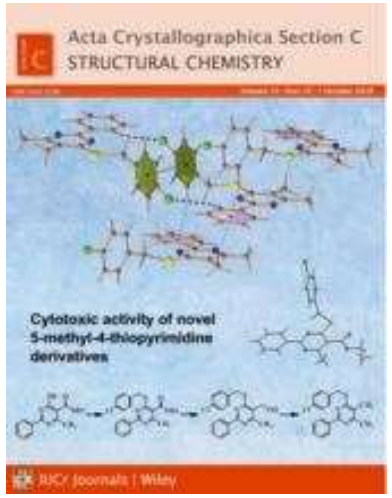
KARNA WIJAYA

TIPS AND TRICKS MEMPUBLIKASIKAN HASIL RISET KE JURNAL ILMIAH

PELATIHAN PENULISAN ARTIK
UPN, YOGYAKARTA. 31 OKT(

DEPARTEMEN KIMIA FMIPA UGM


Separation and Purification Technology


Acta Crystallographica Section C
STRUCTURAL CHEMISTRY
Cytotoxic activity of novel 5-methyl-4-thiopyrimidine derivatives

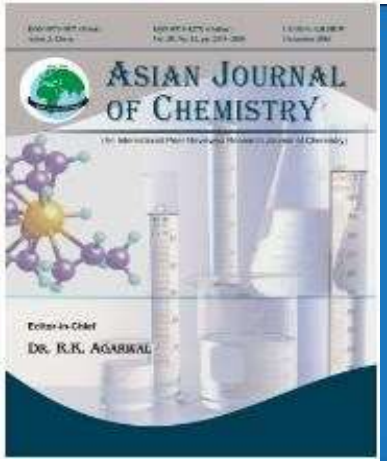

CHEMICAL SCIENCES
ZEITSCHRIFT FÜR NATURFORSCHUNG B


Arabian Journal of Chemistry


Applied CLAY Science


Indonesian Journal of Chemistry
Vol. 18, No. 2, July 2018


Oriental Journal of Chemistry

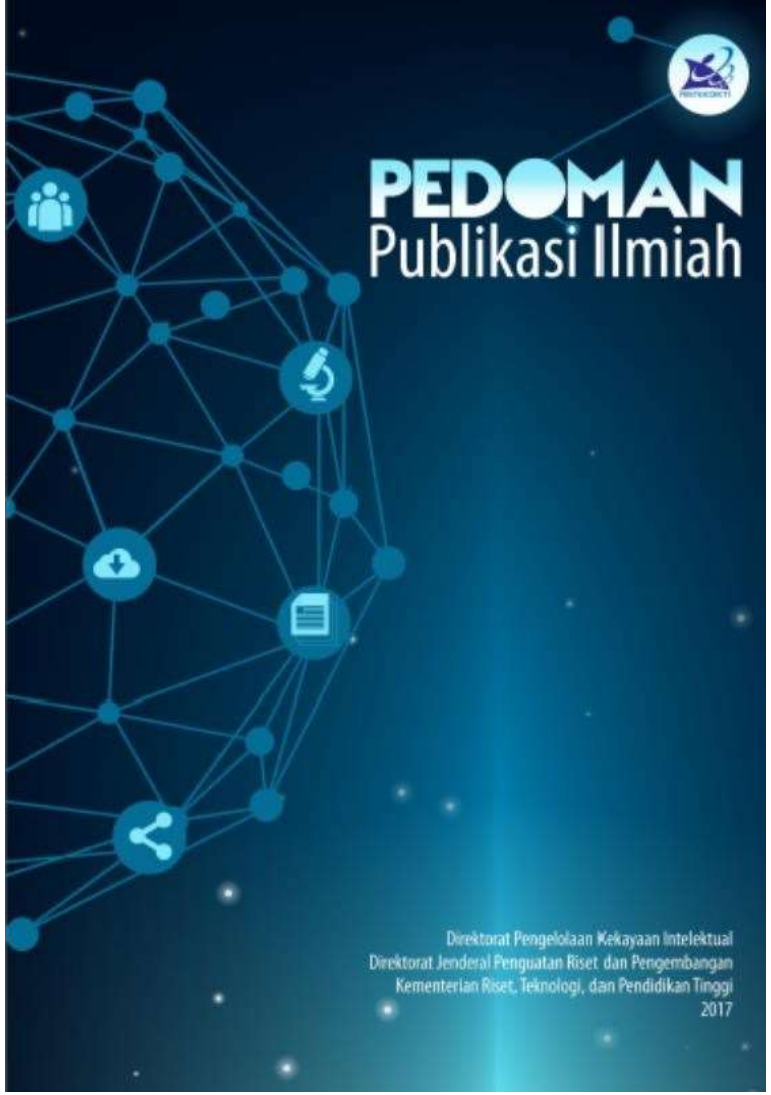

ASIAN JOURNAL OF CHEMISTRY
DR. R.K. AGARWAL

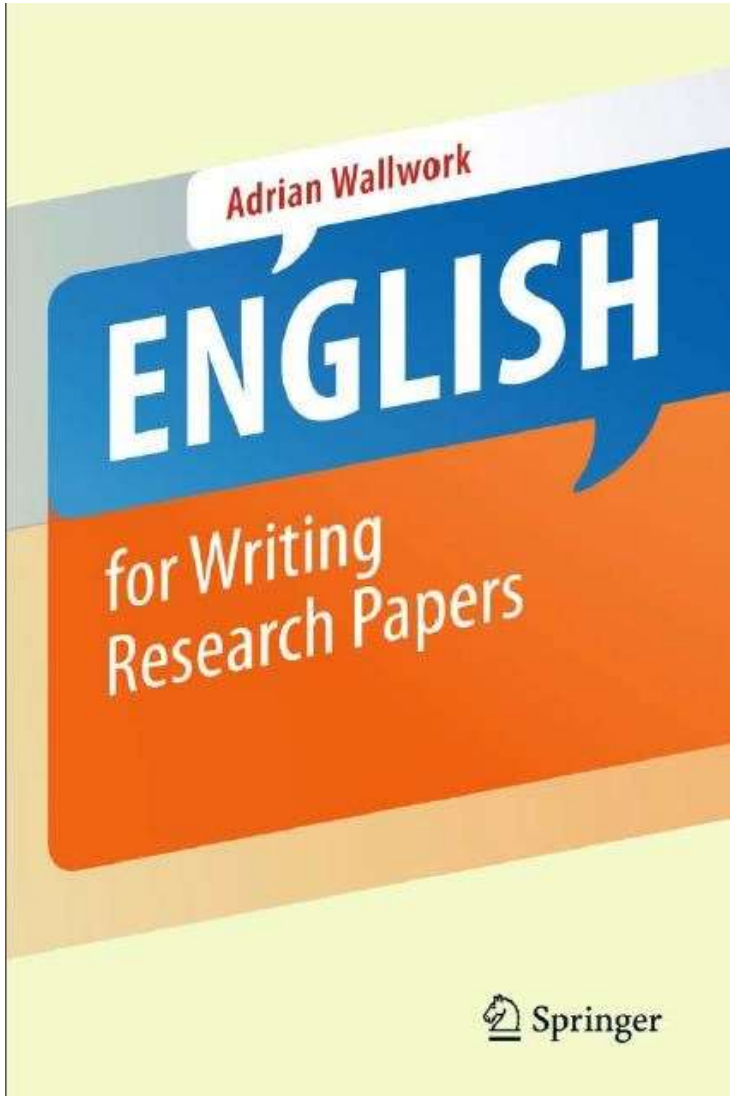

Science
Makara Journal of Science

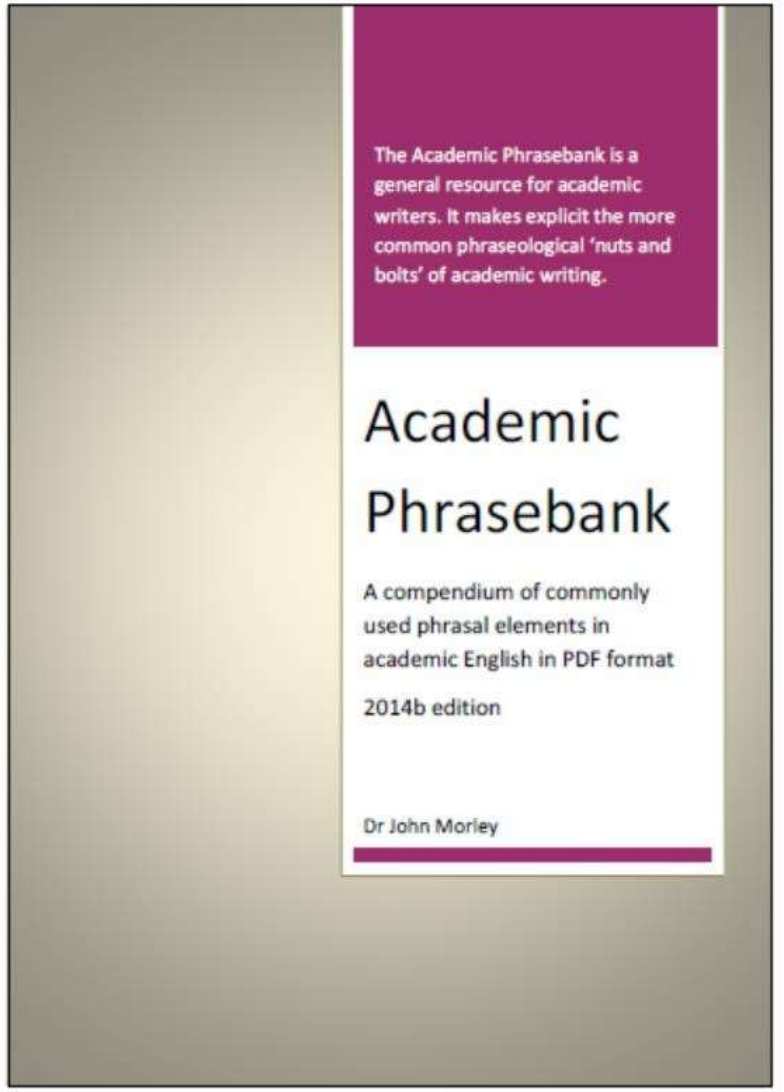

Sustainable Environment Research

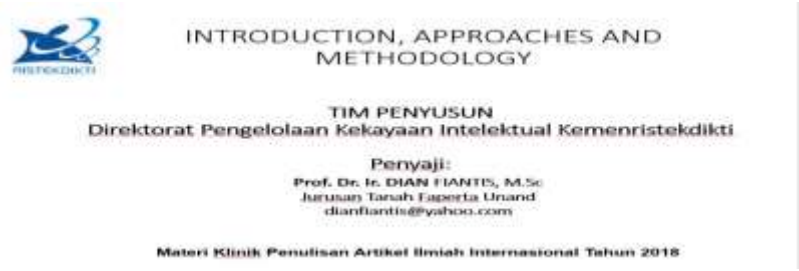
INTRODUKSI

REFERENSI


PEDOMAN
Publikasi Ilmiah
Direktorat Pengelolaan Kekayaan Intelektual
Direktorat Jenderal Penguatan Riset dan Pengembangan
Kementerian Riset, Teknologi, dan Pendidikan Tinggi
2017


Adrian Wallwork
ENGLISH
for Writing
Research Papers
Springer


The Academic Phrasebank is a general resource for academic writers. It makes explicit the more common phraseological 'nuts and bolts' of academic writing.
Academic
Phrasebank
A compendium of commonly used phrasal elements in academic English in PDF format
2014b edition
Dr John Morley


INTRODUCTION, APPROACHES AND METHODOLOGY
TIM PENYUSUN
Direktorat Pengelolaan Kekayaan Intelektual Kemenristekdikti
Penyaji:
Prof. Dr. Ir. DIAN FIANTIS, M.Sc
Jurusan Tanah Faperta Unand
dianfiantis@yahoo.com
Materi Klinik Penulisan Artikel Ilmiah Internasional Tahun 2018

FUNGSI JURNAL ILMIAH

JURNAL ILMIAH ADALAH BENTUK (***BADAN RESMI***):

- REGISTRASI KEGIATAN KECENDEKIAAN SESEORANG (REPUTASI)
- SERTIFIKASI HASIL KEGIATAN KECENDEKIAAN YANG MEMENUHI PERSYARATAN ILMIAH MINIMUM
- DISEMINASI SECARA MELUAS KARYA KECENDEKIAAN ITU KEPADA KHALAYAK RAMAI, DAN
- PENGARSIPAN ATAS SEMUA TEMUAN HASIL KEGIATAN KECENDEKIAN ILMUWAN YANG DIMUATNYA

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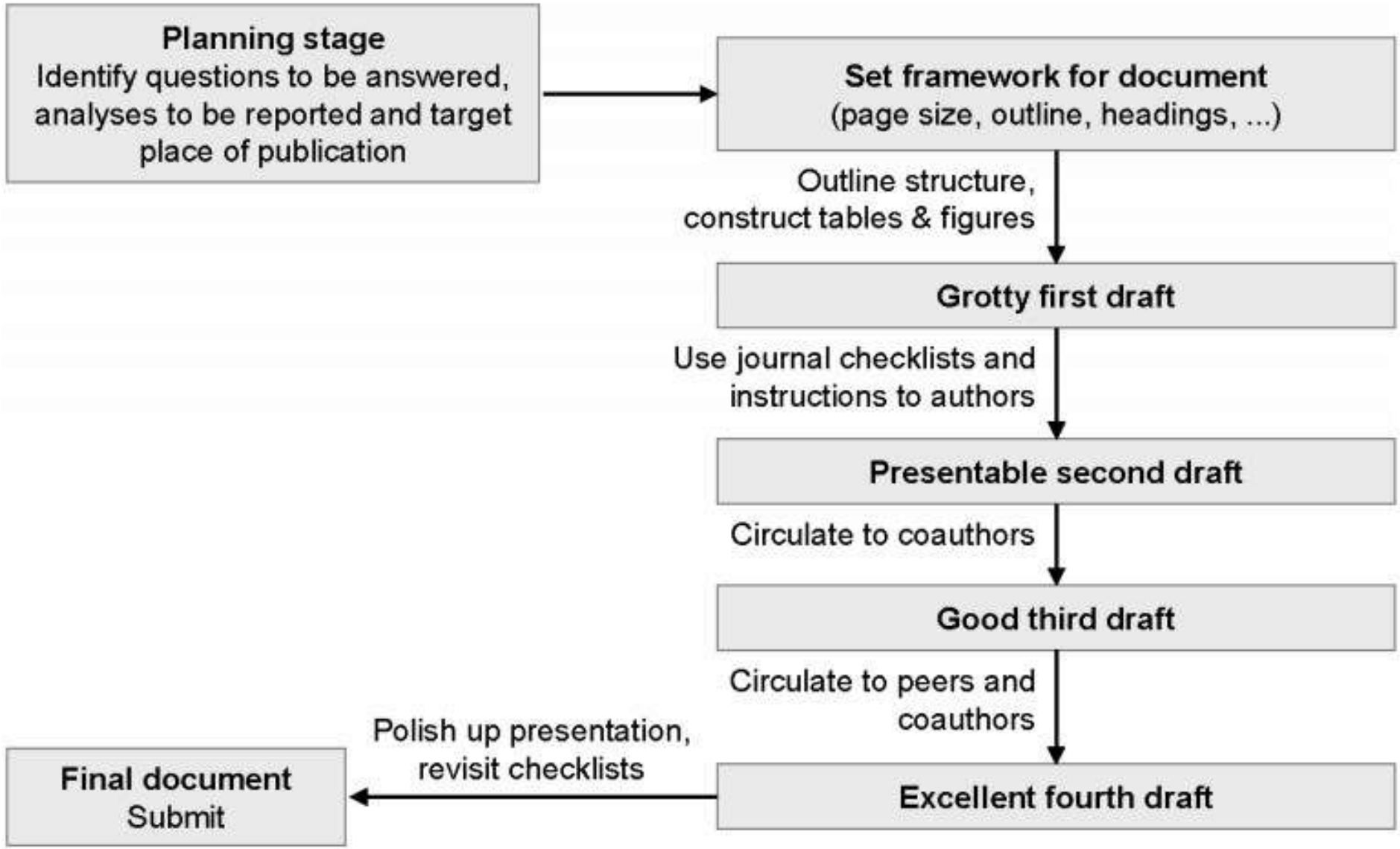
INSTITUT PERTANIAN BOGOR, wasmenmanalu@yahoo.com

Figure 2 Plan for preparing and writing a paper for publication

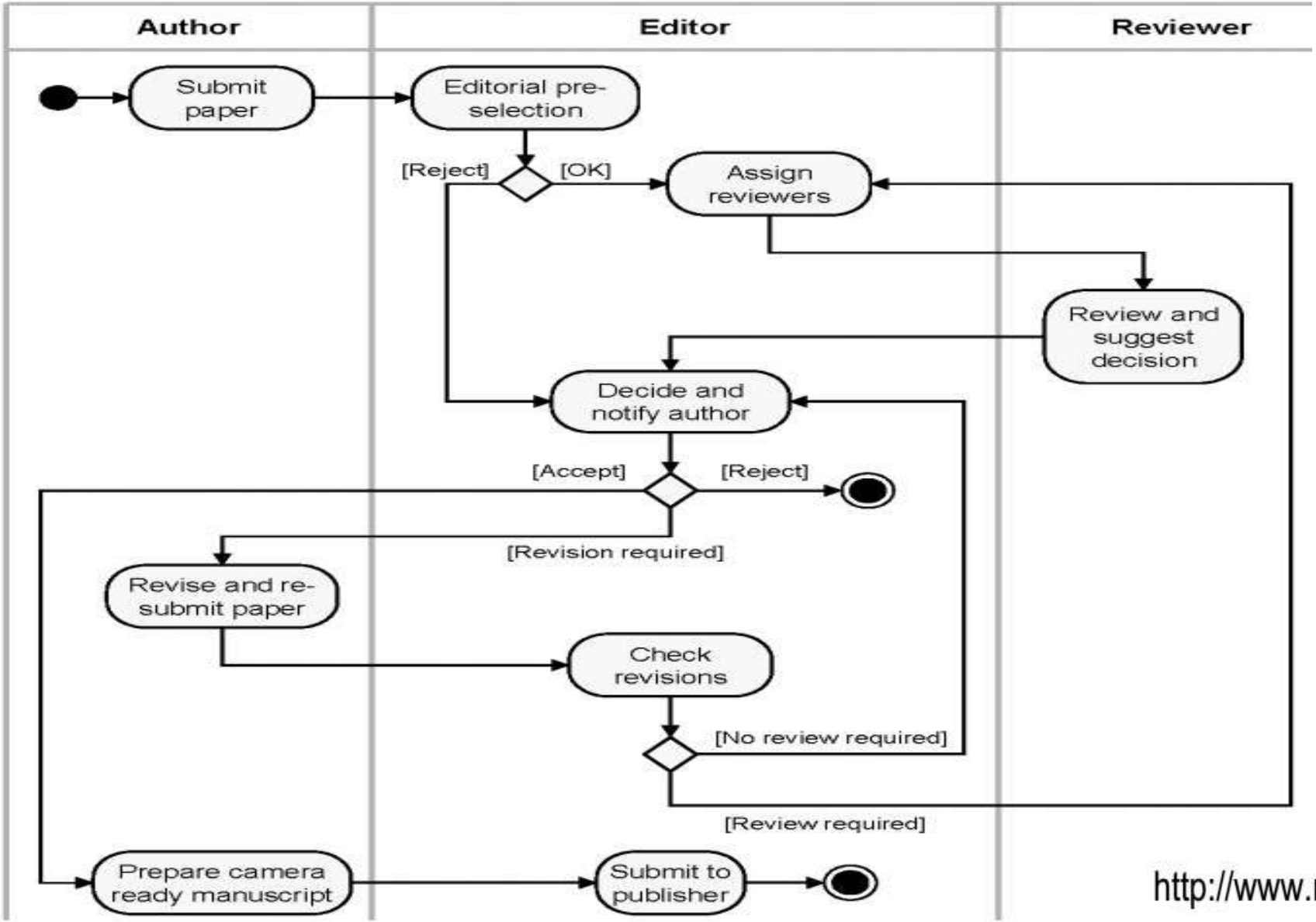


Source: Adapted from Davis (1997)

EMPERSIAPKAN ARTIKEL

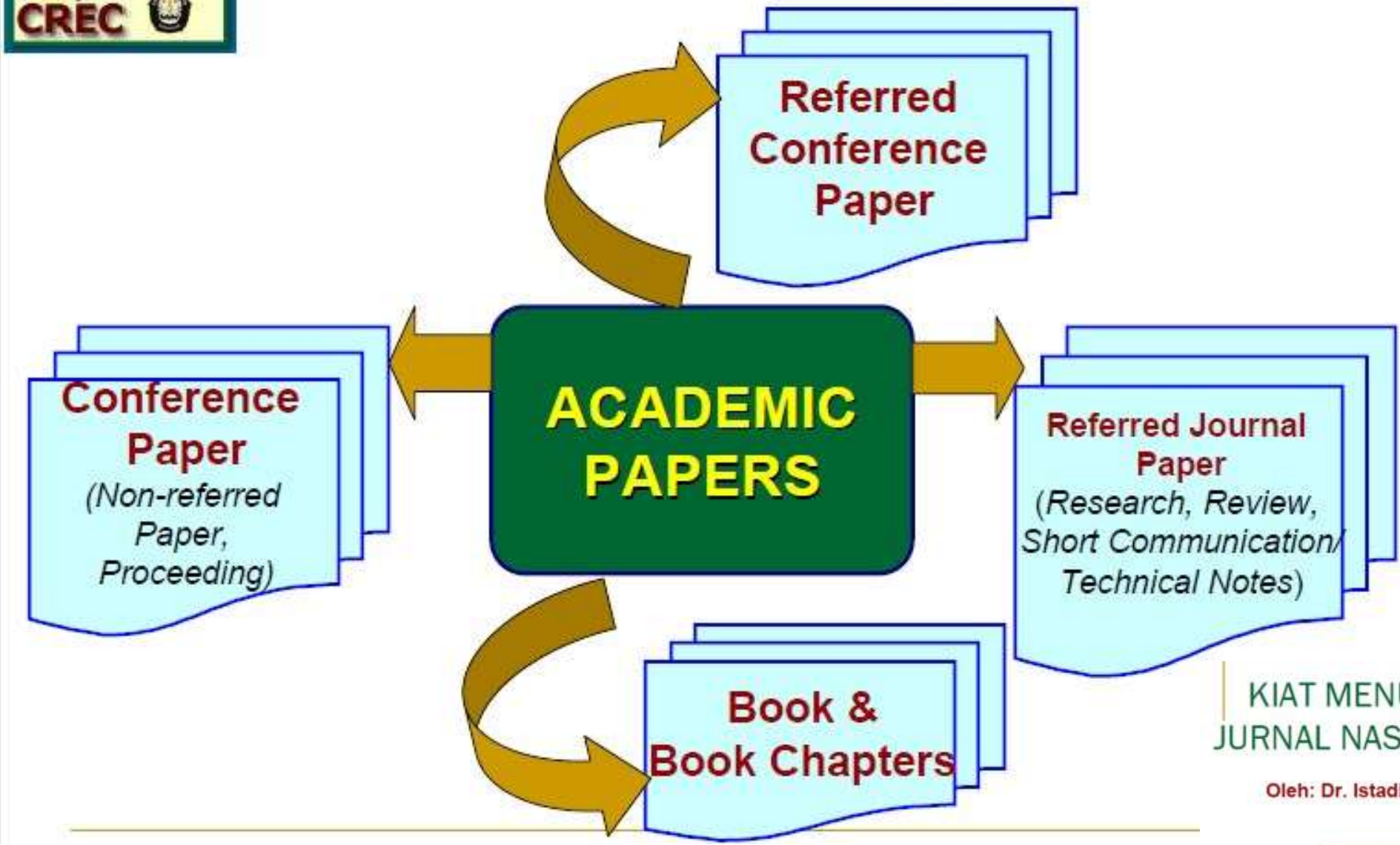
PROSES PUBLIKASI ARTIKEL

Figure 3 Simplified activity diagram of the process of publishing a paper in a journal



http://www.nd.edu/~pkamat

Types of Academic Papers?



KIAT MENULIS ARTIKEL ILMIAH DI JURNAL NASIONAL & INTERNASIONAL

Oleh: Dr. Istadi (Teknik Kimia Universitas Diponegoro)

TIPS AND TRICS

1. BAHAN ARTIKEL DIKAITKAN DENGAN PENELITIAN KITA YANG BERKELANJUTAN
2. MENGACU KEPADA ROAD MAP DAN PASSION KITA
3. BEGITU SIAP MENULIS HARUS SEGERA DILAKSANAKAN DAN JANGAN SAMPAI DISELA DENGAN PEKERJAAN LAIN YANG DAPAT MENGGANGGU FOKUS KITA
4. JIKA ARTIKEL HARUS DITULIS DALAM BAHASA ASING, KONSULTASIKAN

DENGAN KOLEGA ATAU LEMBAGA BAHASA YANG KOMPETEN APAKAH NASKAH KITA SUDAH LAYAK SUBMIT

5. BEBERAPA JURNAL MENAWARKAN *PROOF READER* YANG BISA KITA MANFAATKAN JASANYA UNTUK MENGKOREKSI ARTIKEL KITA
6. PILIHLAH JURNAL DENGAN IMPACT FACTOR TIDAK TERLALU TINGGI DAN TERINDEKS SCOPUS ATAU TERAKREDITASI NASIONAL SEBAGAI

Identify two or three important findings emerging from the experiments. Make them the central theme of the article.

Note good and bad writing styles in the literature. Some are simple and easy to follow, some are just too complex.

Note the readership of the journal that you are considering to publish your work

Each journal specializes in a specific area of research. Hence its readership varies. A proper choice of journal can make a larger impact of your research.

Get to know the focus and readership of the journal that you are considering. - general vs. specialized area journal

Find out the journal's submission criteria and format

Prepare figures, schemes and tables in a professional manner

The authors should make every effort to make a good presentation with proper usage of English grammar.

Ask a colleague to comment on your paper before sending it for publication.

"English is not my Native Language" is not a valid justification for reviewer who cannot comprehend.

Reviewers do not wish to review papers that are not readable. Badly written papers are often recommended as "REJECT" by the Reviewers

ACS Publication office helps to edit the language for accepted manuscripts, but this only happens if the English was good enough to be reviewed.

Ten characteristics of an incredibly dull paper

Sand-Jenson in Oikos 2007, 116 723 (C&E News Sept 10, 2007)

1. Avoid Focus
2. Avoid originality and personality
3. Make the article really really long
4. Do not indicate any potential implications
5. Leave out illustrations (…too much effort to draw a sensible drawing)
6. Omit necessary steps of reasoning
7. Use abbreviations and technical terms that only specialists in the field can understand
8. Make it sound too serious with no significant discussion
9. Focus only on statistics
10. Support every statement with a reference

Parameter Global untuk Reputasi Jurnal Internasional

- Impact Factor (Thomson Reuters)
- SJR dan SNIP (Scimago, Scopus)
- H-index (Scimago, Scopus, Google Scholar)
- i10-index (Google Scholar)
- Number of Published Articles per x-year
- Number of Citations per x-year
- % Rejection Rates (informally)

SJR : SCImago Journal Rank, SNIP : Source Normalized Impact per Paper

Kuswanto
Editor in Chief of Agrivita Journal of Agriculture Science
(ScimagoJR, SCOPUS, PROQUEST, CrossRef, ISI)
Universitas Brawijaya

H-INDEX dan i10-index

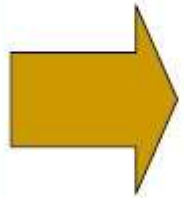
REPUTASI

- h-index adalah bilangan h terbesar dimana sejumlah h artikel paling sedikit mempunyai h citation
  - *Contoh: h-index=6, berarti ada 6 artikel yang disitasi oleh minimum 6 artikel pensitasi*
- i10-index adalah bilangan i10 terbesar dimana sejumlah i10 artikel mempunyai jumlah sitasi minimum 10 citations.
  - *Contoh: i10-index=1, berarti ada 1 artikel yang disitasi oleh minimum 10 artikel pensitasi*

Kuswanto
Editor in Chief of Agrivita Journal of Agriculture Science
(ScimagoJR, SCOPUS, PROQUEST, CrossRef, ISI)
Universitas Brawijaya

Journal Citation Rating / Impact Factor

Bagaimana Jurnal Internasional Dikatakan BERKUALITAS ?



Ditentukan oleh:

JCR (Journal Citation Rating) or IF (Impact Factor)

- Impact Factor is a ratio of the number of article that cited to the journal to the number of article published by the journal

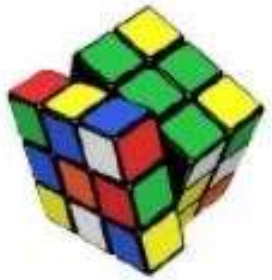
KIAT MENULIS ARTIKEL ILMIAH DI JURNAL NASIONAL & INTERNASIONAL

Oleh: Dr. Istadi (Teknik Kimia Universitas Diponegoro)

Workshop Pengembangan Jurnal Ilmiah Konsorsium Ilmu *(20-21 Agustus 2007)*
Center for Quality Development and Assurance (CeQDA)
Pusat Peningkatan dan Jaminan Mutu (PPJM), Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta 2007

"Using the Impact Factor alone to judge a journal is like using weight alone to judge a person's health."

"There is no single 'best' indicator that could accommodate all facets of the new reality of Journal Metrics."



- Wolfgang Glänzel, Centre for R&D Monitoring, ECOOM Leuven, Belgium

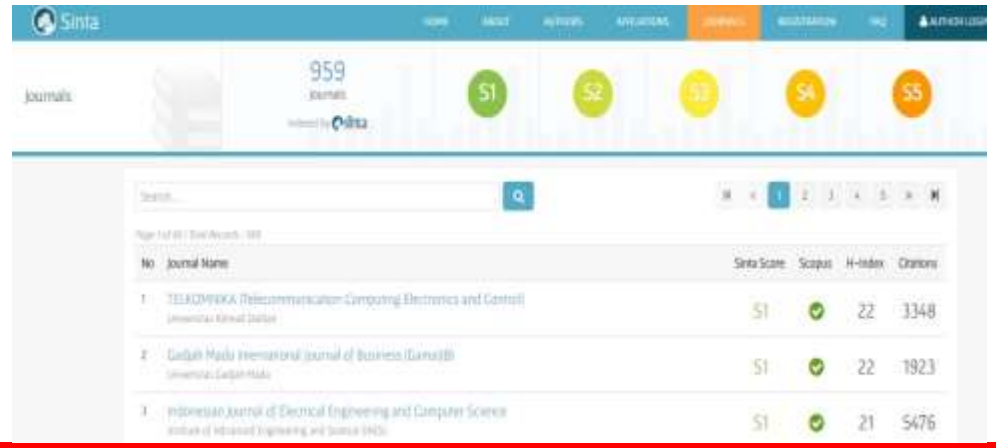
Bibliometrics – A discipline that uses statistical methods to analyze content and measure research performance.

PEMILIHAN JOURNAL UNTUK PUBLIKASI

1. Google Scholar (Rendah)

LEMBAGA PENGINDEKS INTERNATIONAL

2. DOAJ (sedang), PROQUEST



3. Scopus, Thompson Reuters(Tinggi)

LEMBAGA PENGINDEKS NASIONAL

SINTA (Science and Technology Index

TAHAPAN PROSES PENULISAN PADA JURNAL ILMIAH INTERNASIONAL

- **PEMILIHAN JURNAL ILMIAH (TERMASUK SCOPE JOURNAL TARGET)**
- ***INSTRUCTION FOR AUTHORS***
- **PENCARIAN SALAH SATU CONTOH ARTIKEL YANG SUDAH TERBIT**

- **PENULISAN ARTIKEL MENURUT PETUNJUK**
- **PENGIRIMAN NASKAH**
- **PENGEMBALIAN NASKAH OLEH *EDITOR-IN-CHIEF***
- **PERBAIKAN NASKAH**
- **PENGIRIMAN NASKAH YANG SUDAH DIPERBAIKI**
- **PEMERIKSAAN *GALLEY PROOF***
- **PENYELESAIAN ADMINISTRASI**
- **PEMESANAN *REPRINTS***
- **PENERIMAAN *REPRINTS***

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Check-list Persiapan Publikasi di Jurnal Internasional

			V
1	Siapkan manuskrip	1. Hasil riset baru dan kontributif. Uraian meliputi **hasil** diikuti dengan pembahasan berupa **penjelasan hasil, makna hasil, mengapa demikian, komparasi dengan hasil lain**, dan **simpulan hasil ini.** Pilih hasil-hasil utama untuk dibahas, hindari duplikasi argumentasi, tunjukkan dengan jelas kebaruan dan kontribusi riset.	
		2. **Introduction** sesuai *state-of-the-art riset.*	
		3. Metode riset dari persiapan hingga analisis.	
		4. **Conclusion** adalah simpulan keseluruhan riset dan bersifat spesifik; tidak mengklaim hasil riset lain.	
		5. **Abstract** berisi pengantar (biasa klaim keberhasilan riset), metode dan hasil umum.	
		6. **Acknowledgement** kepada sponsor dan pendukung riset.	
		7. **References** dan **sitasi** mengikuti gaya selingkung jurnal. Gunakan manajer referensi seperti EndNote, Zotero atau Mendeley.	
		8. Cek gaya selingkung keseluruhan melalui **Guide for Authors.** Pemilihan huruf dan ukuran kertas, spasi, jenis gambar, penampilan angka dan tabel, dan lain-lain.	
2	Pilih Jurnal	Pilih jurnal menggunakan fasilitas **journal finder** di Edanz, Elsevier dan Springer.	
3	*Guide for Authors*	Unduh dan pelajari **Guide for Authors** (beberapa) jurnal pilihan dan beberapa artikel terbaru sebagai contoh dan patokan; ATM: *amati, tiru, modifikasi.*	
4	Tatabahasa	Manfaatkan perangkat korektor ejaan dan tatabahasa, misal ***Grammarly*** . Kalimat baku dan efisien.	
5	Duplikasi	Cek duplikasi dengan *iThenticate.* Hindari ada kesamaan **kalimat** dan **paragraf**. Jika ada, lakukan parafrase. Lakukan *loop* pemeriksaan sampai *similarity level* rendah dan tidak ada lagi kesamaan **kalimat** dan **paragraf**.	
6	*Proofreading*	*Proofreading,* gunakan jasa profesional, *native speakers* ; misal di **Elsevier Languange Service.** Sertifikat *proofreading* bisa dilampirkan saat *submit* agar bahasa tidak dipersoalkan.	
7	ORCID	Buat akun ORCID melalui https://orcid.org.	
8	Data pengarang	Siapkan kelengkapan kepengarangan, nama lengkap, institusi, alamat email institusi; *corresponding author* (CP). CP bukan hanya penanggungjawab isi manuskrip & artikel, tetapi CP juga akan menjadi pengarang yang mengurusi penanganan manuskrip sampai terbit.	
9	Calon reviewer	Siapkan **3 reviewer** dengan mempertimbangkan riset 5 tahun terakhir, keberadaan di referensi, "kesibukan", variasi negara, reputasi. Catat nama lengkap, institusi dan email.	
10	*Cover Letter*	Siapkan **Cover Letter** yang kuat, sehingga Dewan Redaksi berkenan melanjutkan manuskrip ke tahap review.	

LANGKAH-LANGKAH PENULISAN, SUBMISI DAN PUBLIKASI ARTIKEL ILMIAH

- Getting ready with data
- First draft
- Structure of a scientific paper
- Selecting a journal
- Submission
- Revision and galley proof

Daftar Alamat Jurnal Internasional

- **Elsevier**: http://www.sciencedirect.com
- **Springer**: http://www.springer.com
- **American Chemical Society**: http://pubs.acs.org
- **Wiley Interscience**: http://http://www3.interscience.wiley.com
- **Taylor & Francis**: http://www.taylorandfrancis.com
- Etc.

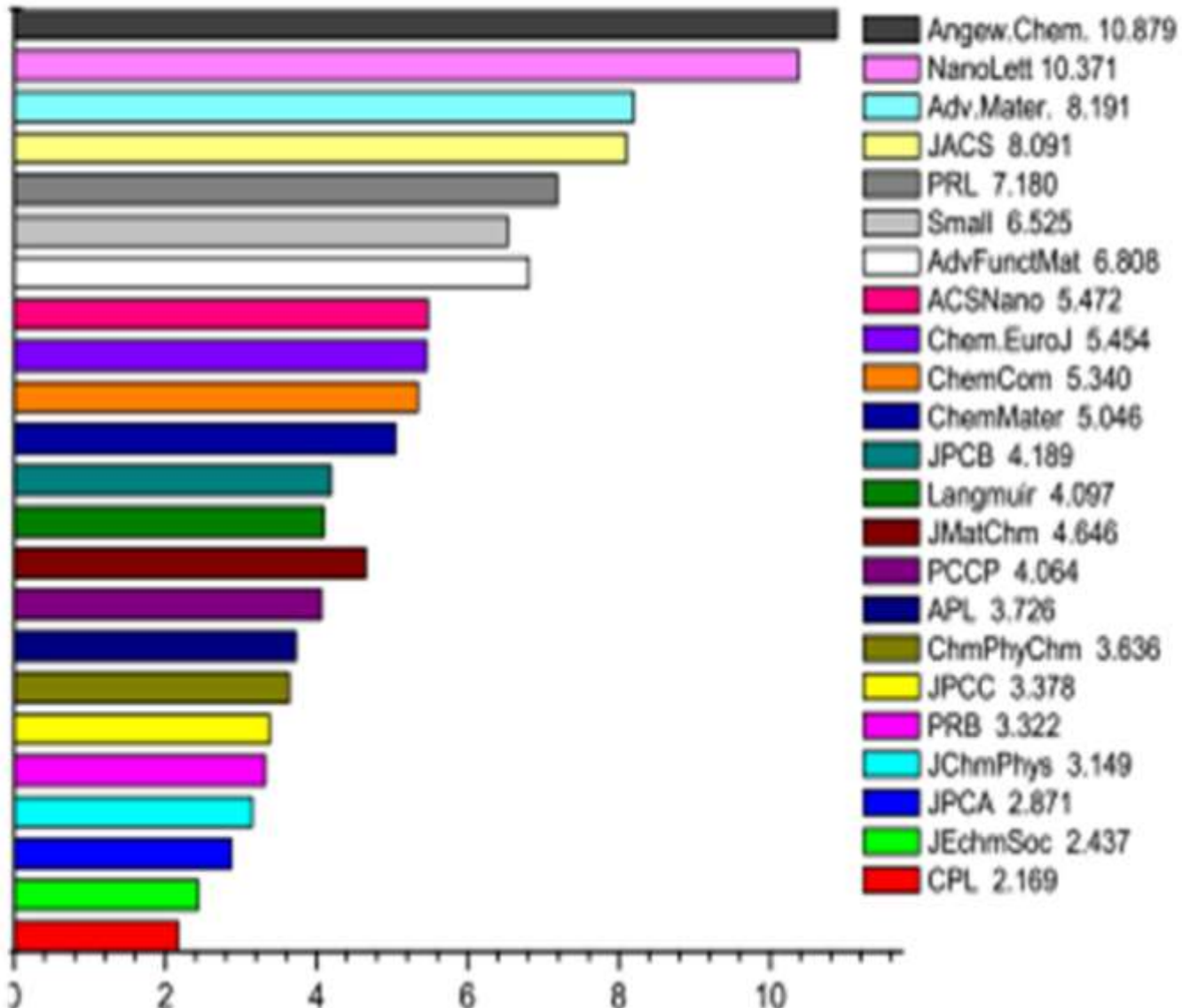
KIAT MENULIS ARTIKEL ILMIAH DI JURNAL NASIONAL & INTERNASIONAL

Oleh: Dr. Istadi (Teknik Kimia Universitas Diponegoro)

Workshop Pengembangan Jurnal Ilmiah Konsorsium Ilmu (20-21 Agustus 2007)

Center for Quality Development and Assurance (CeQDA)

2008 IMPACT FACTORS OF POPULAR JOURNALS



Hati-hati "Predatory Journals"

- http://scholarlyoa.com/publishers/
  - Potential, possible, or probable predatory scholarly open-access publishers
- http://scholarlyoa.com/individual-journals/
  - Potential, possible, or probable predatory scholarly open-access journals

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Universitas Brawijaya

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Materials Chemistry and Physics

Including Materials Science Communications

Co-Editors-in-Chief: Sammy Lap Ip Chan, Kwang-Lung Lin

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An International, Interdisciplinary Journal on Science, Characterisation and Processing of Advanced Materials
The International Journal of the Materials Research Society-Taiwan (MRS-T)

› Elsevier Physics homepage

Materials Chemistry and Physics is devoted to short communications, full-length research papers and feature articles on interrelationships among structure, properties, processing and performance of **materials**. The Editors welcome

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Chitosan and graphene oxide/reduced graphene oxide hybrid nanocomposites – Evaluation of physicochemical properties Karolina Kosowska | Patrycja Domalik-Pyzik | ...

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Announcements

Nobel Prize Physics 2018: Pioneering contributions Mourou and Strickland in Optics Communications

The 2018 Nobel Prize in Physics has been awarded "for groundbreaking inventions in the field of laser physics."

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11 steps to structuring a science paper editors will take seriously

A seasoned editor gives advice to get your work published in an international journal

By Angel Borja, PhD Posted on 24 June 2014

http://www.nd.edu/~pkamat

Michael Derntl

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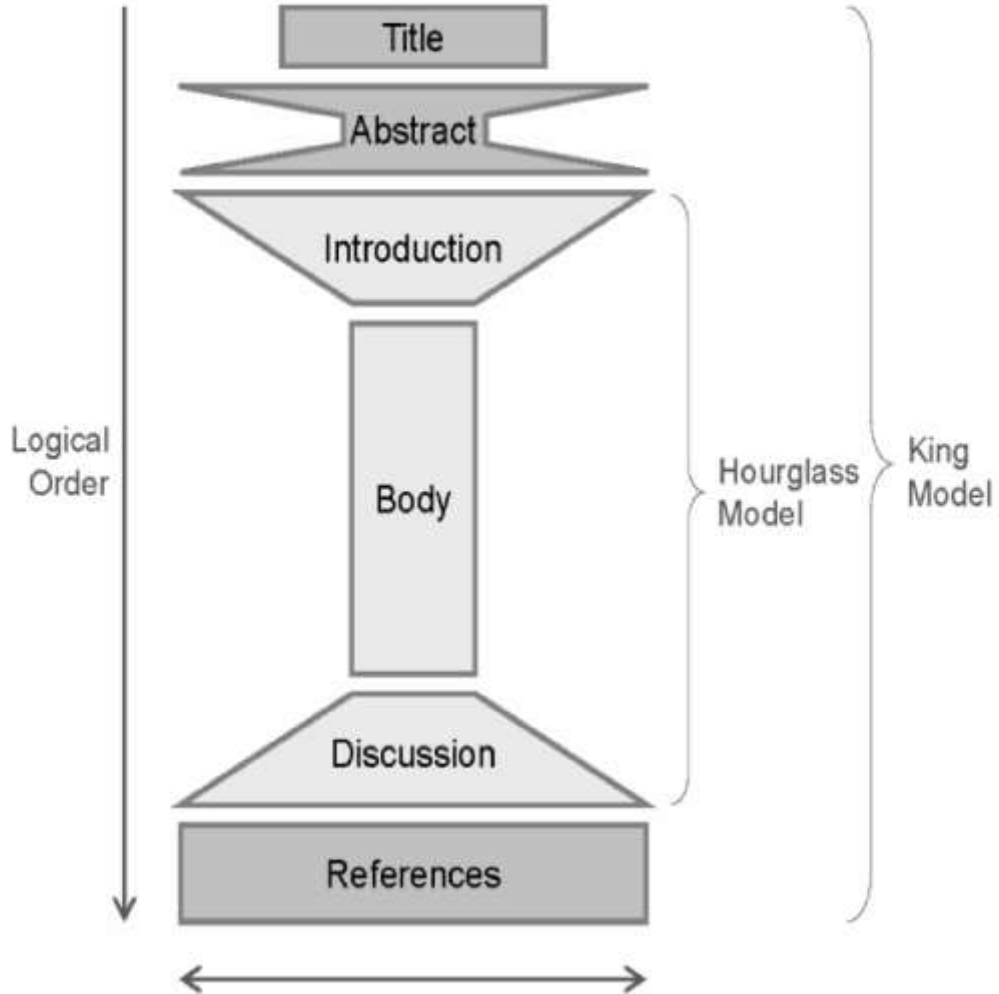
Advanced Community Information Systems (ACIS),
Lehrstuhl Informatik 5, Ahornstr. 55,
52056 Aachen, Germany
Email: derntl@dbis.rwth-aachen.de

STEPS TO ORGANIZING A MANUSCRIPT

Figure 1 The 'Hourglass Model' (light-grey parts) and the 'King Model', which covers an extended set of parts in a typical paper's structure



ARTICLE STRUCTURE

1. ABSTRACT
2. INTRODUCTION
3. METHOD
4. RESULTS AND DISCUSSION
5. CONCLUSION
6. ACKNOWLEDGMENTS
7. REFERENCES

TIKEL

- **Title:** Short and informative
- **Abstract:** 1 paragraph (<250 words)
- **Introduction:** 1.5-2 pages
- **Methods:** 2-3 pages
- **Results:** 6-8 pages
- **Discussion:** 4-6 pages
- **Conclusion:** 1 paragraph
- **Figures:** 6-8 (one per page)
- **Tables:** 1-3 (one per page)
- **References:** 20-50 papers (2-4 pages)

Again, look at the journal's Guide for Authors, but an ideal length for a manuscript is 25 to 40 pages, double spaced, including essential data only. Here are some general guidelines:

Steps to organizing your manuscriptLANGKAH-LANGKAH MENGORGANISASI MANUSKRIP

1. Prepare the **figures and tables**.
2. Write the **Methods**.
3. Write up the **Results**.
4. Write the **Discussion**. Finalize the Results and Discussion before writing the introduction. This is because, if the discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the introduction?
5. Write a clear **Conclusion**.
6. Write a compelling **Introduction**.

7. Write the **Abstract**.
8. Compose a concise and descriptive **Title**.
9. Select **Keywords** for indexing.
10. Write the **Acknowledgements**.
11. Write up the **References**.

https://www.elsevier.com/connect/11-steps-to-structuring-a-science-paper-editors-will-take-seriously

Step 1: Prepare the figures and tables

Remember that "a figure is worth a thousand words." Hence, illustrations, including figures and tables, are the most efficient way to present your results. Your data are the driving force of the paper, so your illustrations are critical!

How do you decide between presenting your data as tables or figures? Generally, tables give the actual experimental results, while figures are often used for comparisons of experimental results with those of previous works, or with calculated/theoretical values (Figure 1).

Whatever your choice is, no illustrations should duplicate the information described elsewhere in the manuscript.

figure and table legends must be self-explanatory

- Avoid crowded plots
  using only three or four data sets per figure

- Think about appropriate axis label size

- Include clear symbols and data sets that are easy to distinguish.

- Never include long boring tables (e.g., chemical compositions of emulsion systems or lists of species and abundances). You can include them as supplementary material.

If you are using photographs, each must have a scale marker, or scale bar, of professional quality in one corner.

Another common problem is the misuse of lines and histograms. Lines joining data only can be used when presenting time series or consecutive samples data (e.g., in a transect from coast to offshore in Figure 5). However, when there is no connection between samples or there is not a gradient, you must use histograms (Figure 5).

Table 2 Physical properties of zirconia prepared using sulfate and CTAB

Catalyst	BET surface area (m^2/g)	Pore diameter (Nm)	Pore volume (cc/g)
Z	76.729	9.76	0.31
ZS	148.81	4.88	0.265
MZ	65.97	12.55	0.377
MZS	147.5	6.6	0.396

Table 4
The element content on the catalyst surface.

Sample	Element content (wt%)		
	O	S	Zr
ZrO_2	35.46	0.46	64.08
SZ	37.42	2.07	60.51
Pt1/SZ	24.02	0.74	75.24
Pt2/SZ	25.02	0.61	74.37
Pt3/SZ	24.40	0.26	75.34

you must pay attention to the use of decimals, lines, etc.

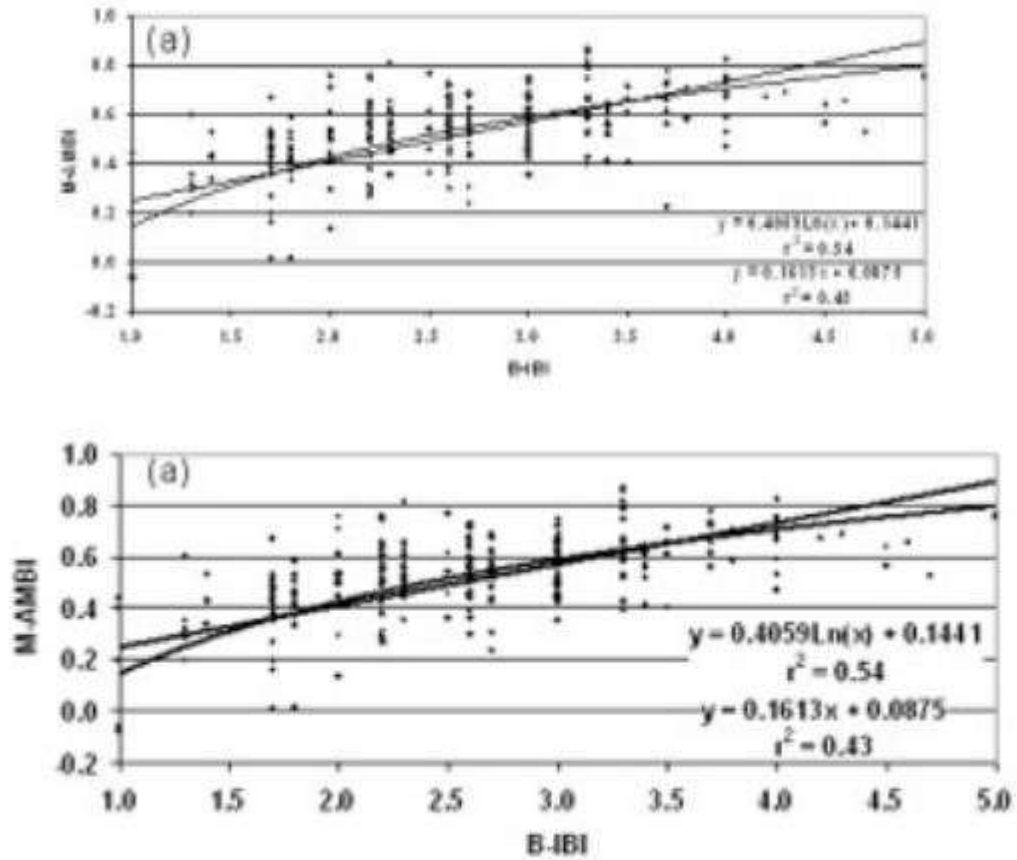
Sometimes, fonts are too small for the journal. You must take this into account, or they may be illegible to readers (Figure 6).

Form should follow function

Depth	Gravel	Sand	Mud
5 m	3,42%	81.41%	15,17%
50 m	2,5%	58.42%	39.08%
100 m	0,0%	32.5%	67.5%

Water depth (m)	Gravel (%)	Sand (%)	Mud (%)
5	3.4	81.4	15.2
50	2.5	58.4	39.1
100	0.0	32.5	67.5

Figure 7. Inadequate use of lines, number of decimals, decimal separators (use always dots, not commas) and position of units (above) and its adequate use (below) for a more clear table.



Should you use a table or chart?

Station	ECOLOGICAL GROUP I	II	III	IV	V
75U	91.3	5.3	3.2	0.2	0.0
75R	89.8	6.1	3.6	0.5	0.0
200R	69.3	14.2	8.6	6.8	1.1
500R	63.0	29.5	3.4	4.2	0.0
1000R	86.7	8.5	4.5	0.2	0.0

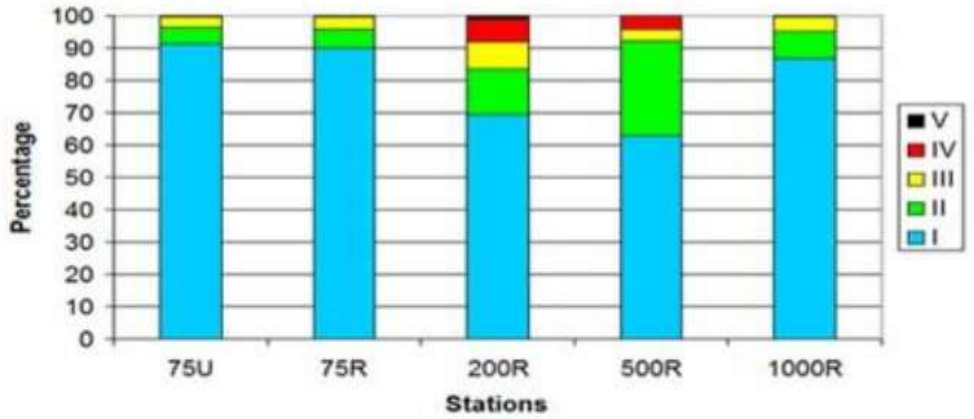
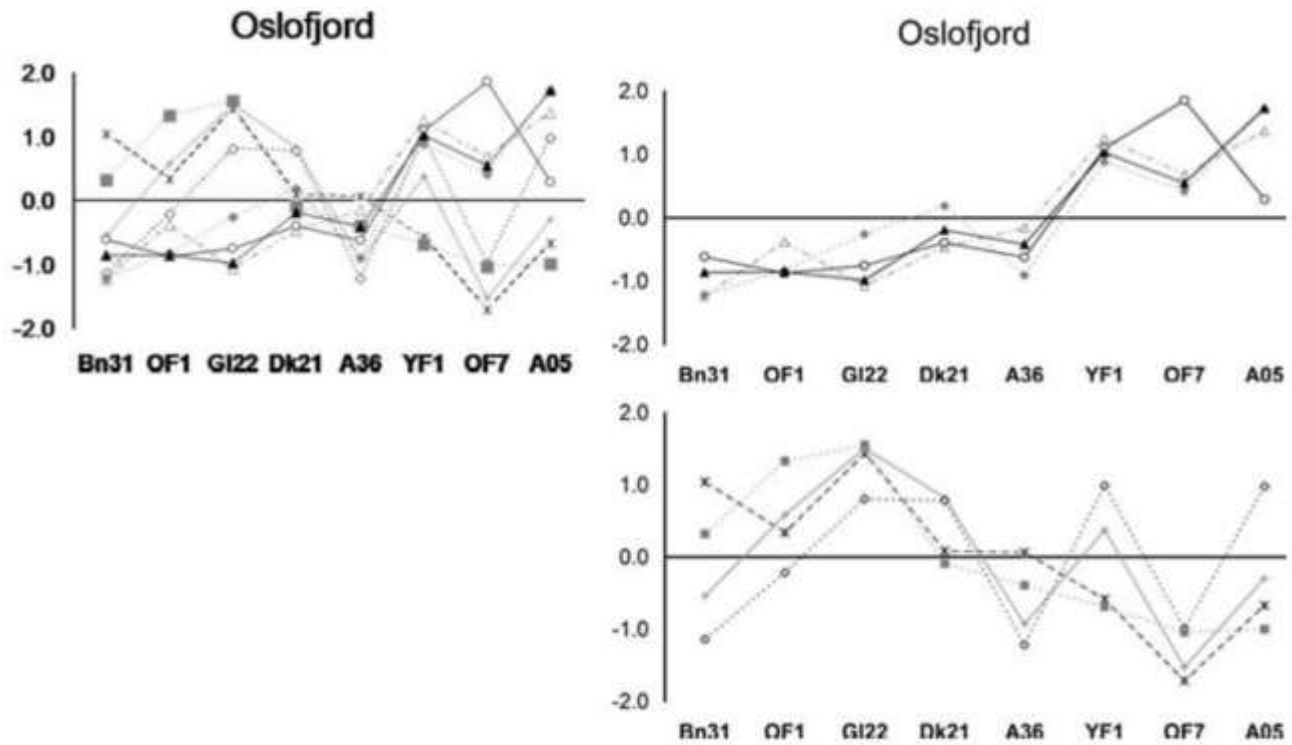


Figure 1. An example of the same data presented as table or as figure. Depending in your objectives, you can show your data either as table (if you wish to stress numbers) or as figure (if you wish to compare gradients). Note: Never include vertical lines in a table.



igure 3. This is an example of how to best present your data. In the first figure (left), data are crowded with too many plots. In the second gure (right), data are separated into two datasets, and plots show gradients, which can be useful for discussion.

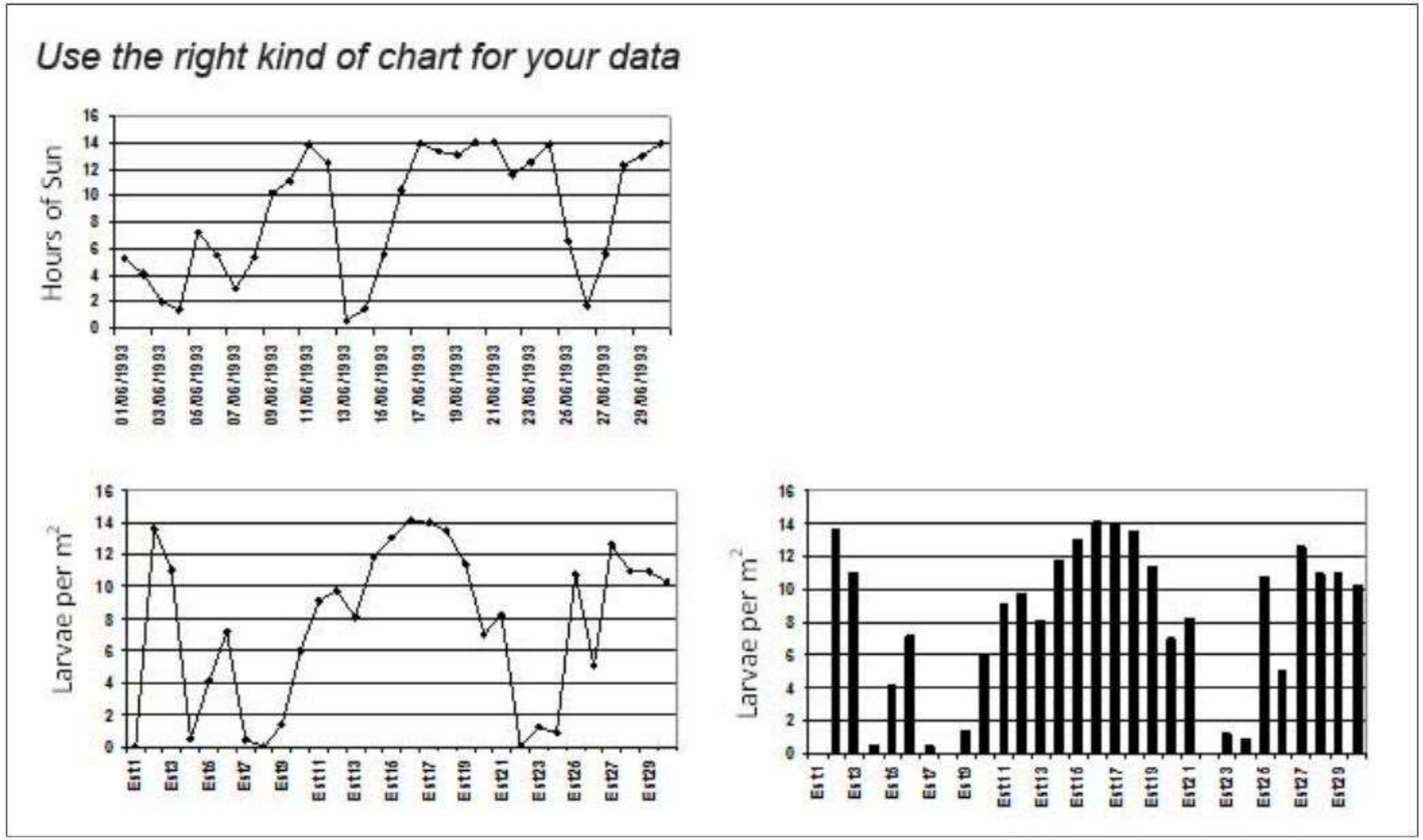
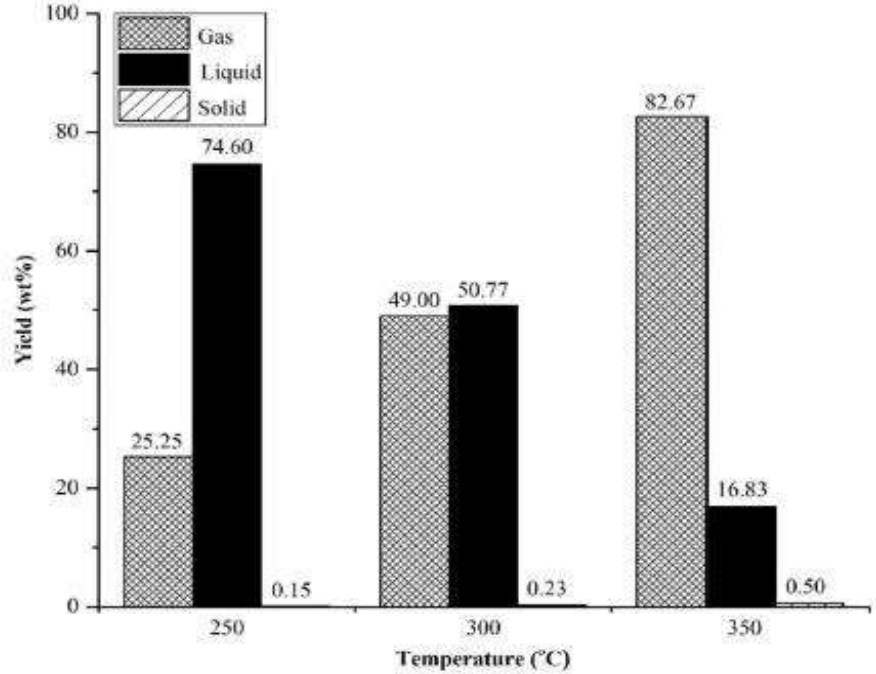
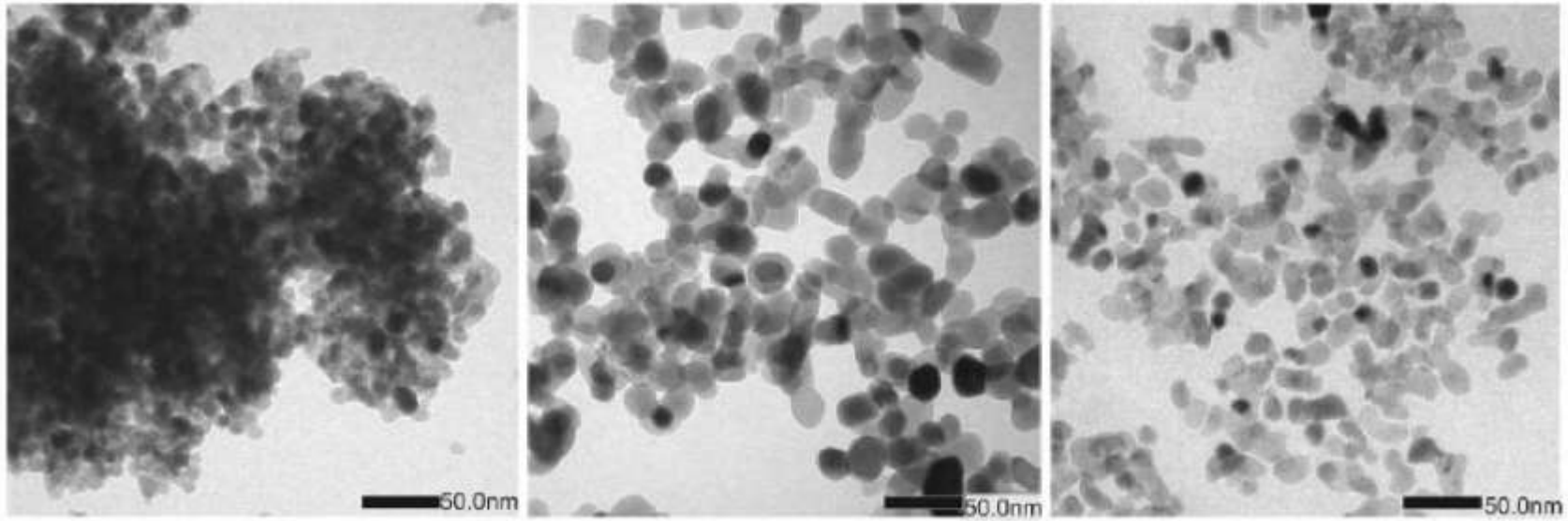


Figure 5. Example on the use of lines (top left, for time series; lower left for gradients) and histograms (right). Figures on the lower left and right are presenting the same data: the left should be used in the case of gradients (e.g., a latitudinal transect), and the bar format if there is no gradient.


Gas
Liquid
Solid
Yield (wt%)
Temperature (°C)
250
300
350
25.25
74.60
0.15
49.00
50.77
0.23
82.67
16.83
0.50
0
20
40
60
80
100


50.0nm
50.0nm
50.0nm

(a) (b) (c)

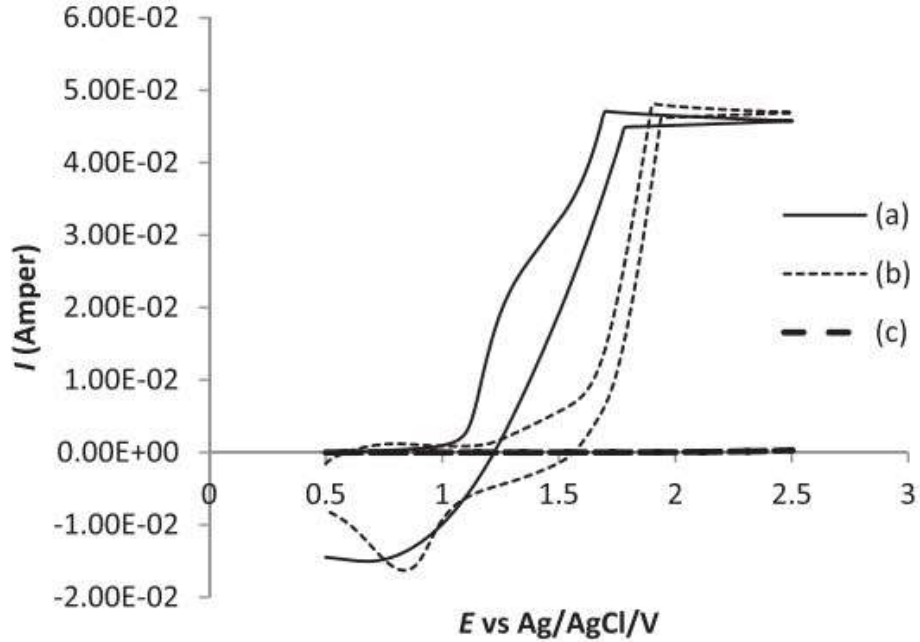


Fig. 5. Cyclic voltammograms, obtained in 0.3 M NaCl for alkaline synthesized Ti/PbO_2 (a), acid synthesized Ti/PbO_2 (b), and Ti (c) electrodes. Sweep rate 100 mV/s. Electrode geometric area = 2 cm^2.

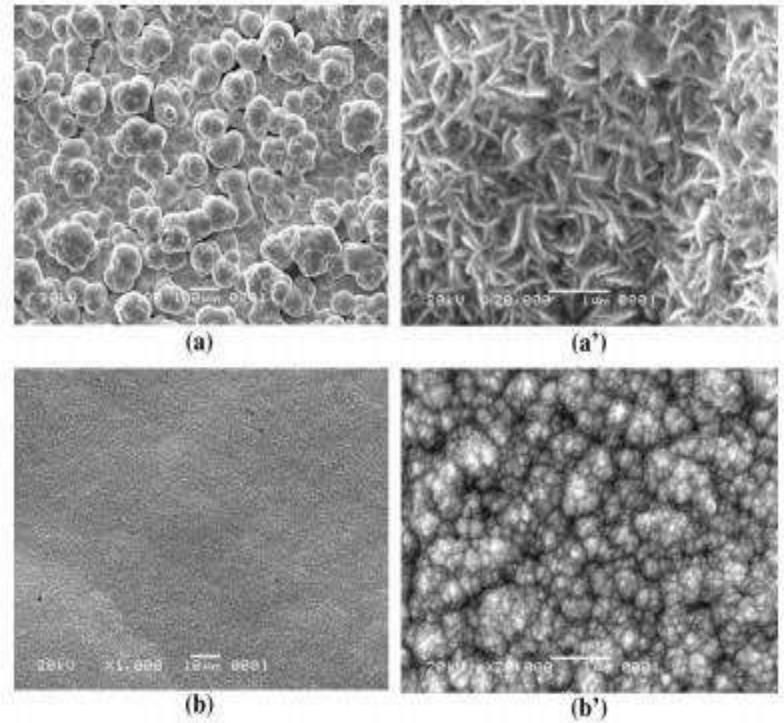


Fig. 4. Scanning electron microscopy images of the alkaline (a) and acid (b) synthesized PbO_2 films. Overview at the magnification of 100×(a and b) and 20000×(a′ and b′).

Oxidation of remazol brilliant blue r (RB.19) with in situ electro-generated active chlorine using Ti/PbO_2 electrode

Aris Mukimin [a,b,*], Karna Wijaya [a], Agus Kuncaka [a]

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Step 2: Write the Methods

- **For species,** use accepted taxonomical nomenclature (WoRMS: World Register of Marine Species (http://www.marinespecies.org) , ERMS: European Register of Marine Species (http://www.marbef.org/data/erms.php)), and write them always in italics.
- **For units of measurement,** follow the ↓ International System of Units (SI) (http://physics.nist.gov/Pubs/SP330/sp330.pdf) .

Reviewers will criticize incomplete or incorrect methods descriptions and may recommend rejection, because this section is critical in the process of reproducing your investigation. In this way, all chemicals must be identified. Do not use proprietary, unidentifiable compounds.

- **For chemicals,** use the conventions of the International Union of Pure and Applied Chemistry (http://www.iupac.org) and the official recommendations of the ↓ IUPAC–IUB Combined Commission on Biochemical Nomenclature

1. Description of the site
2. Description of the surveys or experiments done, giving information on dates, etc.
3. Description of the laboratory methods, including separation or treatment of samples, analytical methods, following the order of waters, sediments and biomonitors. If you have worked with different biodiversity components start from the simplest (i.e. microbes) to the more complex (i.e. mammals)
4. Description of the statistical methods used (including confidence levels, etc.)

In this section, avoid adding comments, results, and discussion, which is a common error.

Experimental section

Materials

$ZrOCl_2 \cdot 8H_2O$, ammonia 25%, *N*-cetyl-*N*,*N*,*N*-trimethylammonium bromide (CTAB) were purchased from Merck, HCl 37% and demineralized water were purchased from a local supplier, while lauric acid was provided by Sigma-Aldrich. All of the chemicals are analytical grade.

Preparation of mesopore sulfated zirconia by template-assisted

In a particular experiment, 13.082 g zirconyl and 4.9249 g CTAB (molar ratio 3:1) were added into 226.75 mL demineralized water and 36.77 mL HCl (35 wt%). The suspension was heated at 60 °C for 5 h and hydrolysis was achieved using ammonia solution to produce white gel $Zr(OH)_4$. Ammonia solution needed to achieve pH required for gel formation approximately 290 mL. The gel was aged in an oven at 100 °C for 12 h and then washed, filtered, and

Catalysts characterization

Rigaku X-Ray diffractometer was used to provide XRD pattern using operating condition set on 30 kV, 10 mA, scan speed 10°/min, and scan range 3°–90°. TEM micrographs were obtained using TEM Jeol JEM 1400 transmission electron microscope (USA). Gas sorption analyzer was carried out using Quantachrome Instruments and adsorption data were calculated using multipoint BET to provide a specific surface area, adsorption–desorption isotherm, and BJH–desorption to provide pore size and volume. The infrared spectrum was analyzed using FT-IR Shimadzu. Pellets were made by grounding samples of catalysts and KBr, while spectrum was scanned from wavenumber 4000–400 cm^{-1}. Solid acidity was calculated gravimetrically based on ammonia adsorbed.

Acidity calculation was conducted using formula:

$$A = \frac{w_a}{w_c \times M_a} \times 1000 \ \frac{\text{mmol}}{\text{g}}, \tag{1}$$

where A is acidity, w_a is the weight of ammonia adsorbed (g), w_c is the weight of catalyst, and M_a is molecular weight of ammonia (17.007 g/mol).

Step 3: Write up the Results

An important issue is that you must not include references in this section; you are presenting *your* results, so you cannot refer to others here. If you refer to others, is because you are *discussing* your results, and this must be included in the Discussion section.

This section responds to the question "What have you found?" Hence, only representative results from your research should be presented. The results should be essential for discussion.

However, remember that most journals offer the possibility of adding Supporting Materials, so use them freely for data of secondary importance. In this way, do not attempt to "hide" data in the hope of saving it for a later paper. You may lose evidence to reinforce your conclusion. If data are too abundant, you can use those supplementary materials.

Use sub-headings to keep results of the same type together, which is easier to review and read. Number these sub-sections for the convenience of internal cross-referencing, but always taking into account the publisher's Guide for Authors.

Statistical rules

- Indicate the statistical tests used with all relevant parameters: e.g., mean and standard deviation (SD): 44% (±3); median and interpercentile range: 7 years (4.5 to 9.5 years).
- Use mean and standard deviation to report normally distributed data.
- Use median and interpercentile range to report skewed data.
- For numbers, use two significant digits unless more precision is necessary (2.08, not 2.07856444).
- Never use percentages for very small samples e.g., "one out of two" should not be replaced by 50%.

Step 4: Write the Discussion

Here you must respond to what the results mean. Probably it is the easiest section to write, but the hardest section to get right. This is because it is the most important section of your article. Here you get the chance to sell your data. Take into account that a huge numbers of manuscripts are rejected because the Discussion is weak.

You need to make the Discussion corresponding to the Results, but do not reiterate the results. Here you need to compare the published results by your colleagues with yours (using some of the references included in the Introduction). Never ignore work in disagreement with yours, in turn, you must confront it and convince the reader that you are correct or better.

Avoid

- Excessive presentation of data/results without any discussion
- Citing every argument with a published work

Take into account the following tips:

1. Avoid statements that go beyond what the results can support.

2. Avoid unspecific expressions such as "higher temperature", "at a lower rate", "highly significant". Quantitative descriptions are always preferred (35°C, 0.5%, $p<0.001$, respectively).

3. Avoid sudden introduction of new terms or ideas; you must present everything in the introduction, to be confronted with your results here.

4. Speculations on possible interpretations are allowed, but these should be rooted in fact, rather than imagination. To achieve good interpretations think about:

- How do these results relate to the original question or objectives outlined in the Introduction section?
- Do the data support your hypothesis?

- Are your results consistent with what other investigators have reported?
- Discuss weaknesses and discrepancies. If your results were unexpected, try to explain why
- Is there another way to interpret your results?
- What further research would be necessary to answer the questions raised by your results?
- Explain what is new without exaggerating

5. Revision of Results and Discussion is not just paper work. You may do further experiments, derivations, or simulations. Sometimes you cannot clarify your idea in words because some critical items have not been studied substantially.

Results and discussion

Effect of calcination on catalyst

Metal oxides formed crystal structure when heated sufficiently via calcination. Diffractogram of zirconia prepared by template-assisted treated with sulfate and heated under different calcination temperatures showed a slightly different (Fig. 1). Catalyst calcined at 400 °C displays amorphous structure due to incomplete crystallization process. Other authors using a different template (sodium dodecyl sulfate and sodium cetyl sulfate) also found out that sulfated zirconia calcined at 400 °C has amorphous structure [14]. Sulfated zirconia started to formed crystal at 500 °C in which degree of crystallization increased as calcination temperature rise to 700 °C. This fact was confirmed by peak sharpening in the diffractogram. Comparison of 2θ diffraction angle of samples with JCPDS 17-923 shows that all sulfated zirconia prepared have a tetragonal structure with no peak of monoclinic structure. The existence of sulfate group has stabilized the formation of tetragonal structure in this temperature limit which in our case, no monoclinic was formed. Other author reported the same trend until calcination temperature 600 °C. The increase of calcination temperature above 600 °C leads to the increase of monoclinic phase in sulfated zirconia [15].

3.3. X-ray diffraction (XRD)

The XRD patterns for ZrO_2, SZ, Pt1/SZ, Pt2/SZ and Pt3/SZ recorded at 4–80° (2θ) are presented in Fig. 4. The crystallinity of ZrO_2 decreases as the addition of sulfate as well as Pt loading with different concentrations. Thus, this phenomenon indicates that sulfate and Pt have been successfully impregnated to ZrO_2, whereby Pt is evenly dispersed and sulfate covers the catalyst surface. The diffraction peaks appearing at 2θ of 28.34° (d_{-111}) and 31.64° (d_{111}) refer to the monoclinic crystal phase of ZrO_2 [15]. The crystalline structure of catalysts is related not only to the calcination temperature and activation process but also to the precursor, in agreement with the work reported by Stichert and Schüth [22]. However, the diffraction peak of Pt is not detected because the impregnated metal concentration is relatively low [24].

3.7. Energy dispersive X-ray fluorescence spectrometry (EDXRF)

The concentrations of Pt over Pt1/SZ, Pt2/SZ and Pt3/SZ samples are shown in Table 5. It can then be seen that Pt content is strongly affected by the dispersion of Pt on SZ. The reduction treatment under H_2 gas stream after calcination step is necessary to obtain supported Pt^0 particles and leads to the virtually complete dispersion of the noble metal [38]. The data show that Pt contents are lower than the theoretical initial concentrations used due to the competition of Pt in catalytic pores. Hence, the amounts of active metals having weak interactions in the pore area of SZ tend to be desorbed. It can be noticed that Pt1/SZ, Pt2/SZ and Pt3/SZ samples contain only 0.35, 0.90 and 1.19 wt% Pt, respectively.

Step 5: Write a clear Conclusion

A common error in this section is repeating the abstract, or just listing experimental results. Trivial statements of your results are unacceptable in this section.

You should provide a clear scientific justification for your work in this section, and indicate uses and extensions if appropriate. Moreover, you can suggest future experiments and point out those that are underway.

You can propose present global and specific conclusions, in relation to the objectives included in the introduction.

Conclusions

A further increase of sulfate amount significantly increased the acidity and decreased the crystallinity of SZ. It indicated that the relative amounts of active sites were increased. The enhancement of the calcination temperature caused a lowering of sulfate. The treatment of 0.8 M sulfuric acid on commercial ZrO_2 nanopowder and calcined at 600 °C produced the optimum conditions in the preparation of SZ. This optimum conditions coincided with the production of the highest acidity that was found to be 1.06 mmol/g.

Conclusion

Based on the data, we can conclude that pillarization of bentonite using Al_2O_3 increased the basal spacing by 1.96 nm with Δd_{001} 1.01 nm while impregnation process gives the highest surface acidity by 8.26 mmol ammonia/g. Chrom/Al_2O_3-bentonite could be used as a catalyst for hydrocracking process of castor oil since it gave the highest conversion by 64.03% where the main product was light hydrocarbon fractions of C_5-C_{10}.

Conclusion

Zirconia prepared using template-assisted CTAB and sulfate soaking exhibit good character on porosity and acidity. Sulfate group could stabilize surface structure forming of zirconia during calcination made it has high specific surface area by prevent pore from collapse as shown by ZS catalyst. CTAB tends to assist porosity to better develop made it higher in pore diameter which ranges from 6.6 nm for MZS-600 to 12.7 nm for MZS-3:1 and also made high pore volume range from 0.382 cc/g for MZS-700 to 0.485 cc/g for MZS-1:1. Calcination temperature is an important parameter for crystal forming of zirconia. So far, from porosity point of view, MZS-600 has the best properties of specific surface area, pore diameter, and volume. Catalytic activity test using esterification of lauric acid showed that calcination at 500, 600, and 700 °C gave the similar result of conversion and yield. The best catalyst is MZS-9:1 with 100% conversion and almost 90% yield of methyl lauric.

Conclusion

Based on the data, we can conclude that pillarization of bentonite using Al_2O_3 increased the basal spacing by 1.96 nm with Δd_{001} 1.01 nm while impregnation process gives the highest surface acidity by 8.26 mmol ammonia/g. Chrom/Al_2O_3-bentonite could be used as a catalyst for hydrocracking process of castor oil since it gave the highest conversion by 64.03% where the main product was light hydrocarbon fractions of C_5-C_{10}.

Step 6: Write a compelling Introduction

A good introduction should answer the following questions:

- What is the problem to be solved?
- Are there any existing solutions?
- Which is the best?
- What is its main limitation?
- What do you hope to achieve?

- Never use more words than necessary (be concise and to-the-point). Don't make this section into a history lesson. Long introductions put readers off.
- We all know that you are keen to present your new data. But do not forget that you need to give the whole picture at first.
- The introduction must be organized from the global to the particular point of view, guiding the readers to your objectives when writing this paper.
- State the purpose of the paper and research strategy adopted to answer the question, but do not mix introduction with results, discussion and conclusion. Always keep them separate to ensure that the manuscript flows logically from one section to the next.
- Hypothesis and objectives must be clearly remarked at the end of the introduction.
- Expressions such as "novel," "first time," "first ever," and "paradigm-changing" are not preferred. Use them sparingly.

1. Introduction

Hydrocracking is a process to convert a larger hydrocarbon molecules into smaller molecules by simultaneous or sequential carbon bond breaking and hydrogenation. It is not only commonly applied for petroleum refining, but also one of the promising method to recycle plastic wastes. In recent years, some investigations concerning the use of solid acid catalysts for degradation of LDPE plastic waste into fuel oils have been reported. These catalysts have been selected due to their excellent activity, selectivity and stability [1e4].

The type of catalyst that has attracted a significant amount of interest in the catalytic reaction is metal oxides, such as zirconia (ZrO_2) [5,6]. The ZrO_2 is an important material as catalyst or support in industry because of its high thermal stability, high ionic conductivity and low thermal conduction [5e11]. The nature of acidity on ZrO_2 can be improved by coating the surface with an acid solution, such as H_2SO_4 to form sulfated zirconia (SZ) [12,13]. The modification of ZrO_2 using sulfate is known to be well-suited for catalyzing several reactions, e.g., isomerization, esterification and hydrocracking reactions [14e17]. The sulfate ion can stabilize the crystal phase of ZrO_2 at room temperature. The activation process of ZrO_2 is one method to increase the reactivity of catalyst based on the nature of active sites, Brønsted and Lewis acid sites [18]. It is generally accepted that the acid strength and catalytic properties of SZ are strongly influenced by the method of preparation, the nature of starting material, the type of sulfation agent and thermal treatment [19,20].

The phase of SZ depends on the crystallinity properties of ZrO_2

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https://doi.org/10.1016/j.matchemphys.2018.03.055

Step 7: Write the Abstract

The abstract tells prospective readers what you did and what the important findings in your research were. Together with the title, it's the advertisement of your article. Make it interesting and easily understood without reading the whole article. Avoid using jargon, uncommon abbreviations and references.

You must be accurate, using the words that convey the precise meaning of your research. The abstract provides a short description of the perspective and purpose of your paper. It gives key results but minimizes experimental details. It is very important to remind that the abstract offers a short description of the interpretation/conclusion in the last sentence.

A clear abstract will strongly influence whether or not your work is further considered.

Keep it simple and informative

avoid detailed experimental procedures and data.

A B S T R A C T

Modified electrode of titanium–lead dioxide (Ti/PbO_2) was created with electrodeposition method from an alkaline solution. The crystal structures of electrode material were orthorhombic and tetragonal. Based on the SEM analysis, the PbO_2 materials were composed of nano-rod shaped particles. The cyclic voltametry diagram showed that the electrode had electroactive properties. In the process of electrodegradation of Remazol Brilliant Blue R, the electrode was used as the anode. The results of electrodegradation were measured based on UV–Vis, COD, and HPLC analyses. UV–Vis analysis results showed a rapidly decreasing absorption in the visible region ($\lambda = 592$ nm), which means the breaking of the bond between the anthraquinone and 1,4-diNHArt group easily took place. This was different from the breaking of the bond on the anthraquinone structure which was identified by the absorption at $\lambda = 227$ nm and $\lambda = 286$ nm, where the degradation lasted longer. HPLC analysis showed the dye had been degraded to small organic substances or simple compounds. Moreover COD decreased to 70.38% showing that an electrolysis method with this type of electrode is very promising and potential for further application. Electrodegradation was effective at pH = 5–10, the concentration of NaCl of 4000 mg/L, and the degradation time of 50–60 min.

A B S T R A C T

Aluminum pillared montmorillonite was prepared and used as a porous support for synthesis of TiO_2-based photocatalysts with varying TiO_2 loading. The physicochemical properties of the TiO_2-pillared montmorillonite samples were characterized by X-ray diffraction, N_2 adsorption isotherm, UV–visible diffuse reflectance spectroscopy, scanning electron microscopy and transmission electron microscopy. Photocatalytic activity of the materials was evaluated by methylene blue photodegradation in aqueous solution. The titania content in the composites significantly influenced the physicochemical properties and catalytic activity. High TiO_2 loading in the composite produced crystalline TiO_2 and enhanced dye degradation.

Abstract

The objective of this research is to synthesis of Mg/Al hydrotalcite-like (Mg/Al HTlc) from brine water and its application as a methyl orange (MO) removal. The research initiated with the synthesis of Mg/Al HTlc from brine water, which is well known as the desalination process wastewater. Characterization of the Mg/Al HTlc synthesized was confirmed through X-ray Diffraction and FT-IR Spectroscopy. The determination of optimum acidity, adsorption rate, and energy and capacity adsorption were studied. The result showed that pH 4 was the optimum acidity for the adsorption of MO on Mg/Al HTlc. MO was adsorbed at pseudo-second order adsorption rate of 1.03×10^5 g mol^{-1} min^{-1} on the Mg/Al HTlc. The adsorption data fitted well into the linearly transformed Freundlich equation.

Keywords: Mg/Al hydrotalcite-like, brine water, adsorption, methyl orange

Step 8: Compose a concise and descriptive title

Title

Compose a title that is simple, attractive and accurately reflects the investigation

-Phrases to avoid: Investigation, Study, Novel, Facile etc.

- Avoid Acronyms that are known only to specialized community

The title must explain what the paper is broadly about. It is your first (and probably only) opportunity to attract the reader's attention. In this way, remember that the first readers are the Editor and the referees. Also, readers are the potential authors who will cite your article, so the first impression is powerful!

We are all flooded by publications, and readers don't have time to read all scientific production. They must be selective, and this selection often comes from the title.

Reviewers will check whether the title is specific and whether it reflects the content of the manuscript. Editors hate titles that make no sense or fail to represent the subject matter adequately. Hence, keep the title informative and concise (clear, descriptive, and not too long). You must avoid technical jargon and abbreviations, if possible. This is because you

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Materials Chemistry and Physics

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Pt-promoted sulfated zirconia as catalyst for hydrocracking of LDPE plastic waste into liquid fuels

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Mater Renew Sustain Energy (2017)6:13
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ORIGINAL PAPER

Synthesis and characterization of sulfated zirconia mesopore and its application on lauric acid esterification

Addy Rachmat[1,2] · Wega Trisunaryanti[1] · Sutarno[1] · Karna Wijaya[1]

Arabian Journal of Chemistry (2015) 8, 228–232

King Saud University

Arabian Journal of Chemistry

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ORIGINAL ARTICLE

Microwave assisted preparation of TiO_2/Al-pillared saponite for photocatalytic phenol photo-oxidation in aqueous solution

Is Fatimah [a,*], Karna Wijaya [b], Narsito [b]

Sustain. Environ. Res., 22(6), 395-400 (2012)

Hydrocracking of oil residue from palm oil mill effluent to biofuel

Hasanudin,[1,*] Muhammad Said,[2] Muhammad Faizal,[2] Muhammad Hatta Dahlan[2] and Karna Wijaya[3]

Applied Clay Science 50 (2010) 588–593

Contents lists available at ScienceDirect

Applied Clay Science

journal homepage: www.elsevier.com/locate/clay

Note

Composites of TiO_2-aluminum pillared montmorillonite: Synthesis, characterization and photocatalytic degradation of methylene blue

Is Fatimah [a,c,*], Shaobin Wang [b], Narsito [c], Karna Wijaya [c]

[a] Chemistry Department, Universitas Islam Indonesia, Yogyakarta, 55581, Indonesia
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Separation and Purification Technology 95 (2012) 1–9

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Separation and Purification Technology

journal homepage: www.elsevier.com/locate/seppur

MAKARA, SAINS, VOL. 15, NO. 1, APRIL 2011: 9-14

SYNTHESIS OF Mg/Al HYDROTALCITE-LIKE FROM BRINE WATER AND ITS APPLICATION FOR METHYL ORANGE REMOVAL: A PRELIMINARY STUDY

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Online: 2018-02-26

Synthesis of Cr/Al_2O_3-Bentonite Nanocomposite as the Hydrocracking Catalyst of Castor Oil

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Study of SERS Chemical Enhancement Factors Using Buffer Layer Assisted Growth of Metal Nanoparticles on Self-Assembled Monolayers

Masato M. Maitani[†], Douglas A. A. Ohlberg[§], Zhiyong Li[§], David L. Allara[†‡], Duncan R. Stewart[§] and R. Stanley Williams[§]

Publication Date (Web): April 16, 2009 (Communication)
DOI: 10.1021/ja809347y

How Graphene Is Cut upon Oxidation?

Zhenyu Li[†‡], Wenhua Zhang[†‡], Yi Luo[†‡], Jinlong Yang[†] and Jian Guo Hou[†]

Publication Date (Web): April 17, 2009 (Communication)
DOI: 10.1021/ja8094729

"Signal-On" Detection of DNA Hole Transfer at the Single Molecule Level

Tadao Takada, Yuichiro Takeda, Mamoru Fujitsuka and Tetsuro Majima*

Publication Date (Web): April 23, 2009 (Communication)
DOI: 10.1021/ja9009919

Step 9: Select keywords for indexing

Keywords are used for indexing your paper. They are the label of your manuscript. It is true that now they are less used by journals because you can search the whole text. However, when looking for keywords, avoid words with a broad meaning and words already included in the title.

Some journals require that the keywords are not those from the journal name, because it is implicit that the topic is that. For example, the journal *Soil Biology & Biochemistry* requires that the word "soil" not be selected as a keyword.

Only abbreviations firmly established in the field are eligible (e.g., TOC, CTD), avoiding those which are not broadly used (e.g., EBA, MMI).

Again, check the Guide for Authors and look at the number of keywords admitted, label, definitions, thesaurus, range, and other special requests.

Step 10: Write the Acknowledgements

Here, you can thank people who have contributed to the manuscript but not to the extent where that would justify authorship. For example, here you can include technical help and assistance with writing and proofreading. Probably, the most important thing is to thank your funding agency or the agency giving you a grant or fellowship.

In the case of European projects, do not forget to include the grant number or reference. Also, some institutes include the number of publications of the organization, e.g., "This is publication number 657 from AZTI-Tecnalia."

Acknowledgments

Remember to thank the funding agency and
Colleagues/scientists/technicians who might have provided assistance

Keywords: Sulfated zirconia, Sulfuric acid, Calcination

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Effect of Sulfuric Acid Treatment and Calcination on Natural Zeolite

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An activation of natural zeolite of Wonosari, Gunung Kidul, Indonesia has been done. Activation was applied by refluxing the zeolite in variation of the sulfuric acid concentration and calcination time. Calcination was applied using microwave of 2.45 GHz. Determination of acidity was applied by measuring the amount of adsorbed ammonia and pyridine. Morphological, functional groups and crystallinity characterizations were analyzed using SEM, TEM, FTIR and XRD. Porosity of the zeolite was analyzed using porosimetry method. The results showed that the greater of the concentration of sulfuric acid and calcination time was, the greater the amount of ammonia and pyridine adsorbed as well as the surface area. FTIR spectra and XRD patterns showed no fundamental changes in the structure of the natural zeolite, SEM, and TEM images were showing an increase in space or field. Optimization was obtained at a concentration of 2 M of sulfuric acid and calcination time of 20 min, respectively each amounted to 0,8941 mmol/g of ammonia and 0,0375 mmol/g of pyridine with 251.00870 m^2/g for surface area, 0.19129 m^3/g of pore volume and 3.04829 nm of pore diameter.

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