHODOLOGY (RSM)**

10TH INTERNATIONAL ANNUAL SYMPOSIUM

2011 PROCEEDING NON-INDEX MAIN AUTHOR

**28. STUDY ON ANTIMICROBIAL ACTIVITY OF ETHYL VALERATE, A FRUITY FLAVOUR ESTER**

22ND PACIFIC SCIENCE CONGRESS, KLCC, MALAYSIA

2011 PROCEEDING NON-INDEX MAIN AUTHOR

**29. KINETICS OF ENZYMATIC SYNTHESIS OF LIQUID WAX ESTER FROM OLEIC ACID AND OLEYL ALCOHOL**

JOURNAL OF OLEO SCIENCE

2010 JOURNAL WOS MAIN AUTHOR

**30. PROCESS IMPROVEMENT ON THE LIPASE-CATALYZED SYNTHESIS OF OLEYL PALMITATE, A WAX ESTER VIA RESPONSE SURFACE METHODOLOGY (RSM)**

JOURNAL OF CHEMISTRY AND CHEMICAL ENGINEERING

2010 JOURNAL WOS MAIN AUTHOR

**31. OPTIMIZATION OF LIPASE CATALYZED SYNTHESIS OF ETHYL VALERATE, A GREEN APPLE FLAVOR USING RESPONSE SURFACE METHODOLOGY (RSM)**

JOURNAL OF ENVIRONMENTAL SCIENCE AND ENGINEERING

2010 JOURNAL WOS MAIN AUTHOR

**32. OPTIMIZATION OF LIPASE-CATALYZED SYNTHESIS OF ETHYL VALERATE, A GREEN APPLE FLAVOR USING RESPONSE SURFACE METHODOLOGY**

THE 3RD PENANG INTERNATIONAL CONFERENCE FOR YOUNG CHEMISTS (PENANG ICYC) 2010

2010 PROCEEDING NON-INDEX MAIN AUTHOR

**33. RESPONSE SURFACE METHODOLOGICAL STUDY ON THE GREEN SYNTHESIS OF NONYL CAPRYLATE, A FLAVOUR ESTER VIA LIPASE CATALYZED REACTION**

THE 2ND INTERNATIONAL CONFERENCE ON CHEMICAL SCIENCES, 2010

2010 PROCEEDING NON-INDEX MAIN AUTHOR

**34. PRELIMINARY STUDY ON THE OPTIMIZATION OF LIPASE-CATALYZED SYNTHESIS OF FLAVOUR ESTERS IN SOLVENT FREE SYSTEM**

REGIONAL ANNUAL FUNDAMENTAL SCIENCE SYMPOSIUM (RAFSS 2010)

2010 PROCEEDING NON-INDEX MAIN AUTHOR

**35. ANTIMICROBIAL ACTIVITY OF NEWLY SYNTHESIZED FLAVOR ESTER**

SEMINAR KEBANGSAAN APLIKASI SAINS DAN MATEMATIK 2010 (SKASM 2010)

2010 PROCEEDING NON-INDEX MAIN AUTHOR

**36. A NEW APPROACH OF THE SYNTHESIZING FERULATE ESTER A SUNSCREEN AGENT VIA LIPASE-CATALYZED REACTION**

PROGRAM BOOK AND ABSTRACT: EXPO INOVASI ISLAM 2010

2010 CHAPTER IN BOOK MAIN AUTHOR

**37. STUDY OF ENZYMATIC SYNTHESIS OF BUTYL ACETATE USING IMMOBILIZED LIPASE FROM RHIZOMUCOR MIEHEI**

2ND THE INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY WELLNESS INDUSTRY

2009 PROCEEDING NON-INDEX MAIN AUTHOR

**38. STUDY OF ENZYMATIC SYNTHESIS OF BUTYL ACETATE USING IMMOBILIZED LIPASE FROM RHIZOMUCOR MIEHEI**

2ND THE INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY WELLNESS INDUSTRY

2009 PROCEEDING NON-INDEX MAIN AUTHOR

**39. STUDY OF ENZYMATIC SYNTHESIS OF BUTYL ACETATE USING IMMOBILIZED LIPASE FROM RHIZOMUCOR MIEHEI?**

INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY WELLNESS INDUSTRY

2009 PROCEEDING NON-INDEX MAIN AUTHOR

## CONSULTATION

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### 1. FULL PAPER REVIEWER FOR THE KOLOKIUW SISWAZAH SAINS DAN TEKNOLOGI 2018

FST

2018

UNIVERSITY

### 2. PERUNDINGAN BAGI PELAJAR KURSUS SEMINAR KEPUJIAN

2014

UNIVERSITY

### 3. PERUNDINGAN BAGI PELAJAR SISWAZAH

2014

UNIVERSITY

### 4. PERUNDINGAN BAGI PELAJAR TESIS TAHUN AKHIR

2014

UNIVERSITY

### 5. REVIEWER FOR RESEARCH PAPER ENTITLED "OPTIMIZATION OF NOVEL METHOD FOR THE EXTRACTION OF STEVIOSIDE FROM STEVIA REBAUDIANA LEAVES" PUBLISHED IN JOURNAL OF FOOD CHEMISTRY

2011

INTERNATIONAL

## AWARDS/RECOGNITION

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### 1. SYNTHESIS AND BIOLOGICAL STUDIES OF WAX ESTER FROM OLIVE-BASED FATTY ACID AS RAW MATERIAL FOR COSMETIC FORMULATION

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024

UNIVERSITY

SILVER

### 2. IONIC LIQUIDS AS GREEN SOLVENTS FOR CHF BIOMASS PRETREATMENT

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024

UNIVERSITY

SILVER

### 3. OUTSTANDING ACHIEVEMENT AWARD 2018

2020

OTHERS

### 4. AWARD OF APPRECIATION 2019

2020

OTHERS

### 5. TOP 100 RESEARCHERS USIM ( 2013-2017)

TOP 100 RESEARCHERS

2018

UNIVERSITY

CERTIFICATE OF APPRECIATION