

MAIZIRWAN MEL



- KULLIYAH OF ENGINEERING
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المؤهل العلمي

- Diploma
- Doctor of Philosophy in Bioprocess Engineering
- Master of Science (Bioprocess Technology)
- Bachelor of Post Harvest Process Technology

مسؤوليات التدريس

ADVANCED BIOLOGICAL REACTOR DESIGN AND ANALYSIS	2016/2017
ADVANCED BIOSEPERATION PROCESSES	2019/2020
ANIMAL CELL CULTURE ENGINEERING	2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015
BIO-PHARMACEUTICAL MANUFACTURING	2003/2004 2004/2005 2005/2006 2006/2007 2007/2008 2009/2010 2010/2011 2011/2012 2012/2013 2014/2015 2017/2018
BIOCHEMICAL ENGINEERING FUNDAMENTALS	2013/2014 2016/2017 2017/2018 2018/2019
BIOMASS ENERGY	2010/2011 2011/2012 2014/2015 2015/2016 2016/2017 2017/2018 2018/2019 2019/2020
BIOPHYSICAL CHEMISTRY	2002/2003
BIOPROCESS FACILITY DESIGN AND REGULATORY	2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2015/2016 2017/2018 2018/2019 2019/2020 2020/2021
BIOPROCESS I	2003/2004
BIOTECHNOLOGY ENGINEERING LAB IV	2008/2009 2009/2010 2010/2011 2011/2012 2017/2018 2018/2019 2019/2020 2020/2021
BIOTECHNOLOGY FACILITY DESIGN AND REGULATORY	2003/2004 2004/2005 2005/2006 2006/2007 2007/2008 2008/2009 2009/2010
BIOTECNOLOGY ENGINEERING LABORATORY	2003/2004 2004/2005 2005/2006 2006/2007 2007/2008 2008/2009 2009/2010
DESIGN AND OPTIMIZATION OF PROCESS BIOTECH.	2012/2013

ENGIN. ASPECT OF ANIMAL & PLANT CELL CULTURE	2008/2009
ENGINEERING INDUSTRIAL TRAINING	2009/2010 2010/2011
FINAL YEAR PROJECT II	2018/2019
INTRODUCTION TO CELL AND TISSUE ENGINEERING	2003/2004 2004/2005 2005/2006 2006/2007
INTRODUCTORY MICROBIOLOGY	2002/2003 2003/2004
ISLAMIZATION OF ENGINEERING STUDIES	2020/2021
Integrated Design Project	2018/2019
PROCESS PLANT DESIGN & SAFETY	2013/2014
PROJECT I	2018/2019
SEMINAR	2018/2019
SEPARATION PROCESSES II	2017/2018 2019/2020 2020/2021

المشاريع البحثية

In Progress

2020 - Present	Design and Development of New Food Holder for Food Packaging Using 3D Printing Technology
2020 - Present	Local production of green chemicals from special strain of non-edible cassava starch in high scale of cost effective process
2019 - Present	Green synthesis of iron oxide nanoparticles for biohydrogen production via thermophilic anaerobic fermentation
2019 - Present	Indigenous and Traditional Medical Knowledge of Orang Asli for Community Sustainable Development
2018 - Present	SYNGAS PRODUCTION USING EFB PELLET AS FEEDSTOCK
2018 - Present	Internet of Things Based Water Quality Monitoring System for Aquaponics
2018 - Present	TRANSFERRING KNOWLEDGE TO AGROPRENUERS FOR MONITORING WATER QUALITY IN AN AQUAPONICS SYSTEM USING INTERNET OF THINGS (IOT)
2016 - Present	Lysozyme Loaded Core Shell CuZnO Nanospheres as Superior Antimicrobial Agent
2006 - Present	Bio-Process and Molecular Engineering Research Unit (BPMERU)

2006 - Present New Name: Bio-Process and Molecular Engineering Research Unit (BPMERU)
Biomolecular Engineering Research Unit (BioMERU)

Unknown - Present SYNGAS PRODUCTION USING EFB PELLET AS FEEDSTOCK

Unknown - Present Internet of Things Based Water Quality Monitoring System for Aquaponics

Completed

2018 - 2020 Internet of Things Based Water Quality Monitoring System for Aquaponics

2016 - 2020 Lysozyme Loaded Core Shell CuZnO Nanospheres as Superior Antimicrobial Agent

2015 - 2019 Straightforward Synthesis of Injectable Calcium Phosphate Cement Through Novel Hydrothermal Technique for Bone Filling Materials

2015 - 2018 Development of Ceramic Membranes from Halal Sources Material for Removal of CO₂ from Biogas Plant

2015 - 2017 Upgrading Biomethaneas Low Carbon Fuel for Motorbike

2014 - 2016 Implementation of Lean Manufacturing Blend with Good Manufacturing Practice for Minda Tulus Sdn Bhd to Improve Their Performance

2012 - 2015 Proof of Concept for a Novel Real Time, Hardware base Cancer Chemotherapeutics Kit Using MEMS Biosensor

2012 - 2013 Study the Effect of Kenaf Biomass' Morphology and its Chemicals Constituents on the Pre-Treatment Process and Production of L(+) Lactic Acid.

2012 - 2015 Hardware Implementation of a Novel Impedance Spectroscopy System for Cancer Cell Studies

2012 - 2015 Exploring the Potential of during Skin Waste as a Filler in Biodegradable Polymer

2012 - 2015 Using Metabolic Flux Balance Analysis (FBA) for the Production of Biohydrogen from Renewable Organic Waste

2012 - 2014 Pilot Scale Production of Biogas from Co-Digestion of Cow Manure and Food Waste for Electricity Generation

2011 - 2012 Bioprocessing Of Recombinant E.Coli Producing Glucuronidase Enzymes

2011 - 2014 Enhancement of Co₂ Mitigation of Cyanobacteria Potential for Biofuel Production

2011 - 2015 Upscaling of Gelatin Coated Microcarrier Beads Fabrication by Using Ultraviolet/Ozone (UVO) system

2011 - 2012 Hydrolysis of Glucose in Kenaf Biomass

2011 - 2012 Extraction of Astaxanthin Esthers from Shrimp Waste by Fermentation

2011 - 2013 Bioactive Ceramic Matrix Nanocomposites for High Performance Load Bearing Bone Substitute

- 2011 - 2014** Production Of High Grade Ethanol From Sago
- 2010 - 2013** The Production of Liquid Spawn (Seed) and Fruiting Bodies of Schizophyllum Commune
- 2010 - 2011** Engine Performance Analysis for Enhanced Fuel
- 2010 - 2011** Development of Glycerol-Containing Media and Process Conditions for Production of Nucleocapsid Protein of New Castle Disease Virus
- 2009 - 2010** Development of Porous Alumina for Biomedical Application using Protein Foaming-Consolidation Method
- 2009 - 2012** Global Metabolite Analysis of CHO Cells Cultured in T-Flasks and Bioreactor using Gas Chromatography-Mass Spectrometry
- 2009 - 2012** Studies on Effect(s) of Glutamine and/or Serum on CHO Cell Growth in Bioreactor Culture Focusing on the Insulin-like Growth Factor (IGF) Pathway
- 2009 - 2011** Development of Gelatin Coated Polyethylenea and Polystyrene Microcarrier for Vero Cell Culture
- 2008 - 2010** Design and Development of Novel MEMS bio-sensor for real-time study of Bone Deformation
- 2007 - 2010** Improvement of Nucleocapsid Protein of Avian Infuenza Virus (NP-AIV) Production from Recombinant E. coli Using 2L Benchtop Fermenter
- 2007 - 2011** Kinetic Studies and Optimisation of Biofuel Production from Cassava-Starch via Yeast Fermentation.
- 2006 - 2009** Development Of Bioactive Porous Ceramic Microcarriers For Animal Cell Proliferation
- 2006 - 2011** Process Improvement of Newcastle Disease Virus (NDV) Vaccine Production In Bioreactor
- 2005 - 2009** Insulin Production: Development of Bioreactor System for High Cell Density Culture of Pancreas Cell (RIN-5F)
- 2005 - 2010** Thermophilic B-Glucuronidase Production by Recombinant Eschericia Coli: Growth Kinetics Study and Modelling in Laboratory Scale Fermenter
- 2005 - 2009** Purification of Monoclonol Antibody (Mouse IgG): Designing Optimization of Yield Using Chromatographic Techniques
- 2005 - 2008** Optimization and Growth Kinetic Study of Laboratory Scale Fermentor for the Production of Lactic Acid

- 2020** [Coronary artery disease in periodontitis rat model.](#) Annals of Tropical Medicine and Public Health , 23 (3) pp.44-52
- 2020** [Water quality monitoring system for aquaponics and fishpond using Wireless Sensor Network.](#) International Journal of Innovative Technology and Exploring Engineering (IJITEE) , 9 (3) pp.51-54
- 2019** [Calcium phosphate /poly \(ethylene glycol\) bone cement: cell culture performance.](#) International Journal of Recent Technology and Engineering , 7 (6) pp.82-86
- 2019** [Portable water quality monitoring system for aquaponics using We MOS.](#) International Journal of Innovative Technology and Exploring Engineering (IJITEE) , 9 (1) pp.4181-4184
- 2019** [The effect of steeping robusta coffee beans on monocytes: Expression of IL-1 \$\beta\$ and TNF- \$\alpha\$ against Streptococcus mutans.](#) Coffee Science , 14 (4) pp.477-483
- 2019** [Heat-treated CNC/PVA composite from natural fibre for wax removal of batik wastewater treatment.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 64 (2) pp.354-362
- 2019** [Fermentation quality of Pennisetum purpureum cv. Mott ensiled with Lactobacillus plantarum and sugarcane molasses in tropic.](#) IOP Conf. Series: Earth and Environmental Science , 293 (012007) pp.1-7
- 2019** [Effectiveness of the use of organic waste as fertilizer and physical scarification of seeds on growth of seeds nila plants \(Indigofera sp.\).](#) IOP Conference Series: Earth and Environmental Science , 293 pp.1-7
- 2019** [The potential of an extract of Zingiber zerumbet \(L.\) Smith as a feed additive to improve the production performances and meat nutritional composition of broiler chickens.](#) IOP Conference Series: Earth and Environmental Science , 293 pp.1-7
- 2019** [Prospect of Fe non-heme on coffee flour made from solid coffee waste: Mini review.](#) IOP Conference Series: Earth and Environmental Science , 293 pp.1-25
- 2019** [Comparative study of the performance and economic value of a small engine fueled with B20 and B20-LPG as an effort to reduce the operating cost of diesel engines in remote areas.](#) IOP Conference Series: Materials Science and Engineering , 598 (1) pp.1-9
- 2018** [Investigation of bioflocculant as dewatering aid in sludge treatment.](#) IIUM Engineering Journal , 19 (1) pp.15-23
- 2018** [Influence of water molar ratio on fabrication of silica ceramic membranes via sol-gel dip-coating method.](#) International Journal of Current Science, Engineering & Technology , 1 (Special Issue 1) pp.378-383
- 2018** [Upgrading biogas by membrane contactor separation.](#) Journal of Advanced Research in Biofuel and Bioenergy , 3 (1) pp.19-26
- 2018** [Preliminary study on designing and development of a synthesis gas analyser in the process of gasification.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 52 (1) pp.76-84
- 2018** [Effect of Rushton impeller speed on biogas production in anaerobic digestion of continuous stirred bioreactor.](#) Journal of Advanced Research in Biofuel and Bioenergy , 3 (1) pp.9-18

- 2018** [The effect of single and double air inlets on swirling flow in a reactor of a fluidized bed gasifier.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 44 (1) pp.157-166
- 2018** [Improvement of biogas upgrading process using chemical absorption at ambient conditions.](#) Jurnal Teknologi , 80 (1) pp.107-113
- 2018** [Screening of lutein content in several fresh-water microalgae.](#) International Food Research Journal , 25 (6) pp.2307-2312
- 2018** [Effect of calcination temperature on the silica ceramic membrane synthesized via sol-gel dip-coating method.](#) International Journal of Current Science, Engineering & Technology , Special issue pp.63-67
- 2018** [Development of mini pilot fluidized bed gasifier for industrial approach: Preliminary study based on continuous operation.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 45 (1) pp.35-43
- 2018** [Preliminary study on designing and development of biogas analyser and monitoring system using IoT.](#) Journal of Advanced Research in Biofuel and Bioenergy , 3 (1) pp.1-8
- 2018** [Transformation of carbon dioxide into methanol.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 52 (1) pp.55-62
- 2018** [Process optimization of biogas production from palm oil mill effluent: a case study of a crude palm oil factory in Muaro Jambi, Indonesia.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 49 (2) pp.155-169
- 2018** [Effect of holes system designing for low energy stove using coffee husk bio-pellet as solid fuel.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 51 (2) pp.215-216
- 2018** [Design of liquefaction process of biogas using Aspen HYSYS simulation.](#) Journal of Advanced Research in Biofuel and Bioenergy , 2 (1) pp.10-15
- 2018** [Effect of poly\(ethylene glycol\) on the injectability, setting behavior and mechanical properties of calcium phosphate bone cement.](#) IIUM Engineering Journal , 19 (2) pp.192-202
- 2017** [Influence of operating variables on the in-situ transesterification using CaO/Al₂\(SO₄\)₃ derived from waste.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 40 (1) pp.1-6
- 2017** [Synthesis and characterization of silica ceramic membranes via sol-dip coating.](#) Journal of Advanced Research in Materials Science , 39 (1) pp.1-7
- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO₃\) system.](#) Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Sciences , 54 (1B) pp.55-59
- 2017** [Statistical optimization of gelatin immobilization on modified surface PCL microcarrier to improve PCL microcarrier compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175
- 2017** [Statistical optimization of gelatin immobilisation on modified surface of PCL microcarrier to improve its compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175

- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO3\) system.](#) Proceedings of Pakistan Academy of Sciences: B. Life and Environmental Sciences , 54 (B) (1) pp.59-64
- 2017** [Effect of dipping number on the fabricated silica ceramic membranes via sol dipping method.](#) Journal of Advanced Research in Applied Sciences and Engineering Technology , 7 (Issue 1) pp.19-24
- 2017** [Calcium phosphate cement for bone filler applications.](#) Journal of Advanced Research in Materials Science , 39 (1) pp.20-31
- 2017** [Ballast weight review of capsule husk *Jatropha curcas* Linn. on acid fermentation first stage in two phase anaerobic digestion.](#) Proceedings of the Pakistan Academy of Sciences , 54 (1B) pp.47-57
- 2017** [Optimization of ultraviolet ozone treatment process for improvement of polycaprolactone \(PCL\) microcarrier performance.](#) Cytotechnology , 69 (4) pp.601-616
- 2017** [Statistical optimization of gelatin immobilisation on modified surface PCL microcarrier to improve PCL microcarrier compatibility.](#) Jurnal Teknologi , 79 (6) pp.167-175
- 2017** [Different oxidation treatments on polystyrene \(PS\) microspheres by using an ultraviolet/ozone \(UVO3\)system.](#) Proceedings of Pakistan Academy of Sciences , 54 (1B) pp.59-65
- 2017** [Effects of co-digestion of camel dung and municipal solid wastes on quality of biogas, methane and biofertilizer production.](#) Journal of Advanced Research in Fluid Mechanics and Thermal Sciences , 40 (1) pp.7-17
- 2017** [Preliminary studies of biorefinery: Integration of slurry and CO₂ gas as biomethane digester waste for microalgae *Scenedesmus* sp. growth.](#) Journal of Advanced Research in Biofuel and Bioenergy , 1 (1) pp.13-19
- 2017** [Combining ability in *Jatropha curcas* L. Genotypes.](#) Proceedings Of The Pakistan Academy Of Sciences (B) , 54 (3) pp.259-261
- 2017** [Production of coconut shell liquid smoke from pilot plant of pyrolysis process.](#) Journal of Advanced Research in Biofuel and Bioenergy , 1 (1) pp.20-25
- 2017** [Influence of volatile fatty acid concentration on biogas production in syntrophic anaerobic digestion.](#) Journal of Advanced Research in Biofuel and Bioenergy , 1 (1) pp.26-43
- 2016** [A review of chemical absorption of carbon dioxide for biogas upgrading.](#) Chinese Journal of Chemical Engineering , 24 (6) pp.693-702
- 2016** [Carbon dioxide capture efficiency using algae biological absorbent and solid adsorbent for biogas purification.](#) Jurnal Teknologi (Sciences and Engineering) , 78 (4-2) pp.175-178
- 2016** [Profiling of extracellular metabolites in CHO-K1 cells cultured in medium with different levels of serum and glutamine.](#) Current Metabolomics , 4 (1) pp.56-62
- 2016** [Fabrication and sintering behavior of zinc-doped biphasic calcium phosphate bioceramics.](#) Materials and Manufacturing Processes , 31 (6) pp.713-718

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- 2015** [Process improvement of biogas production from anaerobic co-digestion of cow dung and corn husk.](#) Procedia Chemistry , 14 pp.91-100
- 2015** [The performance of Jatropha curcas Linn. Capsule Husk as feedstocks biogas in one phase anaerobic digestion.](#) Procedia Chemistry , 14 pp.316-325
- 2015** [The study of slurry recirculation to increase biogas productivity from Jatropha curcas Linn. capsule husk in two phase digestion.](#) Energy Procedia , 65 pp.300-308
- 2015** [Chaterization of Jatropha curcas Linn. Capsule Husk as feedstock for anaerobic digestion.](#) Energy Procedia , 65 pp.264-273
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- 2015** [Preliminary study on biohydrogen production by E. coli from sago waste.](#) Journal of Engineering Science and Technology , 10 (2) pp.11-21
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- 2015** [Effect of organic loading rate \(OLR\) of slurry on biogas production quality.](#) Advanced Materials Research , 1115 pp.325-330
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- 2014** [Preparation of zinc doped-biphasic calcium phosphate/carbon nanotube composites.](#) Advances in Environmental Biology , 8 (3(Spe)) pp.787-791
- 2014** [Optimization of spray drying process conditions for recombinant stem bromelain.](#) Advances in Environmental Biology , 8 (3) pp.696-703
- 2014** [Effects of glutamine and serum on IGF- dependent cho-K1 cell growth in T-Flask.](#) Advances in Environmental Biology , 8 (3 (Special Issue)) pp.831-837
- 2014** [Comparison of two total RNA extraction protocols from CHO-K1 cells for RT-PCR: cutoff cost for researchers.](#) IIUM Engineering Journal , 15 (1) pp.33-39
- 2014** [Study of chemical and thermal properties of kenaf biomass-based polylactic acid \(PLA\).](#) Advances in Environmental Biology , 8 (3 Spec. Issue) pp.633-638
- 2013** [Metabolomics profiling of extracellular metabolites in CHO-K1 cells cultured in different types of growth media.](#) Cytotechnology , 65 (4) pp.577-586
- 2013** [Kinetic studies on recombinant stem bromelain.](#) Advances in Enzyme Research , 1 (3) pp.52-60
- 2012** [Bromelain production: Current trends and perspective.](#) Archives Des Sciences , 65 (11) pp.369-399

- 2012** [Serum in mammalian cell culture: weighing the challenges of bioprocessing, ethics and animal welfare.](#) Advances in Natural and Applied Sciences , 6 (5) pp.596-600
- 2012** [Effect of hydroxyapatite and tricalcium phosphate addition on protein foaming-consolidation porous alumina.](#) Journal of Porous Materials , 19 (5) pp.733-743
- 2012** [Evaluation of maximum percentage glucose conversion for dilute acid hydrolysis of kenaf biomass using statistical analysis.](#) Advanced Materials Research , 576 pp.244-247
- 2012** [Production of lactic acid from kenaf core hydrolysate by rhizopus oryzae FTCC 5215.](#) Advanced Materials Research , 576 pp.248-251
- 2012** [Characterization on surface modification of kenaf biomass via microbial fermentation.](#) Advanced Materials Research , 576 pp.268-271
- 2012** [Batch process modelling and economic evaluation of glucuronidase enzyme production.](#) Bioprocessing and Biotechniques (S4) pp.1-7
- 2012** [Porous alumina-hydroxyapatite composites through protein foaming-consolidation method.](#) Journal of the Mechanical Behavior of Biomedical Materials , 8 pp.86-98
- 2012** [Process modelling and debottlenecking study of a vaccine production.](#) IIUM Engineering Journal , 13 (1) pp.97-107
- 2012** [The importance of a standardized Islamic manufacturing practice \(IMP\) for food and pharmaceutical productions.](#) The Importance of a Standardized Islamic Manufacturing Practice (IMP) for Food and Pharmaceutical Productions , 6 (5 Special 4) pp.588-595
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- 2012** [A rapid method for large sample number extraction of proteins from mammalian cells.](#) Regenerative Research , 1 (2) pp.49-55
- 2011** [Extraction of Algae Oil from Nannocloropsis sp.: A study of Soxhlet and Ultrasonic-Assisted Extractions.](#) Journal of Applied Sciences
- 2011** [Recovery of recombinant bromelain from Escherichia coli BL21-AI.](#) African Journal of Biotechnology , 10 (81) pp. 18829-18832
- 2011** [Fabrication of ceramic membrane chromatography for biologics purification.](#) IIUM Engineering Journal , 12 (4) pp.115-124
- 2011** [Micro-sized particle production of Momordica Sp extract using spray dryer.](#) IIUM Engineering Journal , 12 (4) pp.73-82
- 2011** [Effect of Rhizopus Oryzae Fermentation on Kenaf-based Polylactic Acid's Monomer.](#) IIUM Engineering Journal , 12 (4) pp.83-87
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- 2011** [Study of growth kinetic and modeling of ethanol production by Saccharomyces cerevisiae.](#) African Journal of Biotechnology , 16 (81) pp.18842-18846
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- 2011** [Efficient performance of locally processed serum in vero cell culture.](#) Journal of Materials Science and Engineering , 5 (4) pp.439-446
- 2011** [Porous alumina through protein foaming-consolidation method: effect of dispersant concentration on the physical properties.](#) Asia-Pacific Journal of Chemical Engineering , 6 pp.863-869
- 2011** [Synthesis of TiO₂ nanosized powder photocatalyst via sol-gel method for bacteria inactivation application.](#) Malaysian Journal of Microscopy , 7 pp.161-169
- 2011** [Purification of nucleocapsid protein of Newcastle Disease virus for immunodiagnostic kit.](#) IUM Engineering Journal , 12 (2)
- 2011** [Effect of hydroxyapatite and tricalcium phosphate addition on protein foaming-consolidation porous alumina.](#) Journal of Porous Materials
- 2011** [Synthesis of TiO₂ Nanosized Powder Photocatalyst Via Solgel Method for Bacteria Inactivation Application.](#) Malaysian Journal of Microscopy , 7 pp.161-169
- 2011** [Determination of IGF-1-producing CHO-K1 growth phases using GCMS-based global metabolite analysis.](#) IUM Engineering Journal , 12 (4) pp.89-98
- 2011** [Surface modification of polystyrene beads by UV/Ozone treatment.](#) Advanced Materials Research , 264 pp.1532-1537
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- 2010** [Cell rupture of recombinant escherichia coli using high pressure homogenizer.](#) Journal of Applied Sciences , 10 (21) pp.2717-2720
- 2010** [Optimisation of hydrolysis conditions for ethanol production from sorghum starch.](#) Journal - The Institution of Engineers, Malaysia , 71 (3) pp.26-34
- 2010** [Ragi tapai and saccharomyces cerevisiae as potential coculture in viscous fermentation medium for ethanol production.](#) African Journal of Biotechnology , 9 (42) pp.7122-7127
- 2010** [Surface modification of polystyrene beads by ultraviolet/ozone treatment and its effect on gelatin coating.](#) American Journal of Applied Sciences , 7 (6) pp.724-731
- 2010** [Production of newcastle disease virus by vero cells grown on cytodex 1 microcarriers in a 2-litre stirred tank bioreactor.](#) Journal of Biomedicine and Biotechnology , 2010 (586363) pp.1-7

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- 2010** [Optimization of process conditions for high cell density proliferation of DF-1 cells in bioreactor.](#) Medical Journal of Malaysia , 65 pp.19-21
- 2010** [The evaluation of kLa values for recombinant Escherichia coli fermentation producing \$\beta\$ -Glucuronidase enzyme .](#) Journal of Applied Sciences , 10 (4) pp.325-330
- 2010** [Optimization of process conditions for high cell density proliferation of DF-1 cells in bioreactor.](#) Medical Journal of Malaysia , 65 pp.19-21
- 2010** [Study of immobilized bovine and fish gelatin on carboxyl containing Polystyrene beads for Vero cell culture .](#) Medical Journal of Malaysia , 65 pp.26-27
- 2010** [Comparing BRIN-BD11 culture producing insulin using different type of microcarriers.](#) Cytotechnology , 62 pp.423-430
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- 2009** [Comparison of sweet sorghum and cassava for ethanol production by using saccharomyces cerevisiae.](#) Journal of Applied Sciences , 9 (17) pp.3068-3073
- 2009** [Single-step bioconversion of starch to bioethanol by the coculture of ragi tapai and saccharomyces cerevisiae.](#) Chemical Engineering Transactions , 18 pp.557-562
- 2009** [Process improvement of pharmaceutical grade ethanol production using sweet sorghum.](#) International Journal of Science Engineering and Technology , 2 (1) pp.57-63
- 2008** [Optimizing media of lactobacillus rhamnosus for lactic acid fermentation.](#) Journal of Applied Sciences , 8 (17) pp.3055-3059
- 2008** [Monoclonal antibody production: viability improvement of RC1 hybridoma cell in different types of bioreactor.](#) World Journal Microbiology Biotechnology , 24 (9) pp.1923-1927
- 2008** [Monoclonal antibody production: media optimization for enhancement the cell viability of hybridoma cell.](#) Asian Journal of Scientific Research , 1 (5) pp.525-531
- 2008** [Cell attachment study of chicken fibroblast cell\(DF-1\) using ceramic microcarrier granule in bioreactors.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.18-20
- 2008** [Synthesis and characterization of magnesium doped biphasic calcium phosphate.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.83-84
- 2008** [Influence of Manganese Doping into HA Powders on the properties of its Dense Bodies.](#) The Medical Journal of Malaysia , 63 (Sup A) pp.85-86
- 2007** [Porous hydroxyapatite for artificial bone applications.](#) Science and Technology of Advanced Materials , 8 (1-2) pp.116-123
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Conference or Workshop Item

- 2020 [An overview: analysis of ultrasonic-assisted extraction's parameters and its process.](#) In: **26th Regional Symposium on Chemical Engineering (RSCE 2019@ Kuala Lumpur)**
- 2020 [IoT based water quality monitoring system for aquaponics.](#) In: **International Conference on Telecommunication, Electronic and Computer Engineering 2019, ICTEC 2019**
- 2020 [Automated aquaponics maintenance system.](#) In: **International Conference on Telecommunication, Electronic and Computer Engineering 2019, ICTEC 2019**
- 2020 [Image restoration using mirroring method which based on the gradient direction.](#) In: **The 4th International Conference on Electrical Systems, Technology and Information (ICESTI 2019)**
- 2018 [Biomass and sugar content of some varieties of sorghum \(Sorghum Bicolor L. Moench\) on dry land forest as feedstock bioethanol.](#) In: **3rd International Conference on Electrical Systems, Technology and Information, ICESTI 2017**
- 2018 [Characterisation of Arabica coffee pulp - Hay from kintamani - Bali as prospective biogas feedstocks.](#) In: **3rd International Conference on Electrical Systems, Technology and Information, ICESTI 2017**
- 2018 [Fabrication of silica ceramic membrane via sol-gel dip-coating method at different nitric acid amount.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017, ICAMME 2017**
- 2018 [The effects of excess calcium on the handling and mechanical properties of hydrothermal derived calcium phosphate bone cement.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Antiwashout behavior of calcium phosphate cement incorporated with poly\(ethylene glycol\).](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Surface modification of microporous polycaprolactone \(PCL\) microcarrier to improve microcarrier biocompatibility.](#) In: **International Conference on Halal Innovation in Products and Services 2018 (i-CHIPS 2018)**
- 2018 [Surface modification of polycaprolactone \(PCL\) microcarrier for performance improvement of human skin fibroblast cell culture.](#) In: **International Conference on Advances in Manufacturing and Materials Engineering 2017 (ICAMME17)**
- 2018 [Simulation study of bio-methane conversion into hydrogen for generating 500 kw of power.](#) In: **3rd International Conference on Electrical Systems, Technology and Information, ICESTI 2017**

- 2017 [Effect of Poly\(Vinyl Alcohol\) addition on the properties of hydrothermal derived calcium phosphate cement for bone filling materials.](#) In: **2nd International Conference on Materials Engineering and Nanotechnology (ICMEN2017)**
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