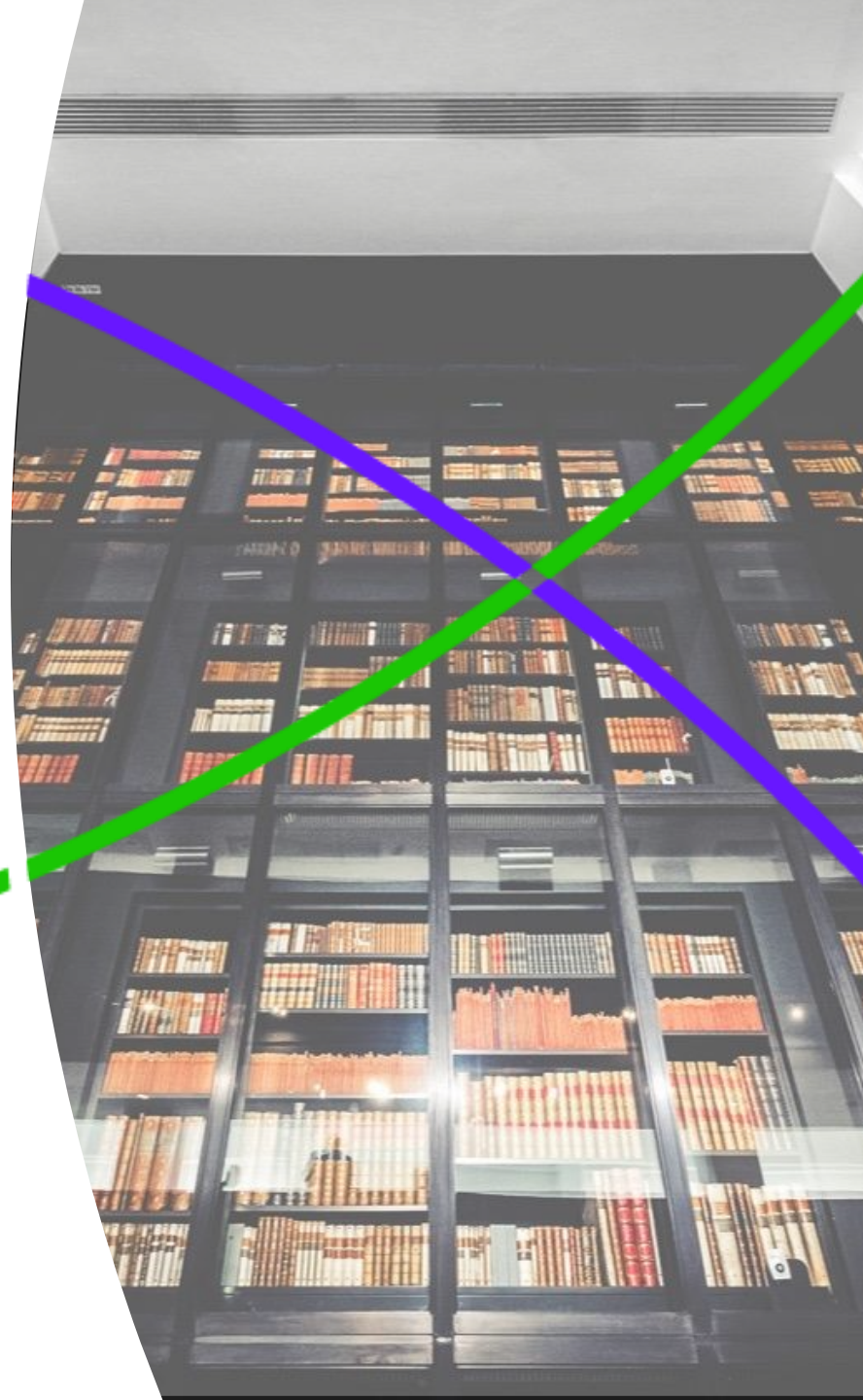


# How to get your research published – the smart use of Web of Science

Kun Yu, PhD

10/19/2017



## Today we will cover

- Locating a hot research topic
- Peer review
- How to write a good paper
- Publication ethics
- Choosing the right journal

# Locating a hot research topic

# Locating a hot research topic

## - introduction of Web of Science

The screenshot displays the Web of Science search interface. At the top left, the text "Web of Science" is shown in orange. The top right corner features the "Clarivate Analytics" logo. Below the header, a navigation bar includes "Search", "My Tools", "Search History", and "Marked List". The main search area has a "Select a database" dropdown menu currently set to "Web of Science Core Collection", with a "Learn More" link to its right. Below this, there are tabs for "Basic Search", "Cited Reference Search", "Advanced Search", and "+ More". The "Basic Search" tab is active. The search input field contains the text "Example: O'Brian C\* OR OBrian C\*" and has a clear button (X). To the right of the input field is a dropdown menu for "Author" and a blue "Search" button. Below the input field are links for "+ Add Another Field" and "Reset Form". To the right of the "Search" button is a link that says "Click here for tips to improve your search." Below the search bar, there is a "TIMESPAN" section with radio buttons for "All years" (selected) and "From 1900 to 2017". At the bottom of this section is a link for "MORE SETTINGS".

## Locating a hot research topic

### - *introduction of Web of Science*

#### Web of Science Core Collection (1900-present)

Access the world's leading scholarly literature in the sciences, social sciences, arts, and humanities and examine proceedings of international conferences, symposia, seminars, colloquia, workshops, and conventions.

[ less ]

- Navigate with cited reference searching and Author Finder
- Create a visual representation of citation relationships with Citation Mapping
- Capture citation activity and trends graphically with Citation Report
- Use the Analyze Tool to identify trends and patterns
- Backfiles available to 1900

Your edition(s):

Science Citation Index Expanded (1900-present)  
Social Sciences Citation Index (1900-present)  
Arts & Humanities Citation Index (1975-present)  
Conference Proceedings Citation Index- Science (1990-present)  
Conference Proceedings Citation Index- Social Science & Humanities (1990-present)  
Book Citation Index- Science (2005-present)  
Book Citation Index- Social Sciences & Humanities (2005-present)  
Emerging Sources Citation Index (2015-present)  
Current Chemical Reactions (1985-present)  
*(Includes Institut National de la Propriete Industrielle structure data back to 1840)*  
Index Chemicus (1993-present)

## Locating a hot research topic

- *introduction of Web of Science*



## Locating a hot research topic

### - *introduction of Web of Science*



- Science Citation Index Expanded (科学引文索引) 176个学科的**8800多种**高质量学术期刊。
- Social Sciences Citation Index (社会科学引文索引) 56个社会科学学科的**3200多种**权威学术期刊。
- Arts & Humanities Citation Index (艺术与人文引文索引) 收录28个人文艺术领域学科的**1700多种**国际性、高影响力的学术期刊的数据内容。
- Conference Proceedings Citation Index – Science+ Social Science & Humanities(会议录引文索引-自然科学版+社会科学与人文版) 超过**160,000个**会议录，有自然科学、社会科学两个版本，涉及250多个学科。
- Emerging Sources Citation Index 截止至2017年10月收录**6900多种**学术专著，且每个星期都在增加。

## Locating a hot research topic

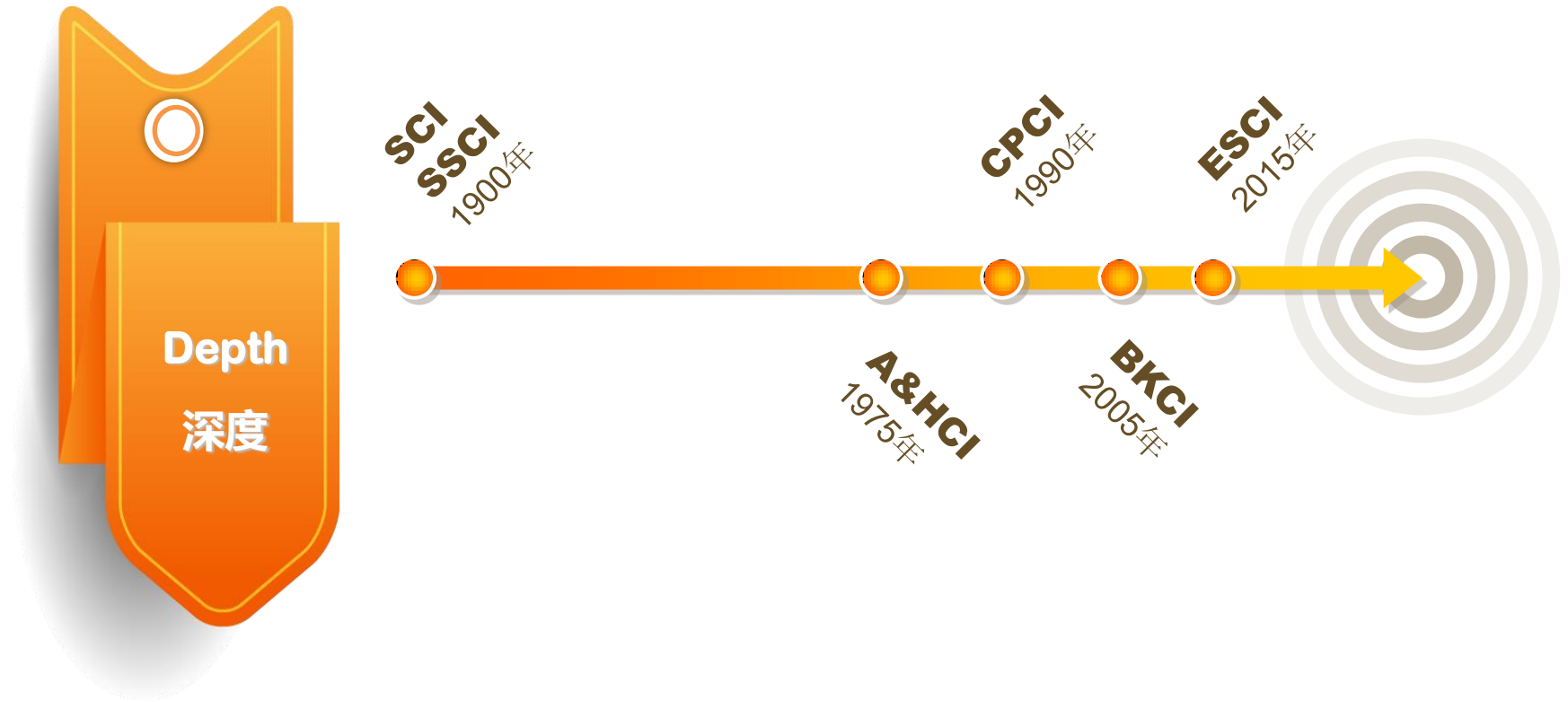
- *introduction of Web of Science*





# Locating a hot research topic

- *introduction of Web of Science*



## Locating a hot research topic

### - introduction of Web of Science

Unique  
Data

独特性

#### Citation Index 引文索引



**Dr. Eugene Garfield**  
Founder & Chairman Emeritus  
ISI, Thomson Scientific

Dr. Garfield 1955年在 *Science* 发表论文提出将引文索引作为一种新的文献检索与分类工具

#### Citation Indexes for Science

A New Dimension in Documentation  
through Association of Ideas

# CI — CITATION INDEX

“The uncritical citation of disputed data by a writer, whether it be deliberate or not, is a serious matter. Of course, knowingly propagandizing unsubstanti-

approach to subject control of the literature of science. By virtue of its different construction, it tends to bring together material that would never be collated by

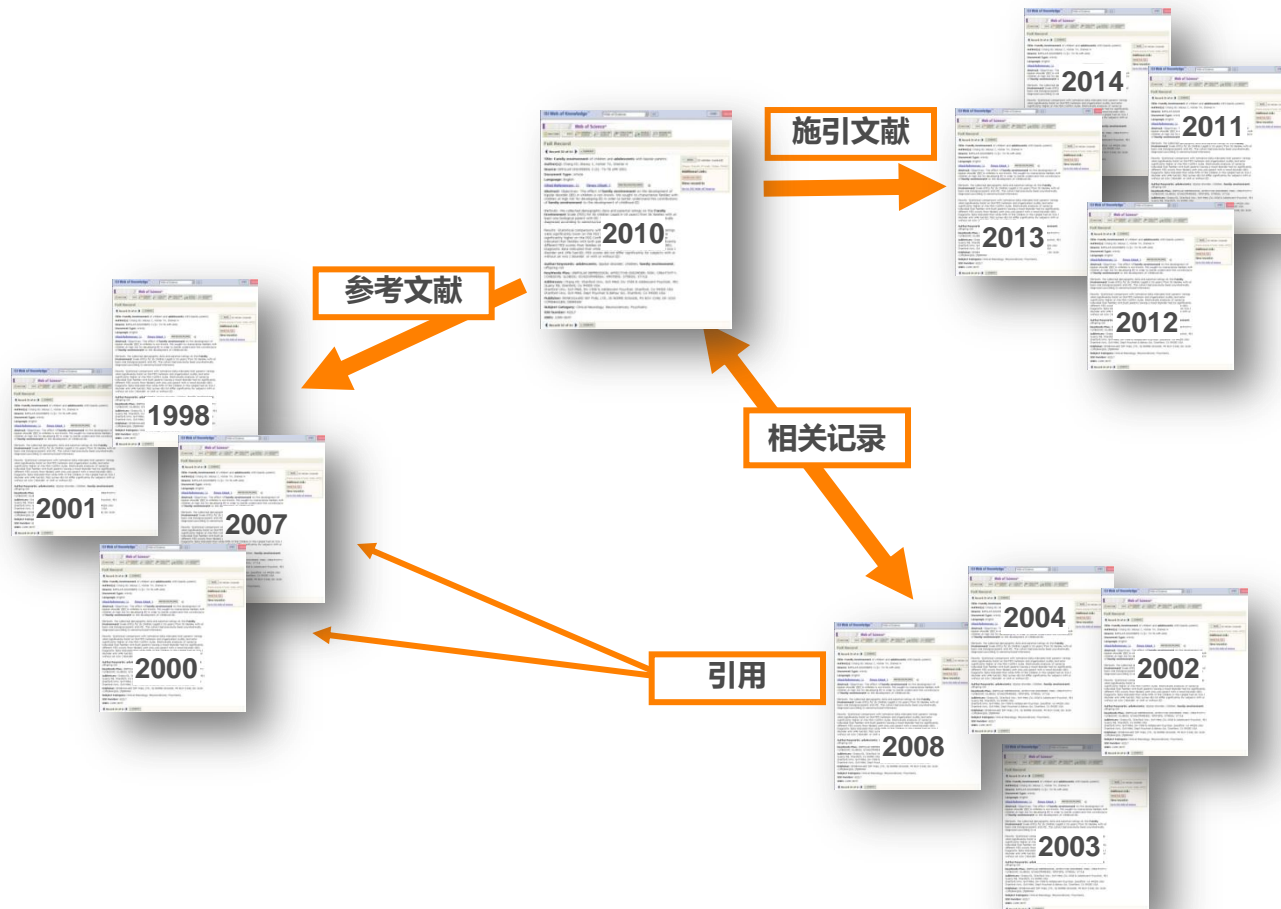
**Dr. Garfield认为：**将一篇文献作为检索字段从而跟踪一个Idea的发展过程及学科之间的交叉渗透的关系。

while the studies to which they pertain, having been reported more widely, are discovered

If one considers the book as the macro unit of thought and the periodical article as the micro thought, then

# Locating a hot research topic

- *introduction of Web of Science*



## Locating a hot research topic

### - *ESI Research Fronts*

#### Essential Science Indicators 定量分析研究绩效的工具

- 来自于 Web of Science 的10年滚动数据，每一种期刊都被按照22个学科进行了分类标引；
- 基于科学家、研究机构（或大学）、国家（或地区）及学术期刊的研究成果数量和影响力指标，以及在全球各研究领域中的排名
- 全球各学科领域的论文被引频次基准值
- 高被引论文、热点论文和研究前沿

## Locating a hot research topic

### - *ESI Research Fronts*

#### ESI高被引论文及热点论文定义

过去**10年**中所发表的，在统计时间点，**被引次数**在**同年同学科**中达到该学科的**前1%**--高被引论文Highly Cited Paper

近**两年内发表**，在统计时间点，**近两个月**的**被引次数**达到该学科的**前0.1%**--热点论文HOT Paper

统计高被引论文之间的**引证关系**，采用**共聚类分析**得出关键词—研究前沿Research Fronts

## Results List

Research Fields

## Filter Results By ?

Changing the filter field removes all current filters.

Add Filter »

## Include Results For

Top Papers

Clear

Save Criteria

## Map View by Top / Hot / Highly Cited Papers

Hide Visualization —

选择研究领域



0 67,735

## Report View by Selection

Customize

Total: 22	Research Fields	Web of Science Documents	Cites	Cites/Paper	Top Papers
1	CLINICAL MEDICINE	2,475,019	30,725,900	12.41	24,46
2	CHEMISTRY	1,544,366	20,295,392	13.14	15,36
3	PHYSICS	1,104,434	11,899,217	10.77	11,12
4	BIOLOGY & BIOCHEMISTRY	678,952	10,972,022	16.16	6,60
5	MOLECULAR BIOLOGY & GENETICS	418,962	10,135,315	24.19	4,19

选择化学



Include Results For

Highly Cited Papers



Clear

Save Criteria



Report View by Selection

	Research Fronts	Highly Cited Papers	Mean Year
1	FEW-LAYER BLACK PHOSPHORUS FIELD-EFFECT TRANSISTORS; FLEXIBLE BLACK PHOSPHORUS AMBIPOLAR TRANSISTORS; BLACK PHOSPHORUS FIELD-EFFECT TRANSISTORS; PRISTINE FEW-LAYER BLACK PHOSPHORUS; FEW-LAYER BLACK PHOSPHORUS	46	2014.3
2	CU-WATER NANOFLUID HEAT TRANSFER; MHD NATURAL CONVECTION HEAT TRANSFER; MAGNETOHYDRODYNAMIC NATURAL CONVECTION HEAT TRANSFER; NATURAL CONVECTION HEAT TRANSFER; FORCED CONVECTION HEAT TRANSFER	45	2013.9
2	HIGHLY SELECTIVE LUMINESCENT SENSING; INFRARED LUMINESCENT YTTERBIUM METAL-ORGANIC FRAMEWORK; LUMINESCENT NANOSCALE METAL-ORGANIC FRAMEWORK; LUMINESCENT CADMIUM METAL-ORGANIC FRAMEWORK; LUMINESCENT METAL-ORGANIC FRAMEWORK FILMS	45	2013.7
2	COMPETITIVE ULTRASONIC ASSISTED REMOVAL; ULTRASONIC ASSISTED REMOVAL; BASED RESPONSE SURFACE METHODOLOGY OPTIMIZATION; ACID BLUE 129 REMOVAL; MULTI-WALLED CARBON NANOTUBES	45	2013.5
5	CU <sub>2</sub> ZNSNS <sub>4</sub> THIN FILM SOLAR CELL EFFICIENCY; HIGH EFFICIENCY ELECTRODEPOSITED CU <sub>2</sub> ZNSNS <sub>4</sub> SOLAR CELL; CU <sub>2</sub> ZNSNS <sub>4</sub> SOLAR CELLS; CU <sub>2</sub> ZNSNSE <sub>4</sub> THIN FILM	43	2012.6



# 对研究前沿关键词进行分析

HIGHLY SELECTIVE LUMINESCENT SENSING;INFRARED LUMINESCENT YTTERBIUM METAL-ORGANIC FRAMEWORK;LUMINESCENT NANOSCALE METAL-ORGANIC FRAMEWORK;LUMINESCENT CADMIUM METAL-ORGANIC FRAMEWORK;LUMINESCENT METAL-ORGANIC FRAMEWORK FILMS

45

2013.7

有机金属配合物发光材料

TETRAPHENYLETHYLENE CORE-BASED 3D STRUCTURE SMALL MOLECULAR ACCEPTOR ENABLING EFFICIENT NON-FULLERENE ORGANIC SOLAR CELLS;HIGHLY EFFICIENT SOLUTION-PROCESSED NON-FULLERENE ORGANIC SOLAR CELLS;HIGH-PERFORMANCE NON-FULLERENE BASED ORGANIC SOLAR CELLS;EFFICIENT ORGANIC BULK HETEROJUNCTION SOLAR CELLS;EFFICIENT NON-FULLERENE POLYMER SOLAR CELLS ENABLED

38

2014.3

非富勒烯型聚合物太阳能电池

LUMINESCENT LANTHANIDE METAL-ORGANIC FRAMEWORKS;LUMINESCENT MULTIFUNCTIONAL LANTHANIDES-BASED METAL-ORGANIC FRAMEWORKS;LUMINESCENT FUNCTIONAL METAL-ORGANIC FRAMEWORKS;FERROELECTRIC METAL-ORGANIC FRAMEWORKS;MICROPOROUS METAL-ORGANIC FRAMEWORKS

37

2012.3

发光镧系金属-有机骨架材料

ASYMMETRIC N-HETEROCYCLIC CARBENE (NHC) CATALYZED ACYL ANION REACTIONS;N-HETEROCYCLIC CARBENE CATALYZED DOMINO REACTIONS;N-HETEROCYCLIC CARBENE CATALYZED ACTIVATION;N-HETEROCYCLIC CARBENE (NHC) CATALYSIS;ACYL ANION FREE N-HETEROCYCLIC CARBENE ORGANOCATALYSIS

34

2013.3

N-杂环卡宾(NHC)催化

ENANTIOSELECTIVE ELECTROPHILIC TRIFLUOROMETHYLTHIOLATION;LEWIS ACID-CATALYZED ELECTROPHILIC TRIFLUOROMETHYLTHIOLATION;SILVER-MEDIATED OXIDATIVE ALIPHATIC C-H TRIFLUOROMETHYLTHIOLATION;DIRECT CATALYTIC TRIFLUOROMETHYLTHIOLATION;COPPER-CATALYZED OXIDATIVE TRIFLUOROMETHYLTHIOLATION

30

2013.6

C-H键的三氟甲基化

COBALT(III)-CATALYZED DIRECTED C-H ALLYLATION;COBALT(III)-CATALYZED DIRECTED C-H COUPLING;COBALT(III)-CATALYZED C-H BOND AMIDATION;COBALT(III)-CATALYZED C-H AMIDATION;COBALT(III)-CATALYZED C2-SELECTIVE C-H ALKYNYLATION

29

2014.8

C-H键的烯丙基化、酰胺化、炔基化

ORGANOMETALLIC SANDWICH LANTHANIDE SINGLE-ION MAGNET;LANTHANIDE ORGANOMETALLIC SINGLE-ION MAGNETS;LANTHANIDE SINGLE-MOLECULE MAGNETS;ASYMMETRIC DY-2 SINGLE-MOLECULE MAGNET;SINGLE-MOLECULE MAGNET BEHAVIOR

28

2012.3

镧系金属元素的单粒子磁体

EFFICIENT BLUE ORGANIC LIGHT-EMITTING DIODES EMPLOYING THERMALLY DELAYED FLUORESCENT ORGANIC LIGHT-EMITTING DIODES;HIGHLY EFFICIENT ORGANIC LIGHT-EMITTING DIODES;ORGANIC LIGHT-EMITTING DIODES EMPLOYING EFFICIENT REVERSE INTERSYSTEM CROSSING;HIGHLY EFFICIENT ORGANIC LIGHT-EMITTING DIODE BASED

28

2013.5

有机发光二极管

HIGH PERFORMANCE ORGANIC SOLAR CELLS;ALL-SOLUTION-PROCESSED BILAYER ORGANIC SOLAR CELLS;HIGH-EFFICIENCY ORGANIC SOLAR CELLS;POLYMER/FULLERENE BULK HETEROJUNCTION SOLAR CELLS;POLYMER-FULLERENE BULK HETEROJUNCTION SOLAR CELLS

25

2012.4

高效有机太阳能电池



# 2012年国家自然科学基金委有机化学面上项目指南

- 有机化学是研究有机物质的来源与组成、合成与表征、结构与性质、反应与转化，以及功能与作用机理的科学，是创造新物质的重要学科之一。有机化学的新理论、新反应、新方法不仅推动了化学学科的发展，同时也促进了该学科与生命、材料、能源、信息、农业和环境等相关领域在更大程度上的交叉和渗透，进一步拓展了有机化学的研究领域，创造了新的学科生长点。当今有机化学研究的特点是：有机化学的分子设计与制备、分子识别与组装等概念正在影响着多个学科的发展；**选择性反应尤其是催化不对称反应，已成为有机化学研究的热点**；绿色化学作为有机化学研究中具有战略意义的前沿，正在为合理利用资源、解决环境污染和可持续发展等发挥重要的作用；有机化学与生命科学的交叉为研究和认识生命体系中的复杂现象及过程提供了新的方法和手段；有机化学与材料科学的交叉促进了新型有机功能物质的发现、制备和应用；新技术的发现与应用推动着有机化学的发展。
- 通过国家自然科学基金多年的持续资助，我国有机化学的基础研究在金属有机化学、物理有机化学、生物有机化学、天然有机化学和不对称合成等研究领域都取得了重要进展。今后，有机化学除了继续支持金属有机化学、不对称合成等优势学科外，将进一步加强下列几方面的基础研究：①物理有机和有机分析领域，重视发展新理论、新方法和新思路，关注人口与健康、农业、能源、环境和新材料等交叉领域的研究；②天然有机化学领域，加强新结构、新功能天然产物的发现，鼓励开展我国自己发现的、具有独特结构和重要生理活性天然产物的合成，同时鼓励发展新的合成方法；加强基于天然产物等活性小分子的化学生物学研究；③医药和农药创制领域，鼓励开展基于分子靶标的药物设计、新先导化合物和新靶标的发现以及结构与活性关系研究；④有机功能材料领域，加强分子设计、高效合成、组装与本征物理化学性质方面的研究；⑤超分子化学领域，注重分子识别、自组装方法及组装体的功能研究；⑥鼓励开展高效、高选择性的新型催化剂和试剂的研究及其应用，推动绿色化学与可持续化学的发展。

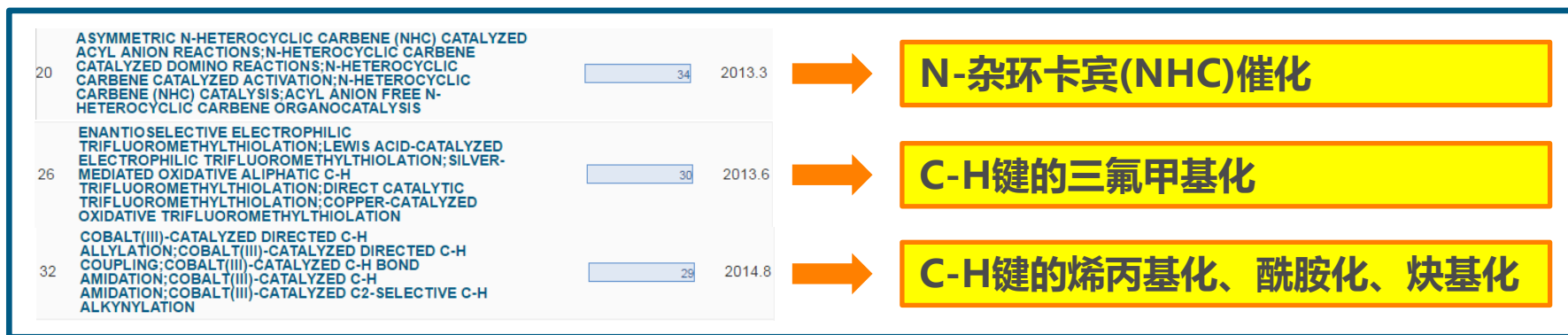
# 2016年国家自然科学基金委有机化学面上项目指南

- 有机化学是研究有机物质的来源与组成、合成与表征、结构与性质、反应与转化，以及功能与作用机理的科学，是创造新物质的重要学科之一。从纵向的角度看，有机化学研究不断深化学科内涵，向宏观拓展、微观深入，力争全时空揭示分子结构-性质关系、化学键形成和断裂以及分子间相互作用的规律，寻求物质转化的最优条件，逐步实现创造和应用有机物质的精准化。从横向的角度看，有机化学积极拓展与其他学科的交叉融合，催生学科增长点，推动能源、健康、环境等领域重大科学问题的解决，促进国家经济和社会的发展。当前有机化学研究的主要特点是：对有机物质结构、转化和相互作用规律的认识不断系统和深入，从而推动新反应、新试剂的发现；**有机化学反应与合成更加注重选择性精准控制和原子/步骤经济性；惰性化学键与小分子的活化与转化、廉价金属催化、绿色合成、生物质转化等成为应对可持续发展需求的前沿领域**；新结构/新活性分子与生物兼容性反应为解决分子层次的生命科学问题提供关键的物质和方法支持；创造全新功能材料分子和智能组装体系从源头上推动了材料科学的创新。
- 近年来，我国有机化学的基础研究无论在规模上还是在深度上都有了长足的进步，有机合成等领域已在国际上占有一席之地，形成了一些有特色的体系。但从近年来基金申请情况来看，我国的有机化学发展也存在如下突出问题：原创性和系统性仍不足、某些领域研究同质化明显、开辟和引领新领域和新方向的能力较弱、各分支学科发展不均衡及以论文为导向的急功近利倾向严重等。有机化学学科将继续支持各分支学科的发展，鼓励科学问题导向的原创性和系统性研究，强调研究思想、研究方向、研究内容以及评价方式的多元化，关注以物质转化为核心的有机合成基础研究原创性突破及对产业应用的源头贡献，进一步加强本学科与物理、材料科学和生命科学等领域的交叉。

# 2012 - 2016年国家自然科学基金委有机化学面上项目指南研究前沿领域的变化

## 惰性化学键活化（碳氢活化）

### 有机化学领域的ESI研究前沿

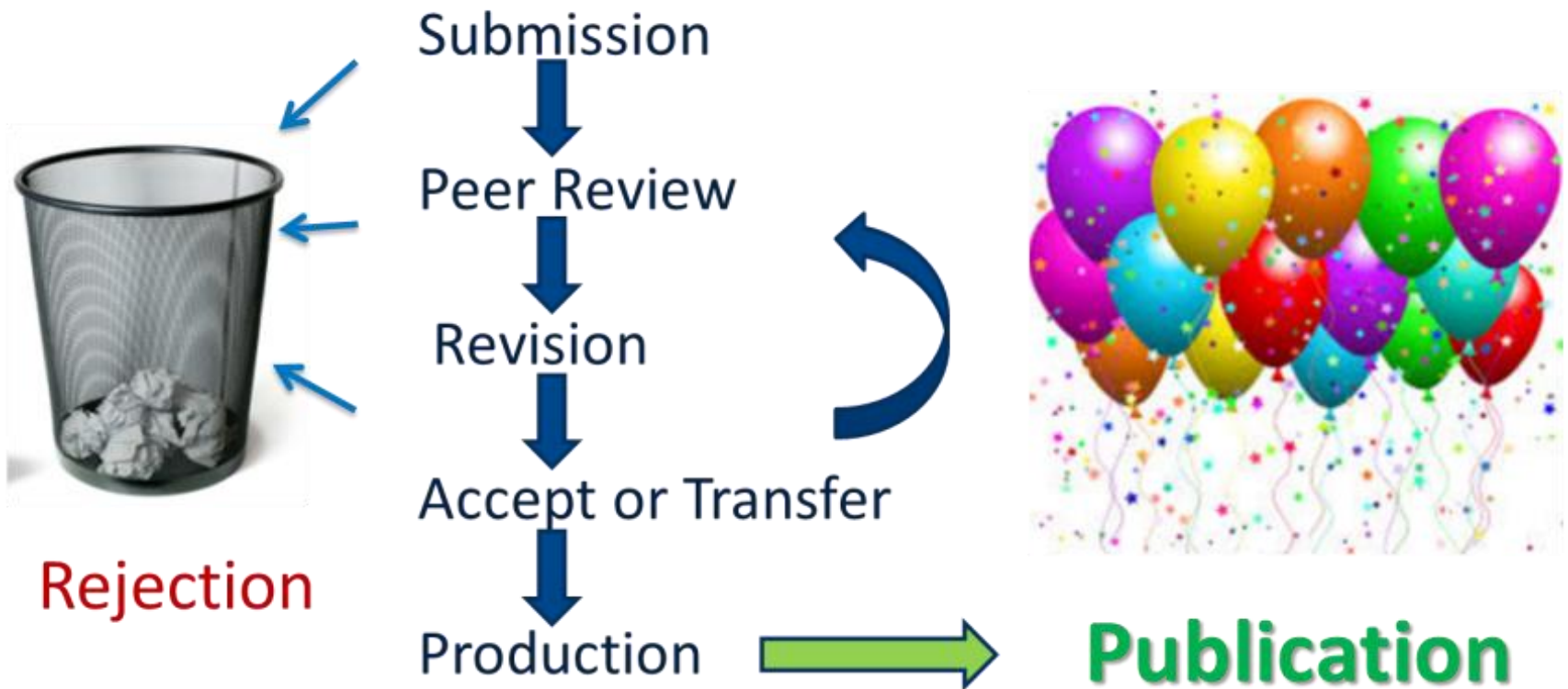


## 利用ESI研究前沿对基金资助领域进行预判

# Peer review

## Peer review

- *the 'life' of a manuscript*



## Peer review

### - *what is peer review?*

- Assessment by independent experts
  - Usually at least two
  - Different reviewers may advise on different aspects
  - Chosen by the editor
- Journals provide guidelines
- Reviewers asked to return their report within two weeks (varies by journal)
- Constructive feedback helps:
  - Editor to make a decision
  - Authors to improve their manuscript

## Peer review

### - *what do peer reviewers look for?*

- Quality
- Soundness of research
- Suitability of methods and analyses
- Soundness of analysis
- Appropriateness of the conclusions
- Reporting/clarity of the message
- Language/presentation
- Contribution to the literature
- Importance/interest
- Suitability to the journal's scope
- Research and publication ethics



## Peer review

### - *why peer review?*

- Ensures that published articles are scientifically sound
- An opportunity to improve manuscripts
- If rejected: take criticism on board before submitting to another journal!





## Peer review

### - *making a decision after peer review*

- Editors make a decision on the basis of the comments from the reviewers and their own assessment
- Reviewers often disagree with each other
- Editors may overrule reviewers
- Editors, not the reviewers, decide ultimately what is published



## Peer review

### - *decisions after peer review*



#### Accepted

- All main aspects of the manuscript been assessed
- The study has been judged to be sound
- Study meets the required threshold for the journal (e.g. significant clinical impact)



#### Revisions

- Further experiments needed (e.g. more controls)
- Discuss limitations more clearly
- Ensure data supports conclusions



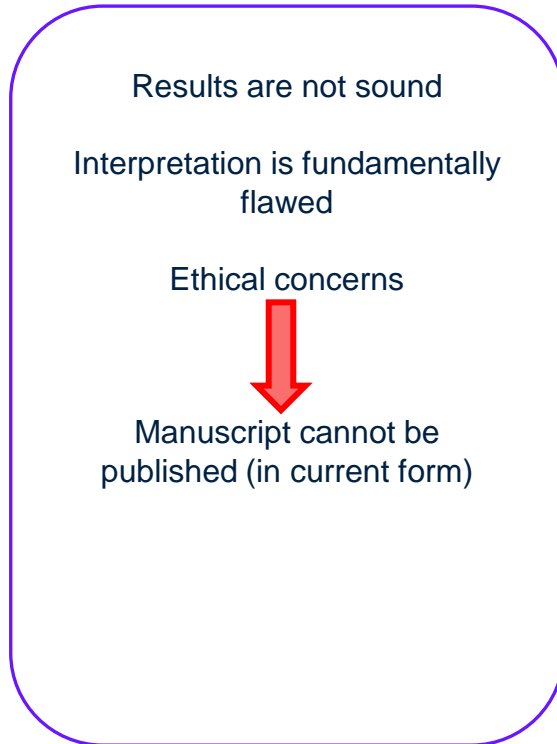
#### Rejected

- Extensive revisions required.
- Stats not appropriate
- Lack of ethical approval or missing data
- Inappropriate controls or methods for analysis
- Data do not support conclusions
- No novelty
- Misconduct, e.g. Plagiarism
- Unsuitable for journal scope or threshold

## Peer review

### - rejection reasons why

#### Scientific soundness



#### Interest/advance



## Peer review

### - *what to do if you are asked to revise your manuscript*

- Ensure you understand what reviewers and editors are asking for (if unsure make an informal query to the editor prior to submitting your response)
- Provide a full and concise point-by-point response to the reviewers and editors
- If you disagree with something, provide a clear rationale for your argument within the response and back up with references where possible
- Give clear indication where revisions in the manuscript have been made (tracked changes, highlighted)
- Always be polite and phrase your responses to reviewers in a neutral way

## Peer review

### - *what to do if your manuscript is rejected*

- All scientific careers are faced with rejection
- Take reviewers advice and improve the study/ manuscript
- If you are invited to resubmit, do the revisions that the reviewers request.
- If you disagree with a decision to reject then you can ask the editor to reconsider – this is called an appeal or rebuttal
- Not all journals consider appeals – check policy
- Never send an appeal immediately after receiving a decision – always leave enough time to be calm!
- Most journals will only allow one appeal per manuscript



# How to write a good paper

## How to write a good paper

### - *writing your manuscript*

Sections of a scientific paper reflect the scientific process:

- Background
- Methods
- Results
- Discussion
- Conclusions

## How to write a good paper

### - *plan ahead*

A good research paper starts long before you start writing the paper

Before you start your research, think about:

- What is your hypothesis or research questions?
- What study design do you need to investigate this?
- What are the appropriate methods to answer your question? (controls, sample size)
- Do you need ethics approval?
- Do you need consent?
- Do you need to register your study? (clinical trials)





## How to write a good paper

### - *research ethics: ethics approval*

- Reputable journals will only publish ethically conducted research
- Research involving human subjects, human material or human data must have been performed in accordance with the declaration of Helsinki
- All papers reporting studies involving human subjects, human material, or human data must have:
- A statement of ethics, including the name of the ethics committee



## How to write a good paper

### - *the cover letter*

Important to make a good first impression:

- Get the journal name right!
- Write in clear English
- Don't write it like an abstract
- Focus on the key finding
- Rationale for the study should be well argued
- Why this research important?
- Why is it a good fit for the journal?



# How to write a good paper

## - the abstract

A well written abstract should provide::

- Clear background and aims
- Appropriate level of details about study design and results
- Clear conclusions

### Abstract

**Background:** DNA demethylases regulate DNA methylation levels in eukaryotes. *Arabidopsis* encodes four DNA demethylases, *DEMETER (DME)*, *REPRESSOR OF SILENCING 1 (ROS1)*, *DEMETER-LIKE 2 (DML2)*, and *DML3*. While *DME* is involved in maternal specific gene expression during seed development, the biological function of the remaining DNA demethylases remains unclear.

**Results:** We show that *ROS1*, *DML2*, and *DML3* play a role in fungal disease resistance in *Arabidopsis*. A triple DNA demethylase mutant, *rd* (*ros1 dml2 dml3*), shows increased susceptibility to the fungal pathogen *Fusarium oxysporum*. We identify 348 genes differentially expressed in *rd* relative to wild type, and a significant proportion of these genes are downregulated in *rd* and have functions in stress response, suggesting that DNA demethylases maintain or positively regulate the expression of stress response genes required for *F. oxysporum* resistance. The *rd*-downregulated stress response genes are enriched for short transposable element sequences in their promoters. Many of these transposable elements and their surrounding sequences show localized DNA methylation changes in *rd*, and a general reduction in CHH methylation, suggesting that RNA-directed DNA methylation (RdDM), responsible for CHH methylation, may participate in DNA demethylase-mediated regulation of stress response genes. Many of the *rd*-downregulated stress response genes are downregulated in the RdDM mutants *npr1* and *npr2*, and the RdDM mutants *npr1* and *ago4* show enhanced susceptibility to *F. oxysporum* infection.

**Conclusions:** Our results suggest that a primary function of DNA demethylases in plants is to regulate the expression of stress response genes by targeting promoter transposable element sequences.

**The abstract is the only thing invited reviewers see before they agree to peer review**

## How to write a good paper

### - *preparing your paper*

- Read the journal's submission guideline
- Read the journal's editorial polices
- Format your article correctly
- Write clearly and concisely

## How to write a good paper - *interpreting your results*

When writing your paper, think about:

- What do your results really show?
- How does this fit with existing knowledge?
- What is new about the findings?
- What are the limitations?
- What can be concluded from your data?

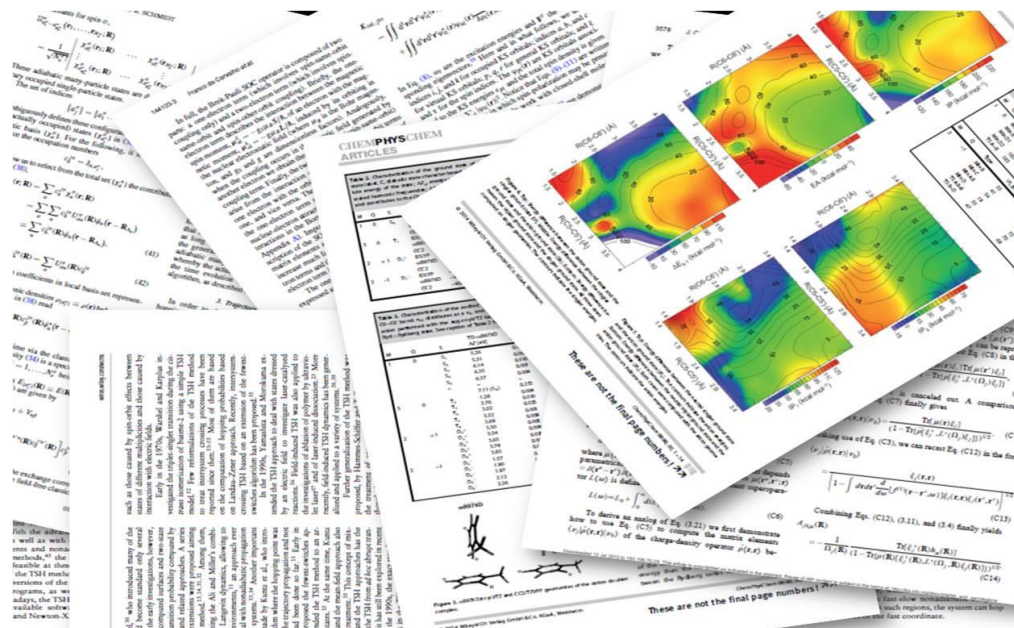
# How to write a good paper

## - 8 tips for writing a good paper

### Tip 1:

Read lots of papers

- Join a journal club
- Read outside of your area



## How to write a good paper

### - 8 tips for writing a good paper

Tip 2:

Write clearly

- Complex language is not needed
- Science is best when complex ideas are expressed in an easy to understand way
- Poorly written manuscripts get rejected
- You can use a professional copyediting service



## How to write a good paper

### - *8 tips for writing a good paper*

Tip 3:

Don't write and edit at the same time

- Write the parts of the paper you're most excited about first
- Decide what the main message is early on
- Quality vs Quantity
- Get a colleague to feedback on your draft



## How to write a good paper

### - *8 tips for writing a good paper*

Tip 4:

Don't forget about figures and tables

- Ensure these are high quality and clear
- Figure legends need to be descriptive
- Get a colleague outside of your field to feedback on your images

## How to write a good paper

### - 8 tips for writing a good paper

Tip 5:

Quality is everything

- Try to publish in as higher quality journal as you can
- One great study is better than several lesser quality studies
- Avoid trying to publish lots of papers from a single research project that provide only a small amount of new data

## How to write a good paper

### - *8 tips for writing a good paper*

Tip 6:

Write clear responses to editors and reviewers

- Provide full, and concise point-by-point responses
- If you disagree, provide clear rationale for your argument and back up with references

## How to write a good paper

### - 8 tips for writing a good paper

Tip 7:

Become a reviewer

- Get used to how to critically assess science – it helps you assess your own study
- Ask your supervisor if you can help with the next review they do

## How to write a good paper

### - 8 tips for writing a good paper

Tip 8:

Learn to live with rejection

- All scientific careers are faced with rejection
- Take reviewers' advice and improve the study/paper
- If you are invited to resubmit, do the revisions the reviewers ask for – don't argue for the sake of it.

# Publication ethics

## Publication ethics

### - *types of publication misconduct*

- Plagiarism
- Duplicate submission/publication
- Undeclared competing interests
- Unethical research involving humans or animals
- Data falsification/fabrication
- Image manipulation
- Gift/ghost authorship

## Publication ethics

### - *plagiarism*

- Duplication of text or figures from someone else's work
- How much can you copy from someone else's work?
  1. None
  2. 10%
  3. 30%





## Publication ethics

### - *text recycling (self-plagiarism)*

- Duplication of text from your own previous work
- Usually without attribution
- Depends on journal's policy

Try to avoid repeating your published text

- If unavoidable:
  - Be transparent
  - Tell the editor
  - Cite the original article

## Publication ethics

### - *text recycling example*

Transparently!

Methods (new article):

*The full methods of this study have already been reported in our previous article [6]. Briefly, we conducted a randomised control trial involving patients over the age of 18 who had undergone and elective laparoscopic cholecystectomy in 2007/8 in one of four London teaching hospitals.*

There is no need to repeat the description of the methods as the authors provide a citation for the details. This clarifies that the results reported in the new article are secondary outcomes from the previous study rather than misleading the reader into believing this was another study.

## Publication ethics

### - *duplicate submission*

Is it ok to submit to more than one journal at once?

No!

Consequences of duplicate submission:

- Rejection of both manuscripts
- Editor may contact the authors' institution
- Duplicate publication
- May lead to retraction (14.2% of all retractions)
- Wastes editors' and reviewers' time

## Publication ethics

### - *competing interests*

#### **Competing interests (CI) can be:**

- Financial
- Non-financial

#### **Importance of declaring CI on submission**

- Editor is aware during manuscript assessments
- Editor will not invite reviewers with the same CI
- Reviewers are aware when assessing manuscript
- Readers are aware once published

**Declaring a CI does not mean that an article will not be published**

## Publication ethics

### - *competing interests examples*

In your paper you report that a commercial sequencing technology works very well; you have shares in the company that makes the technology.

Is this a competing interest?

Yes – this is a financial competing interest

## Publication ethics

### - *competing interests examples*

In your paper, you report that there are no adverse effects of smoking on fertility; your husband works in the cigarette industry.

Is this a competing interest?

Yes, this is a non-financial competing interest

## Publication ethics

### - *authorship*

- Agree on authorship early
- Use ICMJE criteria
- Provide correct email addresses for all authors
- Tell the Editor about any changes

What problems can occur?

- Gift authorship
- Ghost authorship
- Authorship disputes

**Authorship disputes can lead to delays**



## Publication ethics

### - *who should not be an author?*

Someone who has only been involved in:

- Acquisition of funding
- Collection of data
- General supervision

Contributors who do not meet the authorship criteria should be listed in the Acknowledgements

Authors should have made substantial contributions, according to ICMJE

## Publication ethics

### - *potential consequences of unethical behavior*

- Article may be rejected
- Article may be retracted (if already published)
- Institution may be contacted
- May be unable to publish in the future - (some) journals ban authors
- Loss of reputation
- Loss of employment

# Choosing the right journal

## Choosing the right journal

### - *factors need to be considered*

- Impact factor
- Reputation in your field
- Audience – broad vs specialist
- Speed
- Open access
- Peer review model

# Choosing the right journal

## - Impact Factor

Web of Science InCites Journal Citation Reports Essential Science Indicators EndNote kun.yu@clarivate.com Help English

### InCites Journal Citation Reports

Clarivate Analytics

Home

Go to Journal Profile

Master Search

Compare Journals

View Title Changes

Select Journals

Select Categories

Select JCR Year

2016

Select Edition

SCIE  SSCI

Journals By Rank Categories By Rank

Journal Titles Ranked by Impact Factor Show Visualization +

Compare Selected Journals Add Journals to New or Existing List Customize Indicators

		Full Journal Title	Total Cites	Journal Impact Factor	Citable Items	Article Influ Score
<input type="checkbox"/>	1	CA-A CANCER JOURNAL FOR CLINICIANS	24,539	187.040	27	
<input type="checkbox"/>	2	NEW ENGLAND JOURNAL OF MEDICINE	315,143	72.406	328	
<input type="checkbox"/>	3	NATURE REVIEWS DRUG DISCOVERY	28,750	57.000	38	
<input type="checkbox"/>	4	CHEMICAL REVIEWS	159,155	47.928	277	
<input type="checkbox"/>	5	LANCET	214,732	47.831	337	

## Choosing the right journal

### - reputation in your field



## Choosing the right journal

### - reputation in your field

Go to Journal Profile

**Journals By Rank**      Categories By Rank

Show Visualization +

Journal Titles Ranked by Impact Factor

Compare Selected Journals      Add Journals to New or Existing List      Customize Indicators

Select All	Rank	Full Journal Title	Total Cites	Journal Impact Factor	Citable Items	Article Inflation Score
<input type="checkbox"/>	1	NATURAL PRODUCT REPORTS	9,382	11.014	68	
<input type="checkbox"/>	2	ALDRICHIMICA ACTA	862	8.182	6	
<input type="checkbox"/>	3	ORGANIC LETTERS	93,207	6.579	1,638	
<input type="checkbox"/>	4	ADVANCED SYNTHESIS & CATALYSIS	20,548	5.646	508	
<input type="checkbox"/>	5	Advances in Organometallic Chemistry	757	5.462	5	
<input type="checkbox"/>	6	BIOMACROMOLECULES	34,220	5.246	423	
<input type="checkbox"/>	7	Organic Chemistry Frontiers	2,261	4.955	239	
<input type="checkbox"/>	8	JOURNAL OF ORGANIC CHEMISTRY	99,193	4.849	1,371	
<input type="checkbox"/>	9	BIOCONJUGATE CHEMISTRY	14,608	4.818	322	
<input type="checkbox"/>	10	CARBOHYDRATE POLYMERS	45,390	4.811	1,200	

Compare Journals

View Title Changes

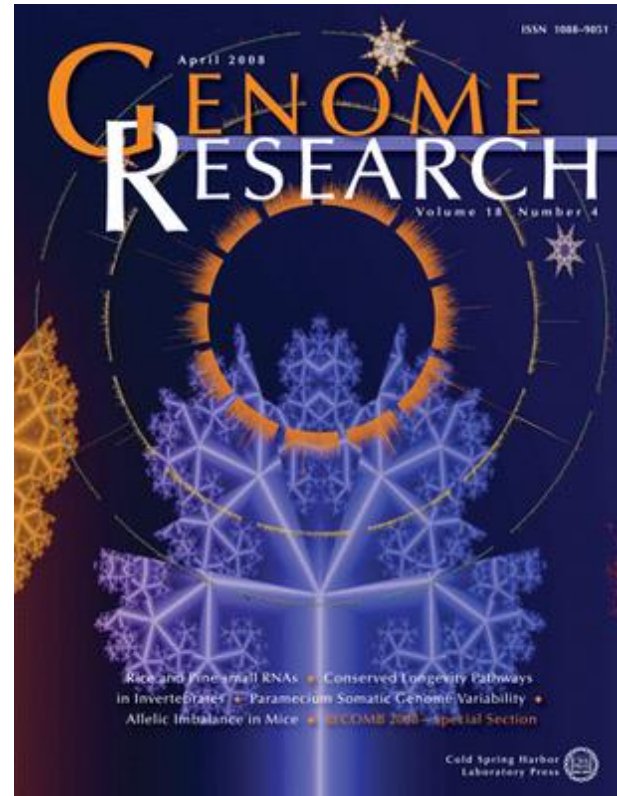
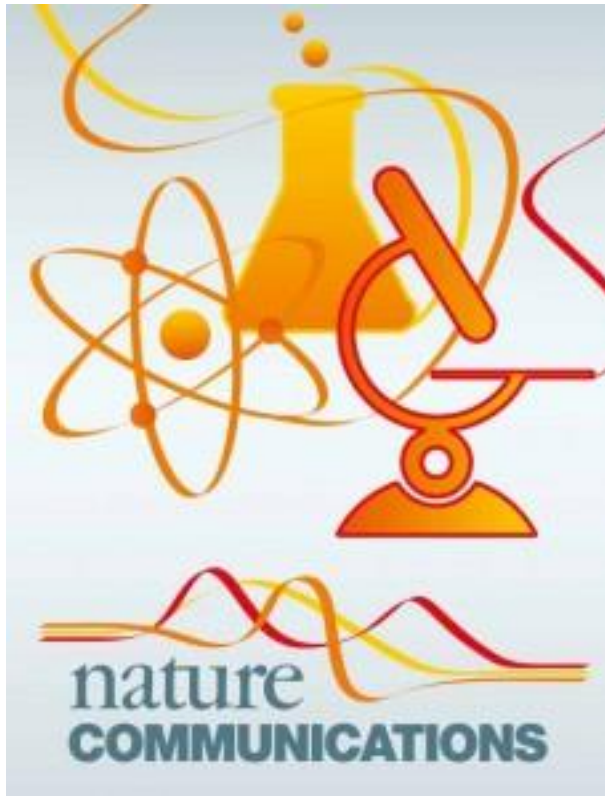
Select Journals

Select Categories

- CHEMISTRY, MULTIDISCIPLINARY
- CHEMISTRY, ORGANIC
- CHEMISTRY, PHYSICAL
- CLINICAL NEUROLOGY
- COMMUNICATION
- COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE

## Choosing the right journal

- *audience: broad vs specialist*





## Choosing the right journal

### - *speed*

- Of the editorial process
- Of publication following acceptance
- Some journals give their average time for peer review on their website
- Some journals promise rapid publication on acceptance
- Ask your colleagues for their experience

# Choosing the right journal

## - open access

- Make your research accessible to everyone
- Can increase the visibility of your research

Go to Journal Profile

**Journals By Rank**    Categories By Rank

Show Visualization +

Journal Titles Ranked by Impact Factor

Compare Selected Journals    Add Journals to New or Existing List    Customize Indicators

		Full Journal Title	Total Cites	Journal Impact Factor	Citable Items	Article Influ Score
<input type="checkbox"/>	1	Living Reviews in Relativity	2,186	29.300	2	
<input type="checkbox"/>	2	Lancet Global Health	2,649	17.686	65	
<input type="checkbox"/>	2	Lancet Global Health	2,649	17.686	65	
<input type="checkbox"/>	4	Light-Science & Applications	2,856	14.098	83	
<input type="checkbox"/>	5	STUDIES IN MYCOLOGY	2,390	14.000	5	
<input type="checkbox"/>	6	Physical Review X	7,645	12.789	192	
<input type="checkbox"/>	7	Living Reviews in Solar Physics	974	12.455	4	
<input type="checkbox"/>	8	Nature Communications	123,958	12.124	3,534	
<input type="checkbox"/>	9	GENOME BIOLOGY	28,862	11.908	213	

Select JCR Year

2016

Select Edition

SCIE     SSCI

**Open Access**

Open Access

Category Schema

Web of Science

## Choosing the right journal

### - *peer review model*

- Single blind peer review – reviewers are anonymous
- Double-blind peer review – reviewers and authors are anonymous
- Open peer review – author and reviewer names are revealed; reports posted online

## Choosing the right journal

### - tips

If you are unsure, send a pre-submission enquiry

- Not a formal submission, just an email to the editors
- ...so you can approach several
- Please don't send the manuscript

What should go in it?

- Can just be an enquiry about scope
- Can be more detailed - approach, key findings, significance of the work

What kind of response will you get?

- A definite no – based on scope
- Discouraged from submitting – based on advance and/or breadth of appeal
- Equivocal response – need to see the full manuscript
- Provisional yes – the journal will probably send the manuscript for peer review

# Choosing the right journal

## - tips

EndNote™ My References Collect Organize Format **Match** Options Downloads

Quick Search  
 Search for  
 in All My References  
 Search

My References  
 All My References (138)  
 [Unfiled] (98)  
 Quick List (0)  
 Trash (14) Empty  
 My Groups  
 PDF (0)  
 投资者行为 (20)  
 碳氢活化 (20)  
 Build a profile to showcase your own work.  
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All My References  
 Show 10 per page Page 1 of 14 Go

Author	Year	Title
		<untitled> Added to Library: 14 Dec 2016 Last Updated: 05 Jun 2017
		<untitled> Added to Library: 21 Mar 2017 Last Updated: 21 Mar 2017
	2012	高选择性的1,3-二取代芳烃的-锅法碳氢活化三氟甲基化反应 有机化学 Added to Library: 29 Nov 2016 Last Updated: 29 Nov 2016
Agaba, M.	2016	Giraffe genome sequence reveals clues to its unique morphology and physiology Nature Communications Added to Library: 16 Nov 2016 Last Updated: 16 Nov 2016 View in Web of Science™ Source Record, Related Records, Times Cited: 4
Alberico, D.	2007	Aryl-aryl bond formation by transition-metal-catalyzed direct arylation Chemical Reviews Added to Library: 29 Nov 2016 Last Updated: 29 Nov 2016 View in Web of Science™ Source Record, Related Records, Times Cited: 2568

# Choosing the right journal

## - tips

EndNote™ My References Collect Organize Format Match Options Downloads

### Find the Best Fit Journals for your Manuscript Powered By Web of Science™

**Enter your Manuscript Details:**

**\*Title:**

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# Whitesides' Group: Writing a Paper\*\*

By *George M. Whitesides\**

## 1. What is a Scientific Paper?

A paper is an organized description of hypotheses, data and conclusions, intended to instruct the reader. Papers are a central part of research. If your research does not generate papers, it might just as well not have been done. “Interesting and unpublished” is equivalent to “non-existent”.

Realize that your objective in research is to formulate and test hypotheses, to draw conclusions from these tests, and to teach these conclusions to others. Your objective is not to “collect data”.

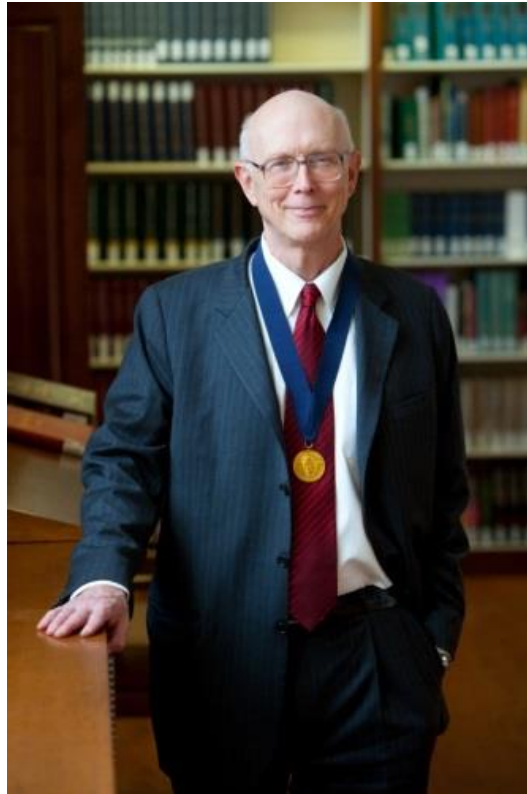
A paper is not just an archival device for storing a completed research program; it is also a structure for *planning* your research in progress. If you clearly understand the purpose and form of a paper, it can be immensely useful to you in *organizing* and conducting your research. A good outline for the paper is also a good plan for the research program. You should write and rewrite these plans/outlines throughout the course of the research. At the beginning, you will have mostly plan; at the end, mostly outline. The continuous effort to understand, analyze, summarize, and reformulate hypotheses on paper will be immensely more efficient for you than a process

do *not* agree on the outline, any text is useless. Much of the *time* in writing a paper goes into the text; most of the *thought* goes into the organization of the data and into the analysis. It can be relatively efficient in time to go through several (even many) cycles of an outline before beginning to write text; writing many versions of the full text of a paper is slow.

All writing that I do—papers, reports, proposals (and, of course, slides for seminars)—I do from outlines. I urge you to learn how to use them as well.

## 2.2. How Should You Construct an Outline?

The classical approach is to start with a blank piece of paper, and write down, in any order, all important ideas that occur to you concerning the paper. Ask yourself the obvious questions: “Why did I do this work?”; “What does it mean?”; “What hypotheses did I mean to test?”; “What ones did I actually test?”; “What were the results? Did the work yield a new method of compound? What?”; “What measurements did I make?”; “What compounds? How were they characterized?”. Sketch possible equations, figures, and schemes. It is



Total Publications

**1,395**

Loading visualization data. . .

-19

-1

*h*-index

**204**

Average citations per item

**129.76**

Sum of Times Cited

**181,012**

Without self citations

**172,912**

Citing articles

**99,655**

Without self citations

**98,536**



