



UTM  
UNIVERSITI TEKNOLOGI MALAYSIA

# Guide for Article Writing

for Undergraduate/Postgraduate  
projects, FKM UTM

innovative • entrepreneurial • global



**KEEP  
CALM  
AND  
KEEP  
WRITING**

• **Academic Writing**

**VS**

◊ **Creative Writing**

**KEEP  
CALM  
AND  
ENJOY  
WRITING**

**KEEP  
CALM  
AND  
enjoy my  
writing :)**

**KEEP  
CALM  
AND  
KISS  
A WRITER**





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# Academic Writing

Thesis

MA  
BSc (Hons) Quantity Surveying  
2013



Geochimica et Cosmochimica Acta

Volume 72, Issue 22, 15 November 2008, Pages 5475–5504



The Lithium, Boron and Beryllium content of serpentinized peridotites from ODP Leg 209 (Sites 1272A and 1274A): Implications for lithium and boron budgets of oceanic lithosphere

Flurin Vilb<sup>a</sup>, Laure Pellester<sup>a</sup>, Angelika Kalt<sup>a</sup>, Othmar Müntener<sup>b</sup>, Thomas Ludwig<sup>c</sup>

<sup>a</sup> Institut de Géologie et d'Hydrogéologie, Université de Neuchâtel, Rue Emile-Argand 11, CP 158, CH-2009 Neuchâtel, Switzerland

<sup>b</sup> Institut de Minéralogie et Géochimie, Université de Lausanne, Anthropole, CH-1015 Lausanne, Switzerland

<sup>c</sup> Mineralogisches Institut, Ruprecht-Karls-Universität Heidelberg, Im Neuenheimer Feld 236, D-69120 Heidelberg, Germany

<https://doi.org/10.1016/j.gca.2008.08.006>, How to Cite or Link Using DOI  
Permissions & Reprints

Journal article

## NOTHING TO TAKE THE PLACE OF A NURSE

Nothing can replace a nurse's tender loving care, Mr W. R. Griffiths told the Past Trainees' League at the Ballarat Base Hospital on Saturday.

4.11.1975

Mr Griffiths was speaking after receiving a donation of \$500 to the hospital appeal. A projector, overhead projector and screen were presented to Matron S. Ogden. Mrs McMillan said a fund was opened two years ago in memory of the late Sister M. McGrath, and the equipment was to assist in training midwifery sisters, a service Sister McGrath was devoted to. Matron Ogden thanked the league for its support, both as a group and members who personally do so much for the hospital.

Newspaper article

## Falsafah SAINS & TEKNOLOGI MENURUT AL-QURAN

YAHAYA JUSOH



Book

## SUMMER INTERNSHIP PROGRAM

## PROJECT REPORT

SUBMITTED BY :

DIVISION :

COMPANY GUIDE :

Project report

innovative • entrepreneurial • global



# Creative Writing



ALLOW ME TO INTRODUCE MYSELF.

When I'm not designing, I'm probably hanging out with my wife, being entertained by our amazing 2 year old little girl, watching college basketball, playing golf or messing around on something inspired by Steve Jobs.

- ✦ Web Design
- ✦ Wordpress
- ✦ Branding & Identity
- ✦ Social Media
- ✦ Professional Video
- ✦ HTML/CSS
- ✦ Joomla!
- ✦ E-Commerce
- ✦ Motion Graphics
- ✦ Search Engine Optimization



# Academic Writing



## What is “Academic” Writing?

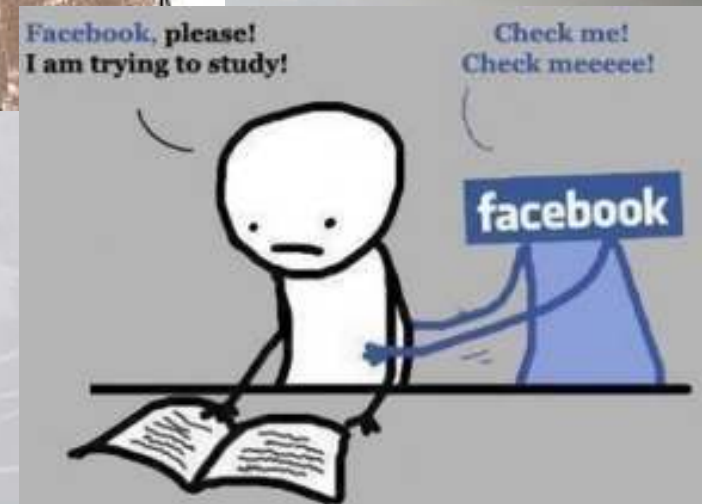


## What is academic writing?

- Academic writing is usually formal (but can be personal) and follows some standard conventions
- The language should be clear and concise.
- Appropriate theories should be used.
- All literature should be correctly acknowledged.



# Creative Writing



No specific format  
Your manuscript  
your style



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# Purpose of Academic Writing



KEEP  
CALM  
AND  
JUST  
GRADUATE

Requirement for  
graduation!!!

I JUST WANT TO



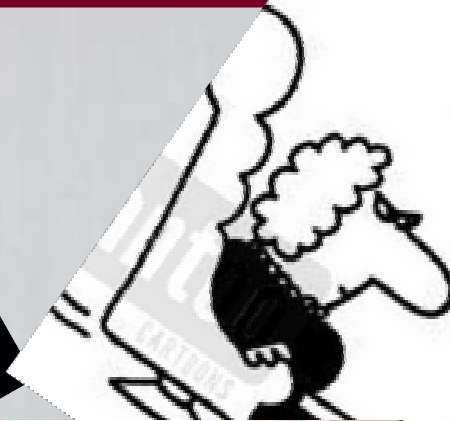




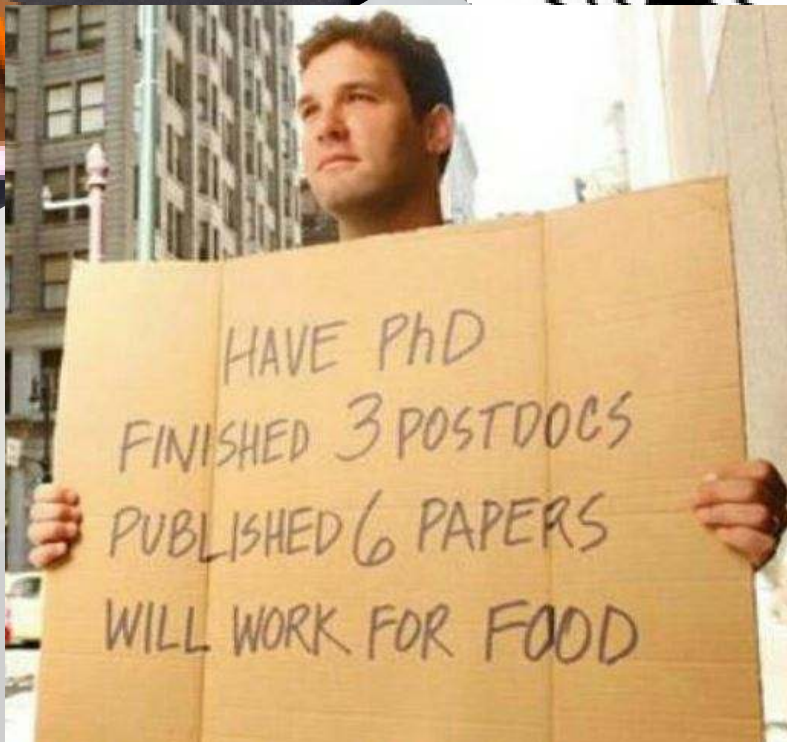
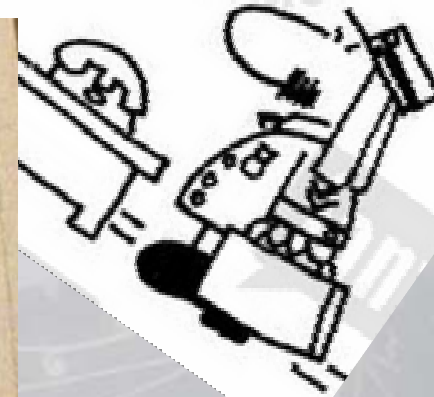
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HIRE  
ME  
PLEASE



I'M GIVING YOU ONE  
MORE CHANCE TO  
CONSIDER MY  
SALARY INCREASE



HAVE PhD  
FINISHED 3 POSTDOCS  
PUBLISHED 6 PAPERS  
WILL WORK FOR FOOD

Requirement for  
promotion!!!





**YOUNG  
AUTHOR AWARD**

PRESENTED TO

**FOR OUTSTANDING  
WRITING**

GRADE \_\_\_\_\_

SCHOOL \_\_\_\_\_

DATE \_\_\_\_\_

SIGNED \_\_\_\_\_



To get  
award/reward!!!

**TELL OTHERS**  
what you know



To share/disseminate  
knowledge!!!



If your research is not published  
in a journal it does not exist.



peribahasa

- 1. manusia mati meninggalkan nama (harimau mati meninggalkan belang, gajah mati meninggalkan gading); orang terkenal walaupun sudah meninggal, ia masih tetap dikenang; (peribahasa)

manusia mati meninggalkan nama

## Why Publish?



- So that your research can be read and built on by other researchers;
- So that people beyond the University can benefit from the work that you are doing;
- A core competency for most academic careers.

Share  
Your  
knowledge







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# To be recognized

[www.utm.my](http://www.utm.my)



Malaysia has three professors  
on world's most influential  
scientific minds list



# To be recognized

Heartiest Congratulations to Professor Dr. Ahmad Fauzi Ismail, (and Manufacturing) of UTM who has been selected as the recipient of the Merdeka Award 2014 for Outstanding Scholastic Achievement.



MERDEKA  
AWARD



USM BANGGA KEJAYAAN PROFE...

[www.eng.usm.my](http://www.eng.usm.my) - 336 x 408 - Search by image

Abdul Latif Ahmad



# To be recognized



Hazzirah Izzati penerima Ph.D termuda Malaysia

[www.vvip.my/.../hazzirah-izzati-penerima-phd-termu...](http://www.vvip.my/.../hazzirah-izzati-penerima-phd-termu...) ▼ Translate this page

Oct 2, 2014 - Hazzirah Izzati Mat Hassim jadi pelajar **termuda** menerima peringkat Ijazah Doktor Falsafah (**Ph.D**) di Universiti Teknologi Malaysia (UTM),.





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# To be recognized



## Heartiest Congratulations

TO DR. MUNDZIR ABDULLAH  
FROM THE FACULTY OF SCIENCE  
FOR BEING RECOGNISED AS  
THE YOUNGEST PHD HOLDER IN MALAYSIA  
AT 23 YEARS 5 MONTHS AS  
CERTIFIED BY THE  
MALAYSIA BOOK OF RECORDS



## CONGRATULATIONS

# TOP 1% MOST GLOBALLY CITED RESEARCHERS

14 MALAYSIAN ACADEMICIANS

BY  
  
THOMSON  
REUTERS

Based on data extracted from the Essential Science Indicator (ESI), Web of Science (WOS) (2006-2014)  
Awards for reprint authors of frequently cited articles by researchers worldwide



innovative • entrepreneurial • global



# To get reward

No	Jenis	Description	Amount
i	INSENTIF PENERBITAN INDEXED JOURNAL	Indexed in Web of Science	<b>For 2013 articles:</b> Bayaran Tuntutan Insentif Penerbitan Indexed Journal IF: ?.???  <b>For 2014 articles :</b> Bayaran Tuntutan Insentif Penerbitan Indexed Journal Q?  <b>For 2013 articles:</b> each 0.1 <i>impact factor</i> = RM200 (max RM3000)  <b>For 2014 articles:</b> Q1 = RM5000 Q2 = RM2000 Q3 = RM1000 Q4 = RM 500
		Indexed in Scopus	<b>For 2013 &amp; 2014 articles:</b> Bayaran Tuntutan Insentif Penerbitan Indexed Journal Scopus  <b>For 2013 articles:</b> = RM200 / article  <b>For 2014 articles:</b> = RM300 / article
		Bayaran Tuntutan Insentif Penerbitan Non-Indexed Journal	RM100 / article
		Bayaran Tuntutan Insentif Penerbitan Book Chapter	RM100 / chapter

**THEY SAY  
MONEY CAN'T BUY HAPPINESS**

**I SAY  
GIVE ME 100 DOLLARS  
YOU CAN WATCH ME SMILE!**

## Related product



SCIMAGO  
INSTITUTIONS  
RANKINGS

	Country	Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1	 United States	8.626.193	7.876.234	177.434.935	83.777.658	23,36	1.648
2	 China	3.617.355	3.569.652	19.110.353	10.462.121	7,44	495
3	 United Kingdom	2.397.817	2.103.145	44.011.201	10.321.539	21,03	1.015
4	 Germany	2.176.860	2.045.433	35.721.869	9.141.181	18,50	887
5	 Japan	2.074.872	2.008.410	27.040.067	7.619.559	13,79	745
6	 France	1.555.629	1.468.286	24.700.140	5.516.943	17,95	811
7	 Canada	1.227.380	1.134.588	22.152.666	4.136.384	21,40	794
8	 Italy	1.200.448	1.117.013	18.019.464	4.186.908	17,52	713
9	 India	998.544	944.632	6.989.150	2.409.025	9,61	383
10	 Spain	952.099	884.670	12.628.097	3.068.362	16,14	591
30	 Norway	200.700	170.000	3.334.027	330.420	20,17	402
31	 Hong Kong	200.580	189.621	2.951.215	393.784	16,87	359
32	 Singapore	192.942	182.169	2.561.645	331.822	15,78	349
33	 Portugal	189.052	179.134	2.096.242	407.892	15,17	297
34	 South Africa	167.440	154.857	1.774.278	386.014	13,41	292
35	 New Zealand	163.559	149.301	2.495.935	380.280	18,52	351
36	 Malaysia	153.378	148.844	670.387	183.198	9,41	165
37	 Argentina	145.416	138.788	1.681.700	354.132	13,49	273
38	 Hungary	136.034	130.299	1.660.840	264.809	13,60	301
39	 Ireland	135.843	123.585	1.999.703	233.733	19,01	332

Number of Academic publications:  
Malaysia's world ranked 36<sup>th</sup>

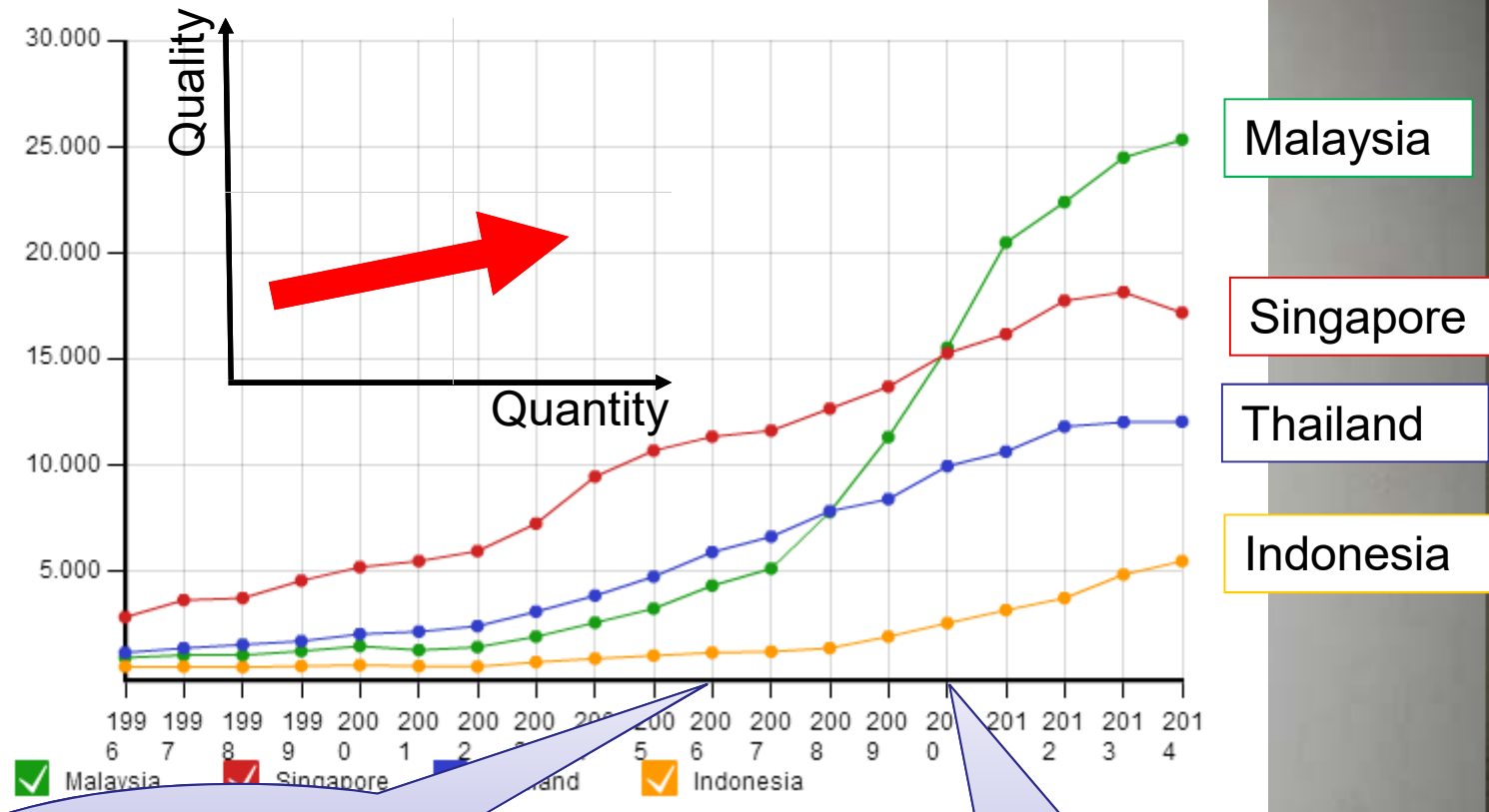


	Country	Documents	Citable documents	Citations	Self-Cit
1	China	3,617,355	3,569,652	19,110,353	10,462
2	Japan	2,074,872	2,008,410	27,040,067	7,619
3	India	998,544	944,632	6,989,150	2,409
4	South Korea	739,229	719,338	7,063,429	1,528
5	Taiwan	491,560	477,442	4,790,230	1,075
6	Hong Kong	200,580	189,621	2,951,215	393
7	Singapore	192,942	182,169	2,561,645	331
8	Malaysia	153,378	148,844	670,387	183
9	Thailand	109,832	104,982	976,328	162
10	Pakistan	81,612	78,219	425,467	118



Despite a small country, Malaysia Ranked 8<sup>th</sup> in Asia Pacific region



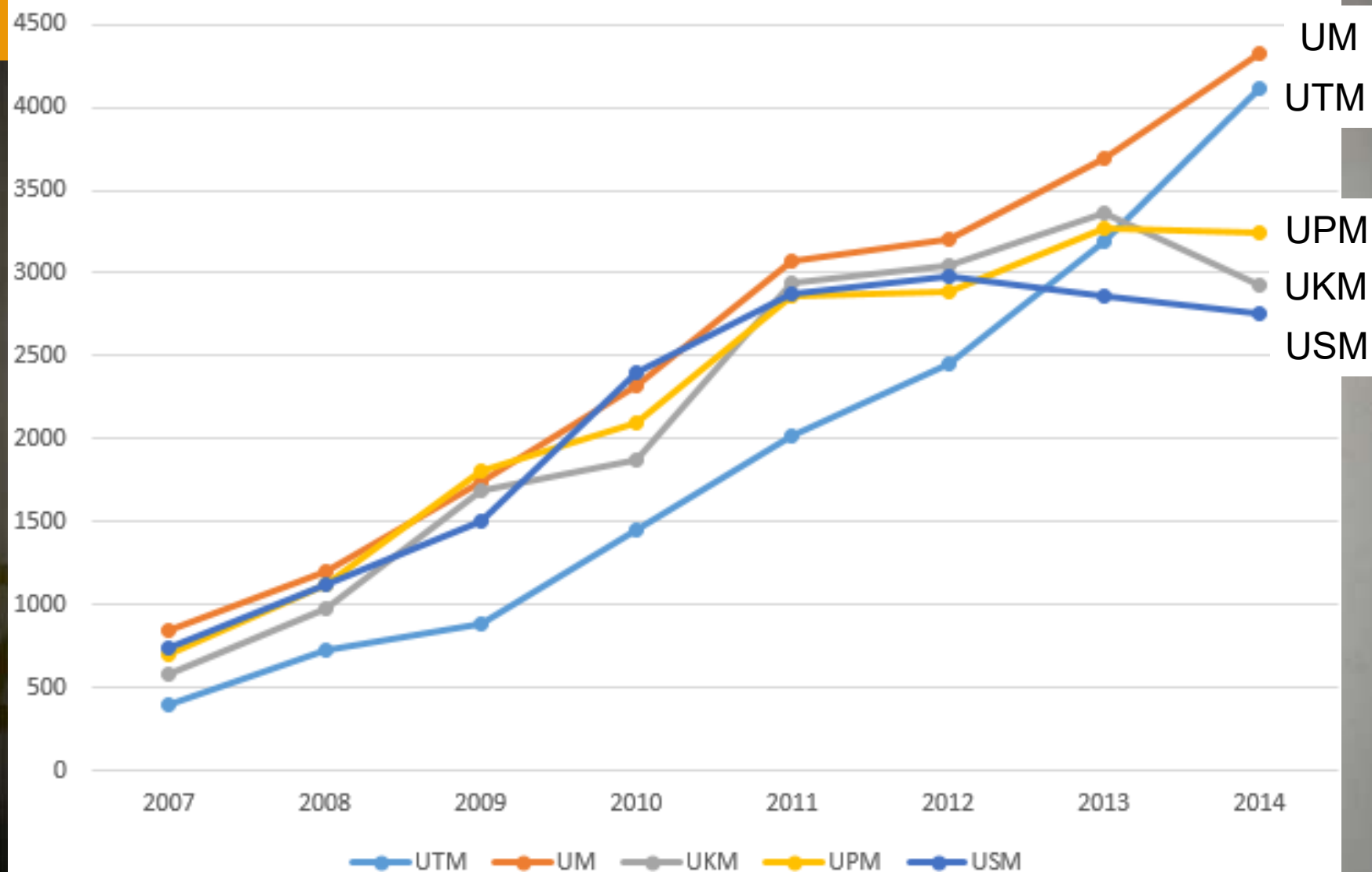


2006, Malaysia  
started Research  
University program

2010, UTM joined  
Research  
University program

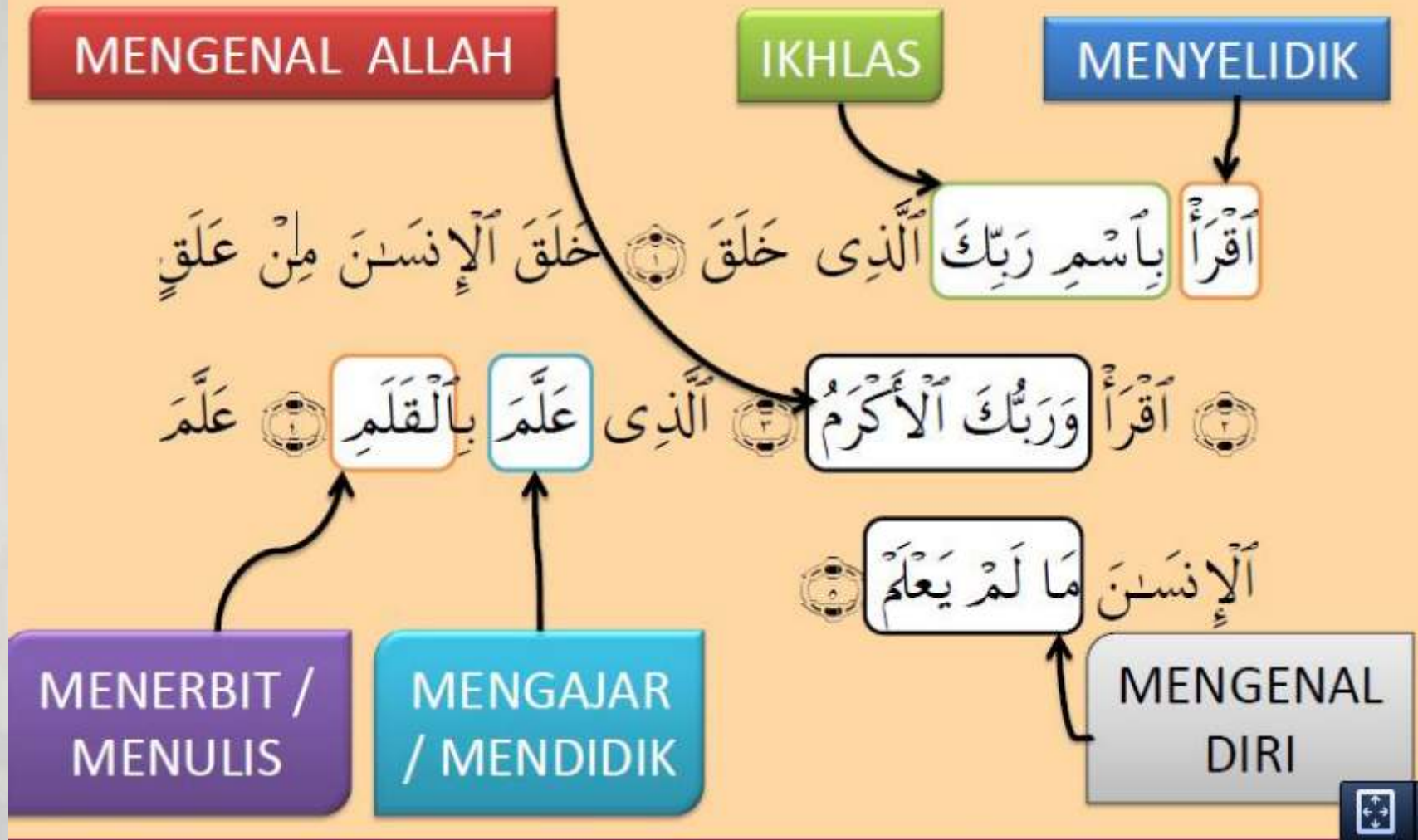


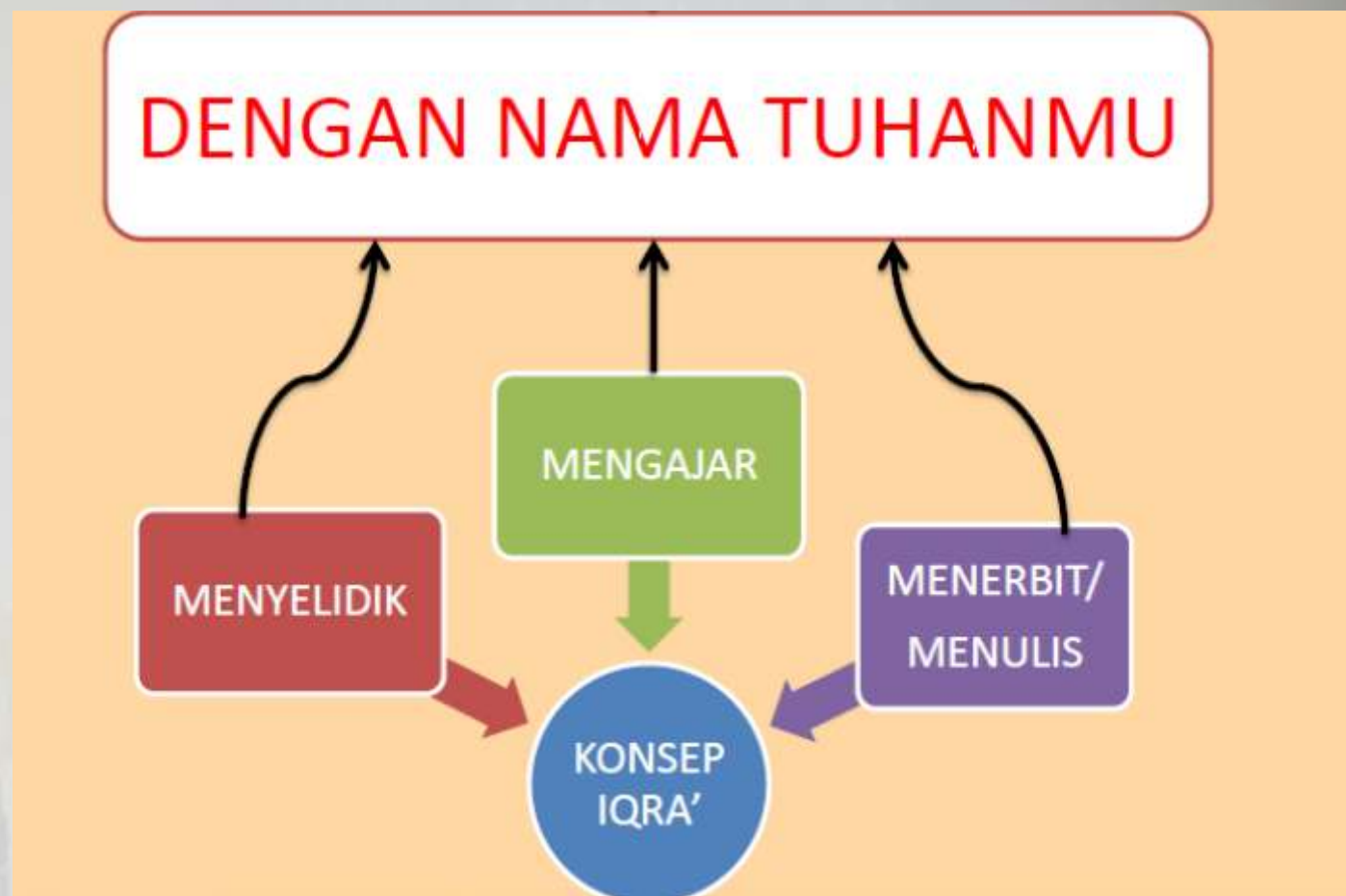
# Publication Trends among RUs





# KONSEP IQRA'





# Where to publish (journal)

## What is a journal?

- Journals are also known as serials or periodicals
- Journals are published by academic institutions, organisations and commercial publishers on a regular basis.
- Some are published weekly, most are published monthly or bi-monthly, others quarterly or even just once a year.
- Journals can be in print or electronic format and some are available as both.
- A journal is a scholarly publication containing articles written by researchers, professors and other experts. Journals focus on a specific discipline or field of study. Unlike newspapers and magazines, journals are intended for an academic or technical audience, not general readers.







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# (Academic) Journal

## Journal of Advanced Research Design



### Guide for Authors

Manuscripts submitted to Advanced Research Design must be original work that has not been published or ...

[See More...](#)

### Submit your paper

Submit manuscripts by email to Editor-in-Chief ...

ISSN (Online): 2289-7984

Frequency: Monthly

Editor-in-Chief: Nor Azwadi Che Sidik ([azwadi@fkn.utm.my](mailto:azwadi@fkn.utm.my))  
[View full editorial board](#)

**Aims and Scope:** This journal offers overall strategy that researchers choose to integrate the different research in a coherent and logical way, thereby ensuring effectively address the research problem. blueprint for the collection, measurement, and analysis of data spanning the interdisciplinary field of Scope of the journal includes: biology, chemistry, physics, environmental, business and economics, and statistics, geology, engineering, computer science, social sciences, natural and technological science, medicine, and architecture.

### Recent Articles

Volume 12, No. 1 (September, 2015)

**Enhancing Organization Demand for Innovation through Entrepreneurial Leaders Networks**

*M. Mokhber, G.G. Tan and A.Vakilbashi*

**Measuring Gender Equality in Technical and Vocational Education and Training**

*M. M. Mohamad, N. L. Sulaiman, L. C. Sern and K. Mohd Salleh*

A journal must has

i) ISSN/eISSN no.

ii) Chief editor

iii) Editorial board member

iv) Aims and scope of the

journal

v) Two articles published per volume



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# Where to publish (journal)

**JURNAL TEKNOLOGI**  
E-ISSN:1180-3722

HOME ABOUT LOGIN REGISTER SEARCH CURRENT ARCHIVES  
ANNOUNCEMENTS SUBMISSIONS PENERBIT UTM PRESS UTM

Home > Vol 74, No 10 > **Aliyu**

## POTENTIAL OF OIL PALM FROND LIQUID EXTRACT AND FIBER AS FEEDSTOCK FOR BIO-BUTANOL PRODUCTION

Abubakar Sadiq Aliyu, Azhar Abdul Aziz, Adibah Yahya, Zulkearnain Abdul Latiff

### Abstract

Oil palm frond is the most abundant yet untapped biomass in Malaysia. The objectives of the present work are to study the influence of the age of oil palms on productive sugar yield from oil palm frond extracts and to highlight the potential OPF liquid extract and fibers as feedstock for biobutanol production. Oil palm tree age between 5-10, 10-15 and 15-25 years were sampled

This title is indexed in SciVerse Scopus  
Improving research results through analytical power

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Journal of Advanced Review on Scientific Research



**Aims and Scope:** This journal offers critical reviews spanning the interdisciplinary field of applied researches. Scope of the journal includes: biology, chemistry, physics, environmental, business and economics, finance, mathematics and statistics, geology, engineering, computer science, social sciences, natural and technological sciences, linguistics, medicine, and architecture. See More...

Journal of Advanced Research Design



**Aims and Scope:** This journal offers overall strategy that researchers choose to integrate the different components of the research in a coherent and logical way, thereby, ensuring effectively address the research problem. It combines the blueprint for the selection, measurement, and analysis of data spanning the interdisciplinary field of applied researches. Scope of the journal includes: design, chemistry, physics, environmental, business and economics, finance, mathematics and statistics, geology, engineering, computer science, social sciences, natural and technological sciences, linguistics, medicine, and architecture. See More...

Journal of Advanced Research in Applied Mechanics

Journal of Advanced Research in Materials Science

**Aims and Scope:** This journal is concerned with

**Aims and Scope:** Advanced Research in



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## Research On Vehicle Technologies (2008)

*Editor*  
Srithar Rajoo



[www.penerbit.utm.my](http://www.penerbit.utm.my)  
2008

## Where to publish (book chapter)

### Contents

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# Types of manuscript

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Depending on the quality/ length of the paper, it can be:

- ♦ Research article
- ♦ Short communication/ brief note/ view point/
- ♦ Technical note
- ♦ Review article
- ♦ Comments



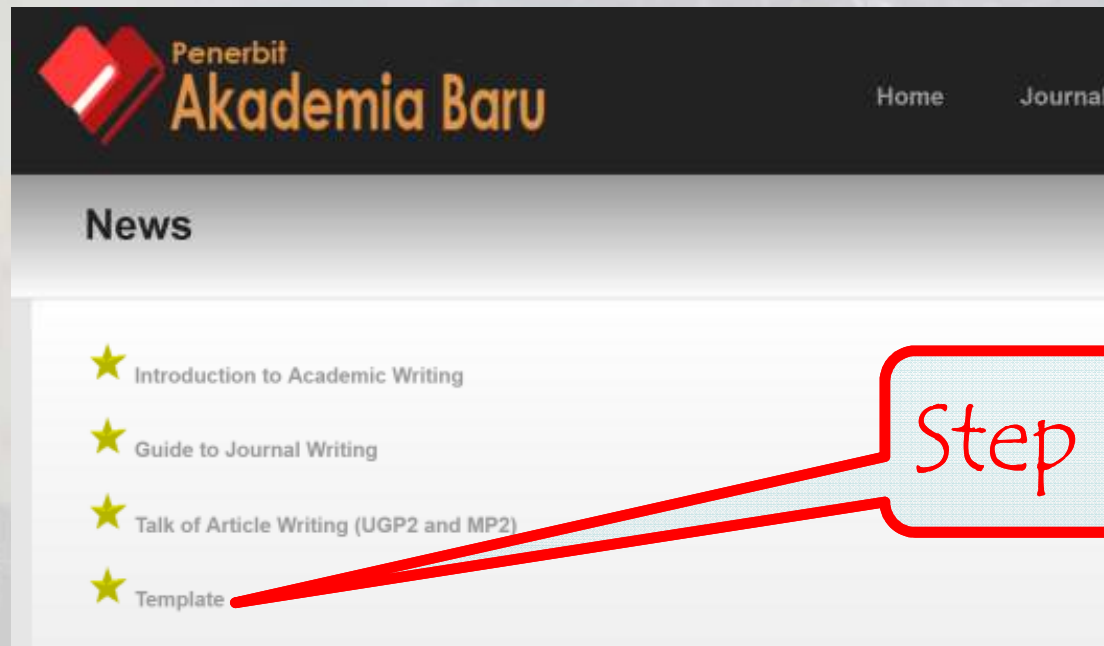


- ♦ The majority of research articles published fall into this category.
- ♦ Contain a comprehensive investigation of the subject matter.
- ♦ Full length articles (7500–9000 words) describing original research.
- ♦ Typically 8–15 pages, 5 figures and 25 references



# Structure of a manuscript

- ◇ How to download template of an article
  - ◇ Step 1: go to [www.akademiabaru.com/news.html](http://www.akademiabaru.com/news.html)



Step 2: click here





Journal of Advanced Research in XXXX  
ISSN (online): XXX-XXX | Vol. X, No.1. Pages XX-XX, 2016

## Title of Manuscript

A. A. Ali<sup>\*,1,a</sup>, S. Abu<sup>2,b</sup> and I. I. Ahmad<sup>1,c</sup>

<sup>1</sup>Department of Polymer Engineering, Faculty of Chemical Engineering Universiti Teknologi Malaysia, 81310 Skudai Johor, Malaysia

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**Abstract** – Abstract must not exceed 250 words. Copyright © 2016 Penerbit Akademia Baru - All rights reserved.

**Keywords:** Microgels, Emulsion polymerization, Hydrogel, Copolymer

### 1.0 INTRODUCTION

Write your introduction here [1]. The last few decades have witnessed vast research on new types of heat transfer fluids, namely nanofluids. Nanofluid is a fluid that contains nanometer-sized solid particles. The nanofluid was introduced by Choi [2] and it has been proven to give better heat transfer efficiency compared to conventional fluids. Detailed reviews on the physical and thermal properties of nanofluids can be seen in review papers by several authors [3-5].

Second paragraph starts here. A nanofluid can be produced by dispersing metallic or non-



- Title
- Affiliation
- Abstract
- Keywords
- 1. Introduction/literature review
- 2. Research Methodology
- 3. Results and Discussion
- 4. Conclusions
- References



# Title

## Title of Manuscript

*A. A. Ali<sup>\*,1,a</sup>, S. Abu<sup>2,b</sup> and I. I. Ahmad<sup>1,c</sup>*

<sup>1</sup>Department of Polymer Engineering, Faculty of Chemical Engineering Universiti Teknologi Malaysia, 81310 Skudai Johor, Malaysia

<sup>2</sup>Department of Thermofluid, Faculty of Mechanical Engineering Universiti Teknologi Malaysia, 81310 Skudai Johor, Malaysia

<sup>a,\*</sup>aqi@gmail.com, <sup>b</sup>abu@fkm.utm.my, <sup>c</sup>ida@cheme.utm.my

- ◇ Normally around 15 WORDS!
- ◇ Brief (short & sharp) phrase describing/reflecting the contents of the paper.
- ◇ Concise and informative.
- ◇ Be specific
- ◇ Avoid abbreviations, prepositions and formulae where possible
- ◇ Your UGP or MP title



- **Introduction/Motivation (optional)**

Importance of your work, the difficulty of the area, the impact it might have if successful

- **Problem statement/study case**

What problem are you trying to solve. What is the scope of your work

- **Approach**

How did you go about solving or making progress on the problem. Did you use simulation, analytical model or prototype construction. What important variables did you control, ignore or measure.

- **Results**

What is the answer

- **Conclusion (optional)**

What are the implication of your answer





# Abstract

## Abstract:

The mechanisms of heat transfer enhancement are used in many industrial applications. Several techniques have been promoted to enhance heat transfer rate and to decrease the size and cost of equipment especially the heat exchangers. In this paper, heat transfer coefficient and pressure drop for  $\text{Al}_2\text{O}_3$ /water nanofluid flow inside circumferential ribbed tubes with different rib dimensions have been experimentally and numerically studies. The nanoparticle size was set equal to 13nm and the volume fractions from 0% to 3% were considered. The ribbed copper tubes tested in this investigation with inner diameter of 14.9 mm have the ranges: circumferential depth from 0.5mm to 1.0 mm and axial pitch distance from 5mm to 15mm. The inlet temperature of turbulent nanofluid was 25 °C and the constant wall heat flux was 5,000 W/m<sup>2</sup>. Comparison of numerical data of ribbed tubes with plain tube shown that the heat transfer coefficient from 92% to 621% and friction factor from 25% to 241% compared to those obtained in smooth tube depending on the circumferential geometric parameters, mass velocity and thermal conductivity of the working fluid.

introduction

Study case

Approach

Results



## Abstract

The esterification of free fatty acids (FFA) found in vegetable oils with  $\text{CH}_3\text{OH}$  using a solid catalyst is a promising method to convert FFA into valuable fatty acid methyl ester (FAME, biodiesel) and obtain a FFA-free oil that can be further transesterified using alkali bases. The present work aimed at determining active and durable solid catalysts for the esterification of palmitic acid (PA,  $\text{C}_{16}\text{H}_{32}\text{O}_2$ ) dissolved in commercial sunflower oil with methanol. Contrary to the case of experiments realized at high dilution in solvents or in pure FFA medium, in which methanol is fully soluble, a lack of full miscibility occurred in the present case. Both a stirred batch reactor and, for the first time to our knowledge, a recirculating system using a fixed bed-reactor were used to investigate this system.

A silica-supported Nafion<sup>®</sup> resin (SAC-13) appeared as the most promising catalyst, requiring no activation, contrary to sulfated zirconia (SZ) that must be activated above 400 °C. The SZ material could not be fully regenerated after use because of sulfate group leaching and the fact that the adsorbed oil decomposed to form carbonaceous deposits at the higher temperatures needed to activate the sample by dehydration. The poisoning of SAC-13 by water was mild and simply reversed using a moisture-free feed or purging with a dry gas. The activity of SAC-13 measured with the batch reactor was essentially equal to that obtained using a fixed bed-reactor in a recirculating system and no rate difference was observed whether an extrudate or a powder form of the sample was used. No rate differences were also observed at various stirring rates. These observations stress that no mass transport limitations were taking place. The TOF (based on the number of sulfur atoms) obtained over the SAC-13 was about seven times lower than that obtained using concentrated sulfuric acid. The possibility to use a fixed bed reactor paves the way for simplified studies of similar systems in terms of (1) the separation of the catalyst and product and (2) the mechanical stability of the catalyst particles. The combination of SAC-13 and a fixed bed-reactor system could lead to a practical and cost-effective FFA removal unit in front of typical oil transesterification units.

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The abstract is too long.

id; Sulfated zirconia; Acidic resin; Fixed bed; Recirculating reactor



Two paragraphs





- ♦ The introduction serves as an orientation for readers, giving them the perspective they need to understand the detailed information coming in later sections.
- ♦ Introduction section should **contain review of up to date literature.**
- ♦ This section should **explain the novelty of the work.**
- ♦ It should also discuss the **objective and significance of the work.**
- ♦ This section should not normally exceed four typed pages (double spaced)



First Stage: **general statements** about a field of research to provide the reader with a setting for the problem to be reported.



Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)



Third Stage: Statements that indicate the need for more investigation. (**Research gap/novelty of the study**)



Fourth Stage: Very specific statements giving the **purpose/objectives** of the writer's study.



Fifth stage: Significance of the study (**optional**).



- ♦ **First Stage:** **general statements** about a field of research to provide the reader with a setting for the problem to be reported.

### **General descriptions of the relevant literature**

Research into X has a long history.

The literature has emphasized the importance of ...

Different theories exist in the literature regarding ...

More recent attention has focused on the provision of ...

There are relatively few historical studies in the area of ...

A great deal of previous research into X has focused on ...

A large and growing body of literature has investigated ...

Much of the current literature on X pays particular attention to ...

For many years, this phenomenon was surprisingly neglected by ...

There is a large volume of published studies describing the role of ...

Over the past decade, most research in X has emphasized the use of ...

In recent years, there has been an increasing amount of literature on ...

The generalisability of much published research on this issue is problematic.

During the past 30 years, much more information has become available on ...

A considerable amount of literature has been published on X. These studies ...

The first serious discussions and analyses of X emerged during the 1970s with ...

Historically, research investigating the factors associated with X has focused on ...

What we know about X is largely based upon empirical studies that investigate how ...





- ❖ Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)

## 1. Author as a subject

Jones *et al.* (2001)

compared the rate of ...  
labelled these subsets as ...  
measured both components of the ...  
used a survey to assess the various ...  
identified parents of disabled children as ...  
set up a series of virtual experiments using ...  
examined the flow of international students ...  
carried out a number of investigations into the ...  
studied the effects of X on unprotected nerve cells.  
analysed the data from 72 countries and concluded that ...  
interviewed 250 undergraduate students using semi-structured ...  
performed a similar series of experiments in the 1960s to show that ...  
reviewed the literature from the period and found little evidence for this ...  
conducted a series of trials in which he mixed X with different quantities of ...  
investigated the differential impact of formal and non-formal education on ...



- ❖ Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)

## 2. Time frame reference

In 1959, a seminal article was published entitled ...

In 1889, Brown performed a bilateral ablation of the ...

In 1859, the publication of X had a major impact on ...

In 1965, Jones published his major historic survey of ...

In 1975, Smith *et al.* published a paper in which they described ...

In 1984, Jones *et al.* made several amino acid esters of X and evaluated them as ...

In 1981, Smith and co-workers demonstrated that X induced in vitro resistance to ...

In 1990, Patel *et al.* demonstrated that replacement of H<sub>2</sub>O with heavy water led to ...

In 1990, Al-Masry *et al.* reported a new and convenient synthetic procedure to obtain ...

Thirty years later, Smith (1974) reported three cases of X which ...

In the 1950s, Gunnar Myrdal pointed to some of the ways in which ...

Following World War 1, Fleming actively searched for anti-bacterial agents.

Almost 20 years ago, Jones (1985) formulated his X theory, centred around ...



- 
- ❖ Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)

### 3. Research topics as subject

A seminal study in this area is the work of ...

One study by Smith (2014) examined the trend in ...

A recent study by Smith and Jones (2012) involved ...

A recent systematic literature review concluded that ...

A longitudinal study of X by Smith (2012) reports that ...

Preliminary work on X was undertaken by Abdul Karim (1992).

A key study comparing X and Y is that of Smith (2010), in which ...

The first systematic study of X was reported by Patel *et al.* in 1986.

Detailed examination of X by Smith and Patel (1961) showed that ...

Analysis of the genes involved in X was first carried out by Smith *et al.* (1983).

A significant analysis and discussion on the subject was presented by Smith (1988).

The study of the structural behaviour of X was first carried out by Rao *et al.* (1986).

A small scale study by Smith (2012) reached different conclusions, finding no increase in ...

The study by Jones (1990) offers probably the most comprehensive empirical analysis of ...



- 
- ❖ Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)

## 4. Research objectives as subject

In an analysis of X, Smith *et al.* (2012) found ...

In a follow-up study, Smith *et al.* (2009) found that ...

In an investigation into X, Smith *et al.* (2012) found ...

In a comprehensive study of X, Jones (2001) found that ...

In a study conducted by Smith (1978), it was shown that ...

In studies of rats given X, Smith and colleagues found that ...

In another major study, Zhao (1974) found that just over half of the ...

In a study which set out to determine X, Smith (2012) found that ...

In a randomised controlled study of X, Smith (2012) reported that ...

In a large longitudinal study, Smith *et al.* (2012) investigated the incidence of X in Y.

In one well-known recent experiment, limits on X were found to be .... (Al-Masry, 2013)

- 
- ❖ Second Stage: More **specific statements** about the aspects of the problem already studied by other researchers. (**literature review**)

## 5. Statement

The roles of X have been studied extensively (Jones, 1989; Johnson, 1994; Smith, 1998).

The causes of X have been widely investigated (Jones, 1987; Johnson, 1990; Smith, 1994).

X has been identified as a major contributing factor to the decline of many species of ... (1).

The relationship between X and Y has been widely investigated (Smith, 1985; Jones, 1987, ...



## Third Stage: Statements that indicate the need for more investigation. (Research gap/novelty of the study)

To date, Surprisingly,	X	has (still) not (yet) been	closely formally empirically extensively scientifically systematically comprehensively	studied. examined. investigated.
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There is a	current relative general notable surprising	paucity	of studies of well-controlled studies	investigating ... describing how ... that seek to identify predictors of
			of empirical research of high-quality research	in the field of ... focusing specifically on ... on the current prevalence of ...
			of scientific literature of evidence-based literature	specifically relating to ... on the experiences of ... describing the impact of ...





## Third Stage: Statements that indicate the need for more investigation. (Research gap/novelty of the study)

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(Very) few studies have  
Few published studies have

explored ...  
focused on ...  
controlled for ...  
examined how ...  
compared trends in ...  
attempted to define ...  
examined the role of ...  
measured X in humans.  
evaluated the effects of X on...  
assessed the implications of ...  
examined the consequences of ...  
actually examined the impact of ...  
provided quantitative evidence of ...  
systematically evaluated the use of ...  
attempted to quantify the impact of ...  
adequately tested the effectiveness of ...  
addressed the long term psychological effects of ...  
been published that specifically assess the use of ...  
been large enough to provide reliable estimates of ...  
been conducted to determine the possible effects of ...



## Third Stage: Statements that indicate the need for more investigation. (Research gap/novelty of the study)

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There is little published data on ...  
No previous study has investigated X .  
The use of X has not been investigated.  
There has been no detailed investigation of ...  
There has been little quantitative analysis of ...  
Data about the efficacy and safety of X are limited.  
Up to now, far too little attention has been paid to ...  
A search of the literature revealed few studies which ...  
The impact of X on Y is understudied, particularly for ...  
Few studies have investigated X in any systematic way ...  
So far, very little attention has been paid to the role of X  
So far, however, there has been little discussion about ...  
In addition, no research has been found that surveyed ...  
Surprisingly, the effects of X have not been closely examined.  
Surprisingly, X is seldom studied and it is unclear to what extent ...  
In contrast to X, there is much less information about effects of ...  
X has hitherto received scant attention by scholars of the Y period.  
A systematic understanding of how X contributes to Y is still lacking.  
Despite the importance of X, there remains a paucity of evidence on ...  
There have been no controlled studies which compare differences in ...  
To date, the problem has received scant attention in the research literature.  
To date, there are few studies that have investigated the association between ...  
To date, no large-scale studies have been performed to investigate the prevalence of ....  
Although studies have recognized X, research has yet to systematically investigate the effect of ...  
Since the publication of X forty years ago, there has only been a limited amount of original research into the history of ...



**Third Stage:** Statements that indicate the need for more investigation. (Research gap/novelty of the study)

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necessary to consider solutions to avoid potential sedimentation of the solid phase.

In particular, no investigation has been made on the nanofluid stability inside solar collectors. Therefore, the aim of this work is to analyze sedimentation inside flat plate solar collectors and to test a suitable solution to prevent it. For this purpose, the stability of several nanofluids was investigated to select the most stable suspension. In addition, an experimental campaign has been car-

efficiency improvement up to 5%.

Very few studies on the thermal performance evaluation of flat plate solar collector with nanofluids are available. As such no study on full size (1.4 m<sup>2</sup>) tilted DASC under actual outdoor condition is available. An attempt has been made in the present paper, to experimentally study the effect of Al<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O nanofluid flowing as thin film over





**Third Stage:** Statements that indicate the need for more investigation. (Research gap/novelty of the study)

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for improvement capabilities and pressure drop of an absorbing medium with suspended oxides in water inside a flat plate solar collector. On the basis of the broad literature review, the entropy generation, the exergy destruction and the pressure drop analysis of a flat plate solar collectors using SWCNT nanofluid as a working medium were rarely reported.

The main aim of this study is on the expanded exergy, entropy generation, the exergy destruction and the pressure drop analysis for a flat plate solar collector using different nanofluids with different flow rates and volume fractions.

collector. A review of the literature shows that there is no work on the flat-plate solar collector performance using CuO/water as the working fluid. For this purpose, a commercial flat plate collector is selected to carry out the experiments in North-East of Iran during summer 2012. The effect of the absorbing medium mass flow rate on the collector efficiency is investigated. The efficiency values of nanofluid and water (as two working fluids) are compared.



- ♦ **Fourth Stage:** Very specific statements giving the **purpose/objectives** of the writer's study.

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### **Focus, Aim, Objective:**

The objective of the present work paper is to investigate ...

In this work we propose a simulation which uses ...

The objective of this study is to develop ...

This paper will focus on/examine/give an account of ....

The objectives of this paper are to determine whether ....

This paper seeks to address the following questions:

This paper critically examines/discusses/traces ....

The aim of this paper is to determine/examine ....

The aim of this study was to evaluate and validate ....

The present study examined numerically the ....

This study was spawned from the lack of research of ....

The objective of this paper is to numerically study ....

- ◆ Fifth stage: Significant of the study (optional).

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### **Significant of the study**

To accomplish this aim and to respond to a recent call for research to...

The findings of this study will help.....

The contribution of this study is obvious as the resulting outcomes can be capitalized as  
guidelines to ....

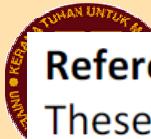
The current study contributes to our knowledge by addressing four important issues. First, ....





# Results and Discussion

- Results and discussions section is the most important part of the manuscript in which critical analysis of the results are done.
- Any limitations of the results presented or techniques used in the study are to be highlighted in this section.
- Care should be taken to avoid any errors of logic and facts.
- Sufficient number of Figures and Tables with good quality



## Reference to previous research: support

These results agree with the findings of other studies, in which ...

These results are consistent with those of other studies and suggest that ...

The results of this study will now be compared to the findings of previous work.

The results of this study are in keeping with previous observational studies, which ...

These results	<div data-bbox="1344 526 1792 654"><b>Compare your results!!</b></div> <p>further support the idea of ... confirm the association between ... are consistent with data obtained in ... match those observed in earlier studies. are in agreement with those obtained by ... are in line with those of previous studies. are in accord with recent studies indicating that ... seem to be consistent with other research which found ... mirror those of the previous studies that have examined ... are consistent with those of Smith and Jones (2015) who ... are in agreement with Smith's (1999) findings which showed ... support previous research into this brain area which links X and Y. corroborate the ideas of Smith and Jones (2008), who suggested that ...</p>
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## Discussion of Results

The discussion of the results begin with ...

This finding highlights...

The finding of the present study suggest that

The findings suggest that .....

The finding provides evidence that ...

This study indicates that ...

The results of the present study also suggest that..

The present findings also suggest that ...

Our finding revealed that ...

Among the plausible explanations for these findings is that ....

The most striking result to emerge from the data is that .....

Interestingly, this correlation is related to .....

The correlation between X and Y is interesting because .....

The more surprising correlation is with the .....

The single most striking observation to emerge from the data comparison was .....

**Discuss your results!!!**





- The conclusions section should very important points describing the important findings of the work
- This section should re-inforce the originality of the work presented.
- Should be consistent with the objectives - highlight the achievements.



# Conclusions

- Step 1: Restatement of aims

## **Restatement of aims**

This paper has argued that ...

This essay has discussed the reasons for ...

In this investigation, the aim was to assess ...

The main goal of the current study was to determine ...

The purpose of the current study was to determine ...

This project was undertaken to design ... and evaluate ...

The present study was designed to determine the effect of ...

The second aim of this study was to investigate the effects of ...

Returning to the question posed at the beginning of this study, it is now possible to state that ..

This study set out to

predict which ...  
establish whether ...  
determine whether ...  
develop a model for ...  
assess the effects of ...  
investigate impact of ...  
better understand the ...  
find a new method for ...  
evaluate how effective ...  
assess the feasibility of ...  
test the hypothesis that ...  
explore the influence of ...  
gain a better understanding of ...  
objectively measure and assess ...  
examine the relationship between ...  
compare the two ways of treating ...  
critically examine the ways in which ...  
evaluate a new method of measuring ...  
provide the first systematic account of ...  
understand the views and experiences of ...  
review in detail the available information on ...



181%







- Summary of research findings

## **Summarising research findings**

This study has identified ...

This study has shown that ...

The research has also shown that ...

The second major finding was that ...

These experiments confirmed that ...

X made no significant difference to ...

This study has found that generally ...

The investigation of X has shown that ...

The results of this investigation show that ...

X, Y and Z emerged as reliable predictors of ...

Multiple regression analysis revealed that the ...

The most obvious finding to emerge from this study is that ...

The relevance of X is clearly supported by the current findings.

One of the more significant findings to emerge from this study is that ...



The main finding can be summarized as follow: 1..2..

The following conclusions can be made: 1..2...

Important conclusions drawn from this work include: 1...2...

The following conclusions were obtained. 1)....2)..

Analysis of the computed results show the following: 1).....2)...

In summary, the current study unveils just the tip of iceberg of ....

The following is a summary of conclusions. 1...2)...



# References: Numbering style

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biodegradability, non-toxicity, better lubricity, low  $SO_x$  and CO emission [2].

Biodiesel can be produced through transesterification reaction in which vegetable oils or animal fats reacts with short chain alcohol (e.g. methanol) in the presence of catalyst [3]. Homogeneous base catalysts such as sodium or potassium hydroxide are the most popular choice of catalyst used in the industry due to its fast reaction rate at mild reaction condition. However, these catalysts are only suitable for refined oils with low free fatty acid (FFA) content. In case when FFA content in oils exceeds 1-2 %, formation of soap instead of biodiesel will cause serious separation problem at the end of reaction and thus generate huge amount of waste water during purification step [4-6]. Apart from that, using refined oils is not an economical choice in a long run since the high price of these feedstock contributes more than 70 % to the overall biodiesel production cost [7]. Therefore, biodiesel production trend has shifted to use low quality oils such as waste frying oil and non-edible oil (e.g. jatropha) as an alternative feedstock to reduce the production cost and to avoid the food versus fuel feud. Nevertheless, one major problem of using these low quality oils is the high FFA content in the oil





# References: Numbering style

## REFERENCES (Chicago Style)

- [1] Chen, Shiyi, and Gary D. Doolen. "Lattice Boltzmann method for fluid flows." Annual review of fluid mechanics 30, no. 1 (1998): 329-364.
- [2] Jamil, M. M., M. I. Adamu, T. R. Ibrahim, and G. A. Hashim. "Numerical Study of Separation Length of Flow through Rectangular Channel with Baffle Plates." Journal of Advanced Research Design| Vol 7, no. 1 (2015): 19-33.
- [3] Allahyar, H. R., F. Hormozi, and B. ZareNezhad. "Experimental investigation on the thermal performance of a coiled heat exchanger using a new hybrid nanofluid." Experimental Thermal and Fluid Science 76 (2016): 324-329.