Session 7: Getting Started!

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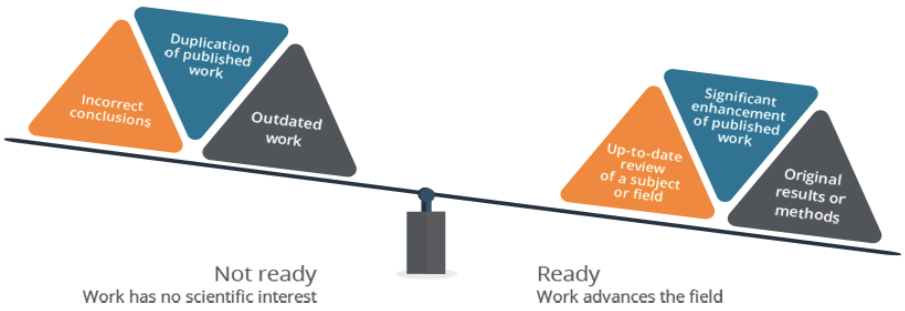
Ready to Write?



What is publishable?

Journals like to publish papers that are going to be widely read and useful to the readers

- Papers that report **"original and significant" findings** that are likely to be of interest to a broad spectrum of its readers
- Papers that are **well organized and well written**, with clear statements regarding how the findings relate to and advance the understanding/development of the subject
- Papers that are **concise and yet complete** in their presentation of the findings

Leonard V. Interrante
Editor-in-chief, Chemistry of Materials
Presented at in the Symposium on Scientific Publishing, ACS National Meeting, Atlanta, GA March 2006

When to Start?

As soon as possible!

- PhD candidate,
  - Its wise to start early
  - By compiling notes of literature that you read
  - Make it a habit to write little pieces every day
  - Its good to have a review paper submitted within the first year of study
  - When results are flowing in
- Supervisor
  - Encourage the student to write once you spot a potential publishable content

To publish in Q1

- Be aware that Q1 journals are very competitive
- Number of submissions are very high
- Reviewers are very specialized and knowledgeable
- Normally Editor is very selective
  - For example: for IEEE Transaction on Industrial Electronics, if one out of three reviewers reject (but two accept), the paper will be rejected.

Ask these Questions before Starting

For Original Research Article

- The problem to be addressed?
  - Is the problem important?
  - Is it still relevant?
- Your approach/idea/solution
  - Is your idea to solve the problem new?
  - Different than others?
- Your Findings
  - Are the results you obtain superior to previous work?
  - If not, are there special "dimension" can be considered significant?

For Review Article
Is there a similar review paper published in the last three years?

Planning an article

- Consider writing the paper like a "**project**".
- Organize materials, team. Synergize
- Plan a time-frame. Work around it
- Get advice from "expert". Ask Opinions/Questions. Is this paper worth writing?
- Get collaborators to share more data, info.
- If necessary, invite co-author. Don't be selfish!

"If You Fail to Plan, You Plan to Fail"

Planning

- Conduct brain-storming session with all authors
- First, put the ideas in power point form.
- Once agreed, build a framework of the article
  - in a form of comprehensive ToC/outlines
  - What is the main focus of the paper (revolving around the results that is available)
  - What are the important points for each section
  - Determine what diagrams, equations, tables, graphs to include
  - Estimate how much space needed for each section
- Decide who does what

Writing sequence

- Order or writing
  1. Experimental: results and and analyses
  2. Research process/experimental set-up/simulation set-up/survey questionnaire
  3. Theory
  4. Introduction
  5. Conclusion
  6. Title
- Revising, revising, revising
- Polishing
- Proof-reading

Example of a Journal Writing Project

Title: PV Charging of EV: A technological and status review
Authors: Rauf Bhatti (RB), Zainal Salam (ZS), Junaidi Aziz (JA) , Pui Yee Kong (YK)
Target date of submission: October 2014.

Article type: Review Paper
Target journal:
Primary: Renewable Sustainable Energy Review (Q1; 5.6 IF)
Secondary: Applied Energy, Q1 (5.4 IF)
Estimated length:
10 pages (final format),12 Diagrams, 6 Tables, 120 references

1.0 Introduction (ZS)
Future direction of auto industry; Environmental damage due to ICE (internal combustion engine); Development of EV by major auto companies; Ideas of charging; prospects of PV charging.

Focus: to review the technology of charging, with emphasis on solar PV.
Novelty: So far, no recent review paper on similar topic; latest was ten years ago with limited coverage on PV; many developments have taken place since then.
Diagram: None
Estimated length: 1 page

2.0 General PV system (ZS)
Structure of PV system in general, MPPT, I-V curve to show relationship P, I, V, G
Table: Example picture, I-V, P-V curve, model of cell;
Diagram: None
Estimated length: 1.5 page

3.0 Background on EV (JA)
General concept; Three main types of EV: (1) directly powered from external power sources, (2) powered by stored electricity originally from external power source, (3) powered by an on-board electrical generator (ICE).
Diagram: Example picture of (1)-(3).
Table: Types and ratings of commercial EV
Estimated length: 2 pages

4.0 Electric Vehicle (EV)/Hybrid plug-in EV (HPEV) (JA)
Definition of EV/HEV/PHEV, Categorization, Block diagram of EV components and system, Explain functionality of each type;
Diagram: 1. Example of PV car structure;
Table: 1. List of the current manufactures, power range, battery capacity, voltage, charging methods
Estimated length: 2 pages

5.0 EV Charging Methods (YK)
Definition of EV charging; Three phase AC-DC, Single phase AC-DC, On board, Off board, Fast charger, Opportunity charging, Standards.
Diagram: 1. Off-board, 2. on-board charging block diagram
Table: 1. Charging power levels for different car.
Table: 2. International Charging Codes and Standards for Ev
Estimated length: 3 pages.

6.0 PV charging of EV (RB)
Different PV charging methods; Direct DC-DC charging using PV only; Grid + PV charging; Charging of EV using PV; controlled system to charge EV from hybrid RE sources (PV, wind, Grid); Optimization techniques, energy management;
Diagram: 1. Charging modes (5 sets),
Diagram: 2. Control structure PV station, Battery-wind hybrid
Table: Power ratings of available PV charging station
Estimated length: 3 pages

7.0 Discussions (RB)
Other new concepts: Embedded cells on EV body for PV (futuristic); Battery swapping; Chassis swapping - batteries, electric motor and wheels.
Diagram: None
Table: Comparison table for all types of PV charging
Estimated length: 1 page

- Conclusion (ZS)
- Abstract (ZS)
- References (RB)
  - ❖100-120
  - ❖At least 10-15 from RSER or APEN
  - ❖At least 5-10% from our previous paper
- Initial proof-reading: ZS
- Final proof-reading: external

Output

Renewable and Sustainable Energy Reviews 54 (2016) 34–47

Contents lists available at ScienceDirect

Renewable and Sustainable Energy Reviews

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

Electric vehicles charging using photovoltaic: Status and technological review

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Journal Selection

- Decide early to avoid time wasting.
- Conduct analysis on the purpose and mission of journal.
  - Do they accept review paper? Letters?
- Different journal have own perception of science and how article should be presented.
  - IEEE focus more on practical applications; must include experimental results.
  - Elsevier more on ideas, concepts and data manipulation; simulation results are acceptable.
  - Best to study articles from specific journals.

Journal Selection

- Authors should asses his own level of research to suit the journal difficulty.
  - If results is “incremental, consider sending to a lower ranked journal.
- Substantial reference form the same journal should be cited to prove relevance.
- Consider turn-around-time
  - crucial fro PhD student
  - Look for “average” review time (from first submission to correction, acceptance).
  - Publication date may not be very important.

BEST WISHES IN YOUR NEXT JOURNAL WRITING PROJECT!

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