

# How to Write a World-class Paper

From title to references

From submission to acceptance

**November 2010**

Ingrid van de Stadt  
Regional Customer Development Manager  
Elsevier



# Agenda

- **Why do we publish?**
- **What is important?**
  - Citations/Impact Factor etc.
- **Role of Editors and Reviewers**
- **Step-by-step publishing guide:**
  - Preparation/Language tips/Build-up of article etc.
- **Copyright/Ethics**
- **Questions**

# Why Scientific Publishing ?

Registration



Certification



Dissemination



Preservation



The timestamp to officially note who submitted scientific results first



Perform peer-review to ensure the validity and integrity of submissions



Provide a medium for discoveries and findings to be shared

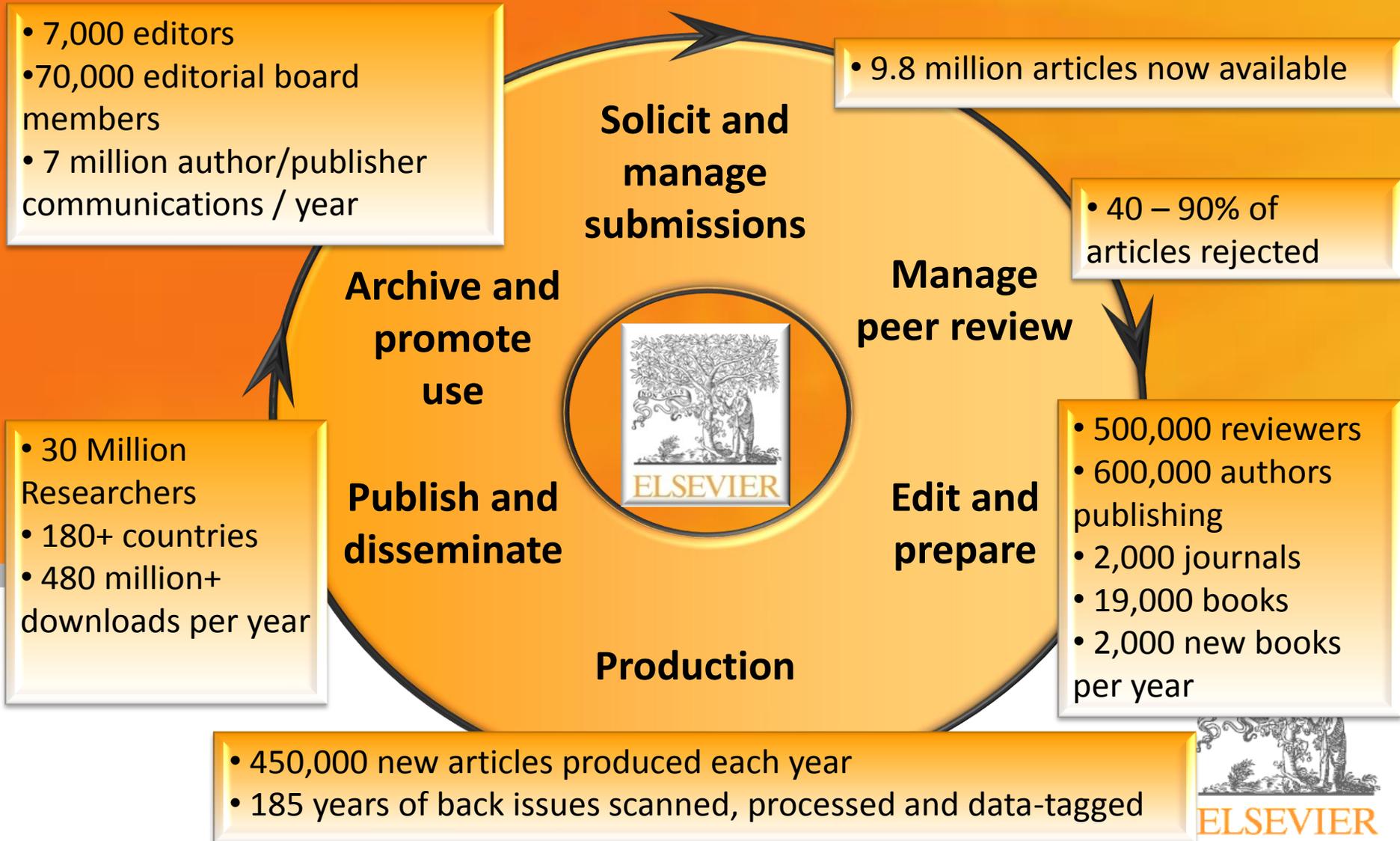


Preserving the minutes and record of science for posterity



ELSEVIER

# Elsevier and Publishing



# Publishing speed

For authors looking to publish their research, the time an article takes to go through the publishing process is one of the most important considerations in selecting a journal

<b>Submission to Acceptance (weeks)</b>	<b>Submission to first online (weeks)</b>	<b>Submission to Print (weeks)</b>
<b>22.6</b>	<b>31.4</b>	<b>47.3</b>

Many journals have now introduced a „Fast Rejection“ process by the journal Editor

# Impact Factor: Established Journal Measure

## Impact Factor

*[the average annual number of citations per article published]*

- For example, the 2003 impact factor for a journal would be calculated as follows:
  - $A$  = the number of times articles published in 2001 and 2002 were cited in indexed journals during 2003
  - $B$  = the number of "citable items" (usually articles, reviews, proceedings or notes; not editorials and letters-to-the-Editor) published in 2001 and 2002
  - 2003 impact factor =  $A/B$
  - e.g.  $\frac{600 \text{ citations}}{150 + 150 \text{ articles}} = 2$

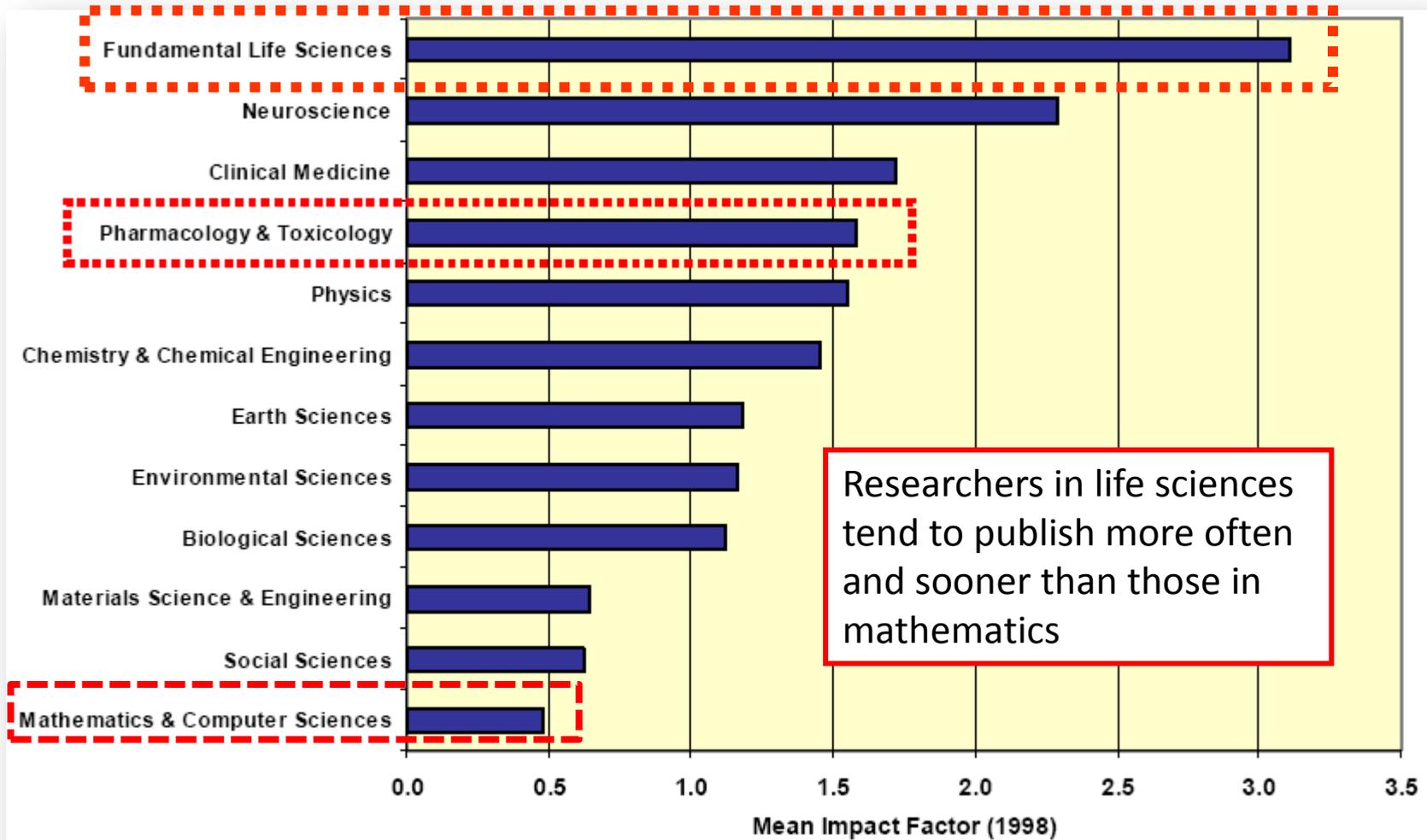
# Even prestigious journals publishes many non cited articles

*Not all articles in high impact journals (e.g. about 20% in Nature, Impact Factor= 32.2) are cited!*

	Document (sort by relevance)	Author(s)	Date	Source Title	Cited By
1.	<input type="checkbox"/> <b>Threaded for degradation</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Eggleston, A.K.</a>	2005	<i>Nature Structural and Molecular Biology</i> 12 (12), pp. 1029	0
2.	<input type="checkbox"/> <b>What is science?</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	[No author name available]	2005	<i>Nature Structural and Molecular Biology</i> 12 (12), pp. 1021	0
3.	<input type="checkbox"/> <b>A poor assessment</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <a href="#">Show Abstract</a>	[No author name available]	2005	<i>Nature</i> 438 (7071), pp. 1051-1052	0
4.	<input type="checkbox"/> <b>For quiet students, finding a voice is the first step towards taking a stand [1]</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Cheung, P.</a>	2005	<i>Nature</i> 438 (7071), pp. 1078	0
5.	<input type="checkbox"/> <b>The grapes of rock</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <a href="#">Show Abstract</a>	<a href="#">Witze, A.</a>	2005	<i>Nature</i> 438 (7071), pp. 1073-1074	0
6.	<input type="checkbox"/> <b>AIDS at Christmas time</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <a href="#">Show Abstract</a>	[No author name available]	2005	<i>Nature</i> 438 (7071), pp. 1051	0
7.	<input type="checkbox"/> <b>Network aims to make maths count in Africa [4]</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Ball, J.</a>	2005	<i>Nature</i> 438 (7071), pp. 1078	0
8.	<input type="checkbox"/> <b>Dogged by doubts.</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Cyranoski, D.</a>	2005	<i>Nature</i> . 438 (7071), pp. 1059	0
9.	<input type="checkbox"/> <b>First glimpse...</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Marris, E.</a>	2005	<i>Nature</i> . 438 (7071), pp. 1064-1067	0
10.	<input type="checkbox"/> <b>The heat was on in 2005</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Henson, R.</a>	2005	<i>Nature</i> 438 (7071), pp. 1062	0
11.	<input type="checkbox"/> <b>India makes waves over tsunami warning system</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Jayaraman, K.S.</a>	2005	<i>Nature</i> 438 (7071), pp. 1060+1061	0
12.	<input type="checkbox"/> <b>Diet book attacked for its high-protein advice</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a>	<a href="#">Dennis, C.</a>	2005	<i>Nature</i> 438 (7071), pp. 1060+1061	0



# Different measures may better suit different fields



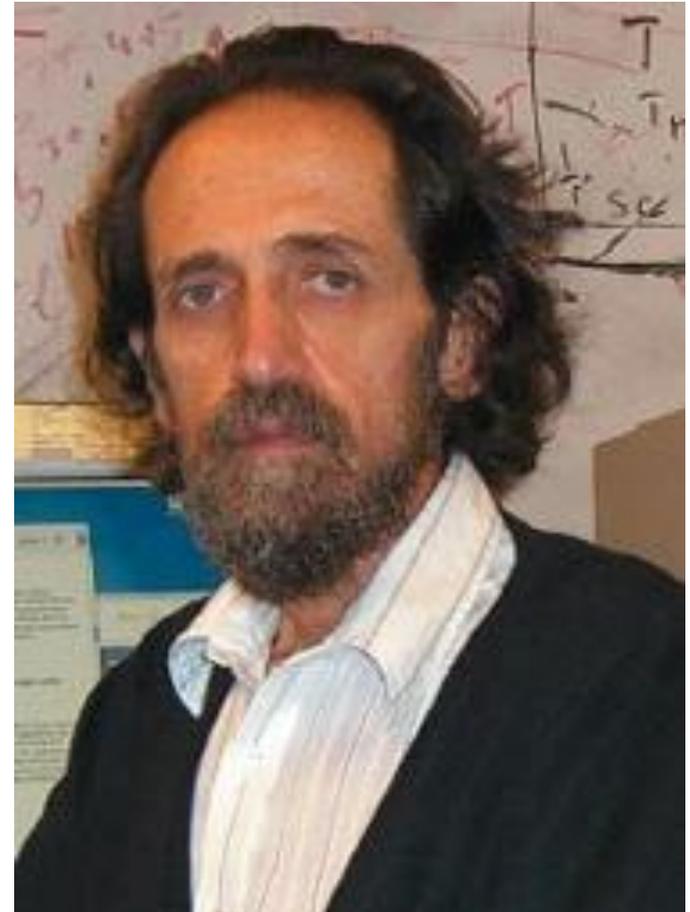
# SJR and SNIP new journal “metrics”

- SCImago Journal Rank (SJR) , is a measure of the scientific prestige of scholarly sources: value of weighted citations per document. A source transfers its own 'prestige', or status, to another source through the act of citing it.
- *A citation from a source with a relatively high SJR is worth more than a citation from a source with a lower SJR.*
- Source Normalized Impact per Paper (SNIP) measures contextual citation impact by weighting citations based on the total number of citations in a subject field.
- *The impact of a single citation is given higher value in subject areas where citations are less likely, and vice versa.*



# Determine the level of your achievements: *h index*

It is important to remember that current metrics such as the *impact factor* and immediacy index are **based on journal evaluation**, whereas the *h-index* **accounts for a researcher's body of work** without the influence of other factors



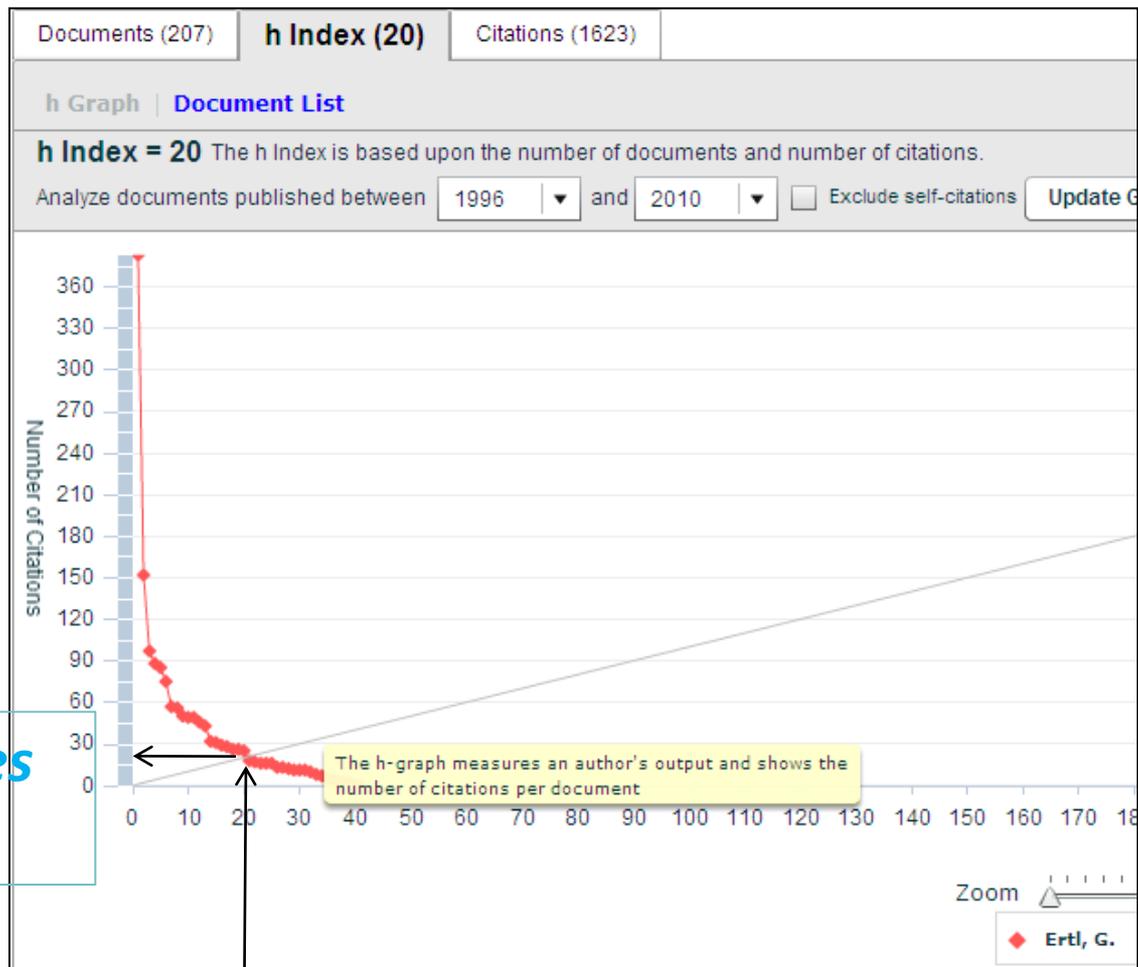
Dr. Jorge E. Hirsch, University of San Diego



# H-index

A scholar with an index of  $h$  has published  $h$  papers each of which has been cited by others at least  $h$  times

*cited 20 times or more*



*20 papers*

# Quick Guide to Metrics

Year 1	Year 5	Year 10
Researcher <b>has not published</b> yet	Researcher <b>has published</b> peer-reviewed work	Researcher has <b>achieved research independence</b>
<b>Examination results and peer-review comments</b>	With small number of publications, metrics based on averages (h-index) may not reflect researchers performance. Look at <b>reading activity, journal ranking (Impact Factor, SJR or SNIP) or collaboration</b>	Sufficient track record to make <b>h-index</b> meaningful. Also use <b>document and citation counts, benchmarking and cited/uncited documents ratio</b>

# Review your research area: “pearl growing”

- **Ancestry Approach:** acquiring a research paper and examining its references „backward searching“
- **Descendency Approach:** identify a paper’s offspring: those recent publications that reference the earlier work „forward searching“

The screenshot shows the Scopus interface for a specific article. At the top, the Scopus logo is visible along with navigation buttons for Search, Sources, Analytics, My Alerts, My List, and My Profile. A search bar and a 'Go' button are present. The article title is 'Multilineage potential of adult human mesenchymal stem cells'. Below the title, there are buttons for 'View at Publisher', 'Full Text', and 'Anet'. A 'LIBRARY OF CONGRESS' logo is also visible. The article's DOI is 10.1126/science.284.5411.143. A red circle highlights the 'View references (44)' link. To the right, a 'Cited By since 1996' box shows that the article has been cited 3642 times in Scopus, with a list of citing authors including Flores-Figueroa, E., Montesinos, J.J., and Flores-Guzmán, P. The title of the citing article is 'Functional analysis of myelodysplastic syndromes-derived mesenchymal stem cells (2008) Leukemia Research'. A red circle also highlights this 'Cited By' box. At the bottom, there are footnotes for Osiris Therapeutics and Johns Hopkins University.

**SCOPUS**

Search Sources Analytics My Alerts My List My Profile

Quick Search  Go

Brought to you by The Scopus Team Ask a Librarian

Search History Results list 1 of 175,096 Next

Science

Volume 284, Issue 5411, 2 April 1999, Pages 143-147

DOI: 10.1126/science.284.5411.143  
Document Type: Article

Output Bookmark Add to list Download

View references (44)

Basic Format Extended Format

View at Publisher Full Text Anet LIBRARY OF CONGRESS

Full Text (opens in new window)

**Multilineage potential of adult human mesenchymal stem cells**

Pittenger, M.F.<sup>a</sup>, Mackay, A.M.<sup>a</sup>, Beck, S.C.<sup>a</sup>, Jaiswal, R.K.<sup>a</sup>, Douglas, R.<sup>a</sup>, Mosca, J.D.<sup>a</sup>, Moorman, M.A.<sup>a</sup>, Simonetti, D.W.<sup>a</sup>, Craig, S.<sup>a</sup>, Marshak, D.R.<sup>a, b</sup>

<sup>a</sup> Osiris Therapeutics, 2001 Aliceanna Street, Baltimore, MD 21231-3043, United States  
<sup>b</sup> School of Medicine, Johns Hopkins University, Baltimore, MD 21205, United States

**Cited By since 1996**

This article has been cited **3642 times** in Scopus:  
(Showing the 2 most recent)

Flores-Figueroa, E., Montesinos, J.J., Flores-Guzmán, P.  
**Functional analysis of myelodysplastic syndromes-derived mesenchymal stem cells (2008) Leukemia Research**

Abstract + Refs



# Review the development of your research area

**SCOPUS**  
 Search Sources Analytics My Alerts My List My Profile

Quick Search:

Scopus: 18,465 | More... (1,936) | Web (214,265) | Patents (620,672) | SelectedSources (1,234) | Search your library

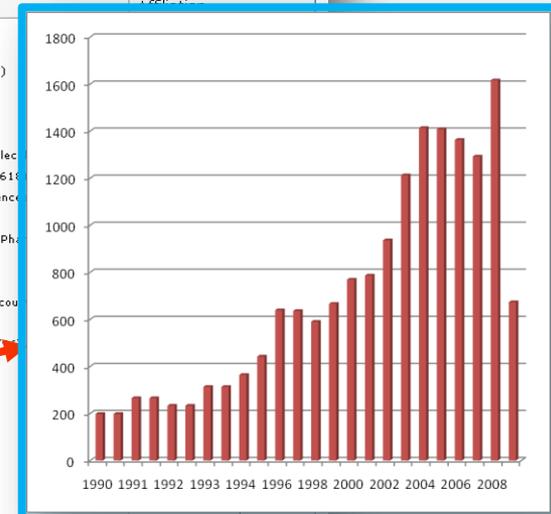
Your query: TITLE-ABS-KEY-AUTH(organic coating) | Edit Save Save as Alert RSS | Search History

Refine Results

Source Title	Author Name	Year	Document Type	Subject Area
<input type="checkbox"/> Progress in Organic Coatings (758)	<input type="checkbox"/> Anon, (134)	<input type="checkbox"/> 2009 (673)	<input type="checkbox"/> Article (12,437)	<input type="checkbox"/> Materials Science (9,116)
<input type="checkbox"/> Proceedings of SPIE the International Society for Optical Engineering (632)	<input type="checkbox"/> Deflorian, F. (56)	<input type="checkbox"/> 2008 (1,616)	<input type="checkbox"/> Conference Paper (3,629)	<input type="checkbox"/> Engineering (6,010)
<input type="checkbox"/> Thin Solid Films (295)	<input type="checkbox"/> Bierwagen, G.P. (47)	<input type="checkbox"/> 2007 (1,292)	<input type="checkbox"/> Review (702)	<input type="checkbox"/> Physics and Astronomy (3,921)
<input type="checkbox"/> Surface and Coatings Technology (266)	<input type="checkbox"/> Fedrizzi, L. (45)	<input type="checkbox"/> 2006 (1,363)	<input type="checkbox"/> Conference Review (151)	<input type="checkbox"/> Chemistry (3,760)
<input type="checkbox"/> Journal of Applied Polymer Science (246)	<input type="checkbox"/> Leidheiser, H. (43)	<input type="checkbox"/> 2005 (1,408)	<input type="checkbox"/> Article in Press (108)	<input type="checkbox"/> Chemical Engineering (3,401)
<input type="checkbox"/> Materials Research Society Symposium Proceedings (242)	<input type="checkbox"/> Joseph, R. (42)	<input type="checkbox"/> 2004 (1,413)	<input type="checkbox"/> Note (94)	<input type="checkbox"/> Environmental Science (886)
<input type="checkbox"/> Journal of Coatings Technology (240)	<input type="checkbox"/> Soucek, M.D. (39)	<input type="checkbox"/> 2003 (1,212)	<input type="checkbox"/> Short Survey (88)	<input type="checkbox"/> Biochemistry, Genetics and Molecular Biology (6,010)
<input type="checkbox"/> Synthetic Metals (188)	<input type="checkbox"/> Rossi, S. (37)	<input type="checkbox"/> 2002 (936)	<input type="checkbox"/> Report (21)	<input type="checkbox"/> Earth and Planetary Sciences (610)
<input type="checkbox"/> Langmuir (175)	<input type="checkbox"/> Bonora, P.L. (33)	<input type="checkbox"/> 2001 (786)	<input type="checkbox"/> Press Release (17)	<input type="checkbox"/> Agricultural and Biological Sciences (3,288)
<input type="checkbox"/> Journal of Chromatography A (170)	<input type="checkbox"/> Pawlisyzn, J. (26)	<input type="checkbox"/> 2000 (769)	<input type="checkbox"/> Book (14)	<input type="checkbox"/> Energy (328)
<input type="checkbox"/> Journal of Sol Gel Science and Technology (155)	<input type="checkbox"/> Pilati, F. (25)	<input type="checkbox"/> 1999 (666)	<input type="checkbox"/> Letter (12)	<input type="checkbox"/> Pharmacology, Toxicology and Pharmaceutical Science (199)
<input type="checkbox"/> Metal Finishing (152)	<input type="checkbox"/> Cingolani, R. (24)	<input type="checkbox"/> 1998 (590)	<input type="checkbox"/> Editorial (11)	<input type="checkbox"/> Medicine (199)
<input type="checkbox"/> Electrochimica Acta (147)	<input type="checkbox"/> Worsley, D.A. (23)	<input type="checkbox"/> 1997 (636)	<input type="checkbox"/> Business Article (4)	<input type="checkbox"/> Computer Science (186)
<input type="checkbox"/> Applied Physics Letters (147)	<input type="checkbox"/> Sanchez, C. (22)	<input type="checkbox"/> 1996 (639)	<input type="checkbox"/> Erratum (4)	<input type="checkbox"/> Business, Management and Accounting (199)
<input type="checkbox"/> Sensors and Actuators B Chemical (136)	<input type="checkbox"/> McMurray, H.N. (21)	<input type="checkbox"/> 1995 (442)	<input type="checkbox"/> Abstract Report (1)	<input type="checkbox"/> Mathematics (98)
<input type="checkbox"/> Corrosion Science (136)	<input type="checkbox"/> Kalendova, A. (21)	<input type="checkbox"/> 1994 (364)	<input type="checkbox"/> Patent (1)	<input type="checkbox"/> Immunology and Microbiology (199)
<input type="checkbox"/> Analytical Chemistry (130)	<input type="checkbox"/> Marks, T.J. (20)	<input type="checkbox"/> 1993 (313)	<input type="checkbox"/> Undefined (1,171)	<input type="checkbox"/> Social Sciences (200)
<input type="checkbox"/> Journal of Protective Coatings and Linings (126)	<input type="checkbox"/> Funke, W. (20)	<input type="checkbox"/> 1992 (233)	<a href="#">Less...</a>	<input type="checkbox"/> Interdisciplinary (68)
<input type="checkbox"/> European Coatings Journal (125)	<input type="checkbox"/> Rie, K.T. (20)	<input type="checkbox"/> 1991 (265)		<input type="checkbox"/> Dentistry (27)
<input type="checkbox"/> Journal of Materials Science (119)	<input type="checkbox"/> De Witth, G. (20)	<input type="checkbox"/> 1990 (198)		<input type="checkbox"/> Arts and Humanities (21)

Sort on: # of results

[Add categories](#) | [Restore original settings](#) | [Save settings](#)



**Check the phase in the life-cycle of your research topic.**

**N.B. Decline may be caused by backlog in publication**

Results: 18,465

Select:  All  P

Document (sort by relevance)	Author(s)
1. <input type="checkbox"/> Phospholipid monolayer coated microfabricated electrodes to model the interaction of molecules with biomembranes <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <input type="button" value="Show Abstract"/>	Coldrick, Z., Steer, M., Davies, M., Nelson, G.
2. <input type="checkbox"/> In situ electrochemical Scanning Kelvin Probe Blister-Test studies of the de-adhesion kinetics at polymer/zinc oxide/zinc interfaces <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <input type="button" value="Show Abstract"/>	Posner, R., Giza, G., Grundmeier, G.
3. <input type="checkbox"/> Binuclear aluminum complex as an efficient orange emitter in single-layer electroluminescent devices <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a> <a href="#">Full Text</a> <input type="button" value="Show Abstract"/>	Liu, X., Xia, H., Ma, J.

# Find out what topics are "Hot"



www.sciencedirect.com

Click here to participate in our Top 25 survey

## select your interest

Biochemistry, Genetics and Molecular Biology

[all journals]

### browse top 25 archive

Current: April to June 2010

### show my alerts

## sign up now!

 for the e-mail alert

e-mail address

Tell other people about this service

[Contact Top 25 Team](#) [About the Top 25](#) [Sitemap](#)

## Top 25 Hottest Articles

Biochemistry, Genetics and Molecular Biology

<http://top25.sciencedirect.com>

SCOPUS™  
TopCited

### About Scopus TopCited

Get a quick overview of your subject-specific top 20 cited articles in the past 3, 4 or 5 years of publication. Also find them displayed on Google maps taking the first author's affiliation as the point of reference. [...more](#)

- ▶ [Share TopCited with a friend](#)
- ▶ [Get a free 30-Day Scopus trial](#)
- ▶ [Go to Scopus API](#)
- ▶ [Contact us](#)

### Subject area

Biochemistry, Genetics and Molecular Biology

### Publication period

Last 5 years (2006 - 2010)

### Preview area

[expand map](#)



### TOP 20 cited articles in Biochemistry, Genetics and Molecular Biology (2006 - 2010)

#### 1. [A short history of SHELX](#)

Sheldrick, G.M. (2007), *Acta Crystallographica Section A: Foundations of Crystallography*, Volume 64, Issue 1, Pages 112-122

Cited by: **8,187**

#### 2. [MEGA4: Molecular Evolutionary Genetics Analysis \(MEGA\) software version 4.0](#)

Tamura, K. (2007), *Molecular Biology and Evolution*, Volume 24, Issue 8, Pages 1596-1599

Cited by: **2,283**

#### 3. [Pathogen recognition and innate immunity](#)

Akira, S. (2006), *Cell*, Volume 124, Issue 4, Pages 783-801

Cited by: **1,411**

#### 4. [Induction of Pluripotent Stem Cells from Mouse Embryonic and Adult Fibroblast Cultures by Defined Factors](#)

Takahashi, K. (2006), *Cell*, Volume 126, Issue 4, Pages 663-676

Cited by: **1,343**

#### 5. [Structure validation in chemical crystallography](#)

Spek, A.L. (2009), *Acta Crystallographica Section D: Biological Crystallography*, Volume 65, Issue 2, Pages 148-155

Cited by: **1,295**

#### 6. [Induction of Pluripotent Stem Cells from Adult Human Fibroblasts by Defined Factors](#)

Takahashi, K. (2007), *Cell*, Volume 131, Issue 5, Pages 861-872

<http://info.sciverse.com/topcited>

# Why publish?

**Publishing** is one of the necessary steps **embedded in the scientific research process.**

## **We should publish:**

- To present **new and original results or methods**
- To rationalize (**refine or reinterpret**) **published results**
- To **review the field** or to summarize a particular subject

## **We should not publish:**

- Reports of no scientific interest
- Work out of date
- **Duplications** of previously published work
- Incorrect/not acceptable conclusions

**You need a GOOD manuscript to present your contributions to the scientific community**



# Your paper is worthless if no one reads, uses, or cites it



A research study is meaningful **only if...**

- it is clearly described, so
- someone else can use it in his/her studies
- it arouses other scientists' interest and
- allows others to reproduce the results.

By submitting a manuscript you are basically trying to sell your work to your community...

# What makes a good manuscript?

- Contains a **scientific message** that is **clear, useful, and exciting**.
- Conveys the authors' thoughts **in a logical manner such that the reader arrives at the same conclusions** as the author.
- Is constructed in the format that best **showcases the authors' material**, and written in a style that **transmits the message clearly**.



**Content is essential!**

# What makes a good manuscript?

A good manuscript **makes** readers (especially reviewers and editors) **grasp the scientific significance as EASILY as possible.**

- **Writing a good manuscript is NOT easy.** Be prepared to work hard on it.
  - **Cherish your own work** – if you do not take care, why should the journal?
  - There is **no secret recipe for success** – just some simple rules, dedication and hard work.
  - **Editors and reviewers** are all busy scientists, just like you – make things easy to **save their time!**



**Presentation is critical!**

# Decide on the type of the manuscript

- **Full articles** / Original articles: the most important papers. Often substantial **completed pieces of research** that are of significance.
- **Letters** / Rapid Communications/ Short communications: **quick and early communication of significant and original advances**. Much shorter than full articles (usually strictly limited).
- **Review papers** / perspectives: summarizing recent developments on a specific topic. Highlighting important points that have previously been reported and introduce no new information. **Often submitted on invitation**.



**Self-evaluate your work.** Is it sufficient for a full article? Or are your results so thrilling that they should be shown as soon as possible?

**Ask your supervisor and your colleagues** for advice on manuscript type. Sometimes outsiders can see things more clearly than you.



# Identify the right audience for your paper



- **Identify the sector of readership/community for which a paper is meant**
- **Identify the interest of your audience**
  - “Knock-down of mdr-1 activity in transiently transfected HEK cells” in *Int’l J. of Pharmaceutics?*
- **Is your paper of local or international interest?**
  - “A bioequivalence study of ibuprofen tablets marketed in Southern Kosovo”

# Choose a target journal

- **Choose one right journal** for your work. DO NOT gamble by scattering your manuscript to many journals. **Only submit once!**
- Articles in **your own references will likely lead you** to the right journal.
- **Read** recent publications (at least go through the abstracts) in **each candidate journal**. Find out the hot topics, the accepted types of articles, etc.
- Ask yourself the following questions:
  - Is the journal **peer-reviewed**?
  - Who is this journal's **audience**?
  - **How long will it take** to see your article in print?
  - **Is this a prestigious journal** (Impact Factor)?

# Choose a target journal

SCOPUS

Search Sources Analytics My Alerts My List My Profile

Quick Search  Go

Scopus: 175,096 More... (17,714) Web (1,305,344) Patents (121,967) SelectedSources (25,118)

Your query: TITLE-ABS-KEY(stem cells) Edit Save Save as Alert RSS

Refine Results  Limit to  Exclude

Source Title	Author Name	Year	Document Type	Sub
<input type="checkbox"/> Blood (8,298)	<input type="checkbox"/> Broxmeyer, H.E. (313)	<input type="checkbox"/> 2008 (6,729)	<input type="checkbox"/> Article (127,132)	<input type="checkbox"/> P
<input type="checkbox"/> Bone Marrow Transplantation (4,405)	<input type="checkbox"/> Storb, R. (287)	<input type="checkbox"/> 2007 (16,465)	<input type="checkbox"/> Review (24,423)	<input type="checkbox"/> E
<input type="checkbox"/> Experimental Hematology (3,503)	<input type="checkbox"/> Weissman, I.L. (237)	<input type="checkbox"/> 2006 (15,596)	<input type="checkbox"/> Conference Paper (8,500)	<input type="checkbox"/> P
<input checked="" type="checkbox"/> Proceedings of the National Academy of Sciences of the United States of America (2,327)	<input type="checkbox"/> Dexter, T.M. (222)	<input type="checkbox"/> 2005 (14,402)	<input type="checkbox"/> Letter (3,492)	<input type="checkbox"/> I
<input type="checkbox"/> British Journal of Haematology (2,163)	<input type="checkbox"/> Gaves, C.J. (211)	<input type="checkbox"/> 2004 (12,591)	<input type="checkbox"/> Editorial (2,699)	<input type="checkbox"/> A
<input type="checkbox"/> Journal of Immunology (1,841)	<input type="checkbox"/> Goldman, J.M. (199)	<input type="checkbox"/> 2003 (11,074)	<input type="checkbox"/> Short Survey (2,647)	<input type="checkbox"/> F
<input type="checkbox"/> Stem Cells (1,740)	<input type="checkbox"/> Locatelli, F. (182)	<input type="checkbox"/> 2002 (10,018)	<input type="checkbox"/> Note (2,562)	<input type="checkbox"/> P
<input type="checkbox"/> Leukemia (1,715)	<input type="checkbox"/> Appelbaum, F.R. (179)	<input type="checkbox"/> 2001 (10,007)	<input type="checkbox"/> Article in Press (461)	<input type="checkbox"/> E
<input type="checkbox"/> Journal of Biological Chemistry (1,466)	<input type="checkbox"/> Takaeue, Y. (177)	<input type="checkbox"/> 2000 (7,840)	<input type="checkbox"/> Erratum (350)	<input type="checkbox"/> F
<input type="checkbox"/> Brain Research (1,448)	<input type="checkbox"/> Quesenberry, P.J. (174)	<input type="checkbox"/> 1999 (6,662)	<input type="checkbox"/> Conference Review (10)	<input type="checkbox"/> C
<input type="checkbox"/> Development (1,446)	<input type="checkbox"/> Nagler, A. (173)	<input type="checkbox"/> 1998 (6,363)	<input type="checkbox"/> Dissertation (7)	<input type="checkbox"/> C
<input type="checkbox"/> Nature (1,328)	<input type="checkbox"/> Verfaillie, C.M. (173)	<input type="checkbox"/> 1997 (6,130)	<input type="checkbox"/> Book (3)	<input type="checkbox"/> P
<input type="checkbox"/> Cancer Research (1,299)	<input type="checkbox"/> Gratwohl, A. (171)	<input type="checkbox"/> 1996 (5,768)	<input type="checkbox"/> Business Article (2)	<input type="checkbox"/> E
<input type="checkbox"/> Leukemia and Lymphoma (1,251)	<input type="checkbox"/> Zander, A.R. (165)	<input type="checkbox"/> 1995 (4,617)	<input type="checkbox"/> Press Release (2)	<input type="checkbox"/> P
<input type="checkbox"/> Journal of Comparative Neurology (1,210)	<input type="checkbox"/> Vainchenker, W. (162)	<input type="checkbox"/> 1994 (4,021)	<input type="checkbox"/> Report (2)	<input type="checkbox"/> P
<input type="checkbox"/> Haematologica (1,201)	<input type="checkbox"/> Metcalf, D. (160)	<input type="checkbox"/> 1993 (3,746)	<input type="checkbox"/> Less...	<input type="checkbox"/> S
<input type="checkbox"/> Developmental Biology (1,033)	<input type="checkbox"/> Gluckman, E. (159)	<input type="checkbox"/> 1992 (3,212)		<input type="checkbox"/> V

- Use your own references
- Check databases to find in what journals most articles on your topic were published

# Find out more about your target journal

ScienceDirect

Home + Recent Actions | Browse | Search | My Settings

Quick Search: title, abstract, keywords

search tips | Journal/book title

Neuroscience  
Volume 119, Issue 4 | 16 July 2003, Pages 933-943

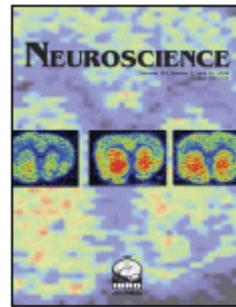
Article | Figures/Tables | References | PDF (781 K)

doi:10.1016/S0306-4522(03)00288-4 | Cite or Link Using DOI  
Copyright © 2003 IBRO. Published by Elsevier Science Ltd.

Commentary

**Comparative modeling of GABA<sub>A</sub> receptor developments**

M. Ernst<sup>a</sup>, D. Brauchart<sup>a</sup>, S. Boriesch<sup>b</sup> and W. Sieghart<sup>a</sup>



## Neuroscience

Copyright © 2008 International Brain Research Org

Shortcut URL to this page: <http://www.sciencedirect.com/journal/S03064522>

[Sample Issue Online](#) | [About this Journal](#) |

peer reviewing

audience

Impact Factor

ELSEVIER

- Products
- Neuroscience
- Journal information
- Product description
- Editorial board
- Audience
- Abstracting/indexing
- Special issues and supplements
- Subscription information
- Bibliographic and ordering information
- Journal-related information
- Contact the publisher
- Impact factor
- Most downloaded articles
- Other journals in same subject area
- Related publications

Home | Site map | Elsevier web

## NEUROSCIENCE

An International Journal under

**Chief Editor:**  
O. P. Ottersen  
See [editorial board](#) for all editors

### Description

Neuroscience publishes papers representing the latest aspect of the scientific study of the brain and is considered for publication by authors of confirmed findings with full experimental support.

**Bibliographic & ordering information**  
ISSN: 0306-4522  
Imprint: PERGAMON  
Commenced publication 1976

Subscriptions for the year 2008

Also available as part of the Neuroscience Collection

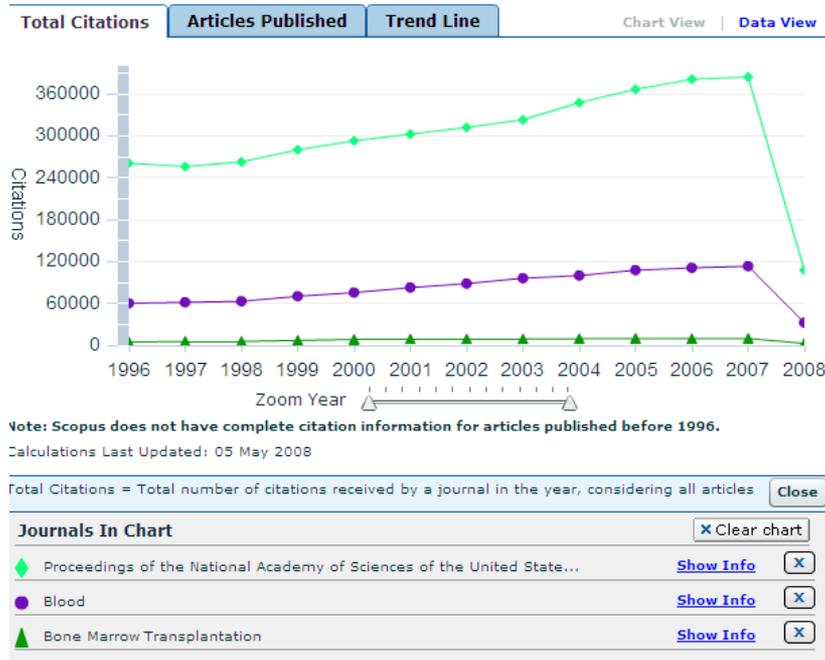
**Institutional online access:**  
For purchase of online access to the full text of articles, visit [www.elsevier.com/locate/locate/locate](#)



ELSEVIER

# Is this a prestigious journal?

Other tools of journal evaluation have become available (e.g. in Scopus)



# One last thing before typing:

Read the 'Guide for Authors' of the target journal! Again and again!

Apply the Guide for Authors to your manuscript, **even to the first draft** (text layout, paper citation, nomenclature, figures and table, etc.). It will save your time, and the editor's.



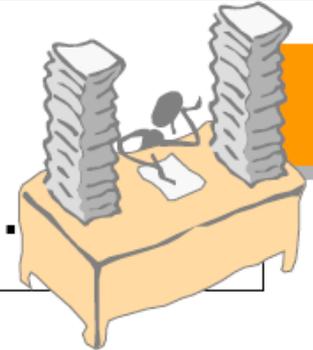
The screenshot shows the Elsevier website's 'Guide to Publication' page. The page is titled 'ELSEVIER'S GUIDE TO PUBLICATION' and is part of the 'For Authors' section. The left sidebar contains a navigation menu with items like 'Journal authors' home', 'Why publish with Elsevier', 'Resource center', 'Guide to publishing with Elsevier', 'Funding body agreements/policies', 'Authors' rights', 'Track your accepted article', 'FAQ', 'Book authors' home', 'Permissions', 'Products', 'Support & contact', 'About Elsevier', and 'Resources for'. The main content area includes an 'Introduction' section with text about Elsevier's global community and peer-reviewed journals. It also features a 'Steps to submitting your paper for publication:' section with a numbered list of 9 steps, including downloading the 'Guide for Authors', formatting documents, preparing graphics, drafting cover letters, editing manuscripts, re-checking instructions, reviewing submission checklists, and submitting manuscripts. There are also links to download PDFs of submission steps and a submission checklist.

<http://www.elsevier.com/wps/find/authorsview.authors/howtosubmitpaper>

# Editors and Reviewers

More submissions

→ **STRESS** for editors and reviewers..



Editors and reviewers are the **most precious resource** of a journal!

- Editors and reviewers are practicing scientists, even leaders in their fields. They are **not professional** journal staff – they do journal work **on top of** their own research, writing and teaching.
- They are busy people who work for journals **to contribute to science.**
- Editors may receive a small payment, but reviewers are **UNPAID.**
- Every manuscript takes up their precious time!  
Nowadays they are working **even harder!**

# An international editor says...

“The following problems appear **much too frequently**”

- Submission of papers which are clearly out of scope
- Failure to format the paper according to the Guide for Authors
- Inappropriate (or no) suggested reviewers
- Inadequate response to reviewers
- Inadequate standard of English
- Resubmission of rejected manuscripts without revision

– Paul Haddad, Editor, *Journal of Chromatography A*



# The general structure of a full article

- Title
- Authors
- Abstract
- Keywords

Make them easy for indexing and searching!  
(informative, attractive, effective)

- Main text
  - Introduction
  - Methods
  - Results
  - And
  - Discussion (Conclusions)

Journal space is precious. Make your article as brief as possible. If clarity can be achieved in  $n$  words, never use  $n+1$ .

- Acknowledgements
- References
- Supplementary material



# Some special technical aspects of the manuscript

## Length of the manuscript:

- **25- 30 pages is the ideal length for a submitted manuscript, including ESSENTIAL data only.**
  - Title page
  - Abstract 1 paragraph
  - Introduction 1.5-2 pages
  - Methods 2-4 pages
  - Results and Discussion 10-12 pages
  - Conclusions 1-2 pages
  - Figures 6-8
  - Tables 1-3
  - References 20-50 papers
- **Letters or short communications have a stricter limitation of the length. For example, 3000 words with no more than 5 illustrations.**



# The Order of Writing

It helps to write in the following order:

- Figures and tables
- Methods, Results and Discussion
- Conclusions and Introduction
- Abstract and title



# Language – clear for Editors and reviewers

- If the language prevents **editors and reviewers** from **understanding the scientific content** of your work, the possibility of acceptance will be lowered greatly

Complaint from an editor:

“[This] paper fell well below my threshold. **I refuse to spend time trying to understand what the author is trying to say.** Besides, I really want to send a message that they can't submit garbage to us and expect us to fix it. My rule of thumb is that **if there are more than 6 grammatical errors in the abstract, then I don't waste my time** carefully reading the rest. ”

# Language

**Seek** clarity, objectivity, accuracy, brevity

- Make your **writing scientific**.
- Be careful with unfamiliar words or phrase. Do not just rely on electronic dictionaries or translating software, which may bring out ridiculous results. You should **understand the meaning of every single word** you type in the manuscript.
- Pay attention to the **common problems**.
  - **Consistency** of the sentences
  - **Logic** of expression
  - Accuracy of the **grammar**
  - **Spelling mistakes and typos**

# Language – short sentences

## Write direct and **short sentences**.

- Long sentences confuse readers.
- **Short sentences look more professional**
- Nowadays, the **average length** of sentences in scientific writing is about **12-17 words**.
  
- **One idea** or piece of information **per sentence** is sufficient.
  
- Avoid multiple statements in one sentence.
  
- A **bad example**
  - “If it is the case, intravenous administration should result in that emulsion has higher intravenous administration retention concentration, but which is not in accordance with the result, and therefore the more rational interpretation should be that SLN with mean diameter of 46nm is greatly different from emulsion with mean diameter of 65 nm in entering tumor, namely, it is probably difficult for emulsion to enter and exit from tumor blood vessel as freely as SLN, which may be caused by the fact that the tumor blood vessel aperture is smaller.”



# Language – Grammar, spelling, etc.

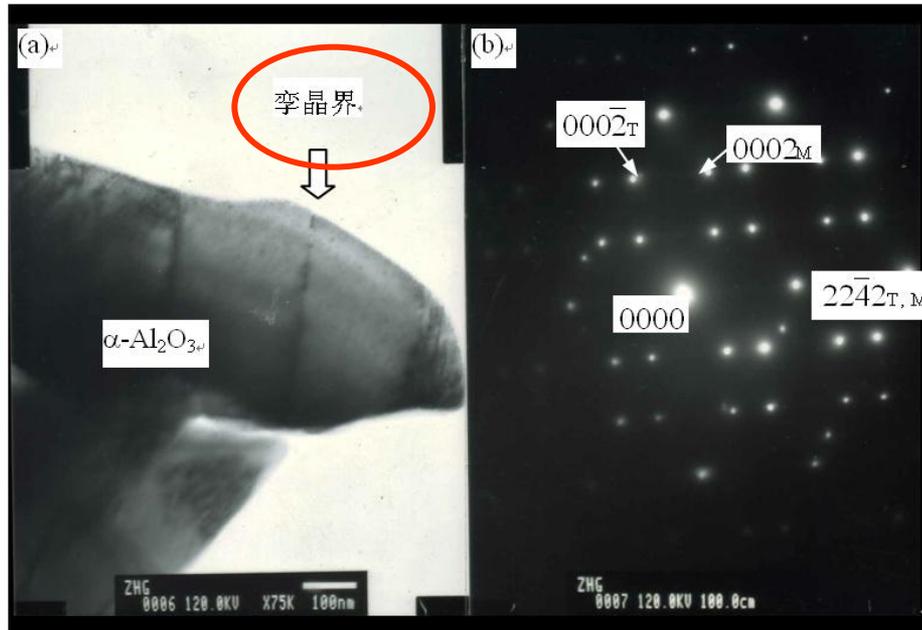
- **Have** an English expert proof reading your manuscript. At least you should make **use of the spelling and grammar checking tool** of your computer.
- **Practice writing English** at any moment you can. Maybe **keep records in English** during the research?

## **Avoid:**

- Inappropriate use of **passive voice** or dummy clauses
  - e.g., “It has been found that there had been many ...” makes sentences complex.
- Bad structure of sentences with **wrongly used conjunctive words** or dangling modifiers.
  - e.g., “because..., so...”, “Although..., but...”, “considering..., it is...”

# Language – also in figures !

- Use English throughout the manuscript...



- Make sure that the right pictures are at the right places and correctly numbered

# The general structure of a full article

- Title
- Authors
- Abstract
- Keywords

Make them easy for indexing and searching!  
(informative, attractive, effective)

- Main text
  - Introduction
  - Methods
  - Results
  - And
  - Discussion (Conclusions)

Journal space is precious. Make your article as brief as possible. If clarity can be achieved in  $n$  words, never use  $n+1$ .

- Acknowledgements
- References
- Supplementary material



# 1. Title – what is the paper broadly about?

- Your opportunity to **attract the reader's attention**.
  - Remember: readers are the potential authors who will cite your article
- Keep it **informative and concise**.
  - 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.
- The title must be accurate for use in indexing systems and databases

# 1. Title – what to avoid?

- **Avoid** technical **jargon** and abbreviations if possible.
  - You wish to have a readership as large as possible, right?
- Delete ***trivial phrases*** e.g. “Notes on ...” or “A study of...”
- Titles that end with a question mark are seldom acceptable.

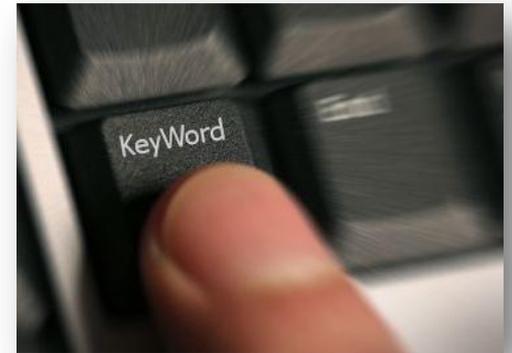
## 2. Abstract – tell the prospective readers what you did and what were the important findings.

- This is the advertisement of your article. Make it interesting, and easy to be understood without reading the whole article.
  - Avoid using jargon and uncommon abbreviations if possible.
- You must be accurate and specific!
  - Use words which reflect the precise meaning
- A clear abstract will strongly influence whether or not your work is further considered.
- Keep it as BRIEF as possible!!!



### 3. Keywords – mainly used for indexing and searching

- It is the label of your manuscript.
  - Avoid words with a broad meaning, but do neither use too narrow terms (get into the Google groove...)
- Only abbreviations firmly established in the field are eligible.
  - e.g. DNA
- Check the Guide for Authors!
  - Number, label, definition, thesaurus, range, and other special requests



## 4. Introduction – to convince readers that you clearly know why your work is useful

- **What is the problem?** Are there any existing solutions? What are their main limitations? And **what do you hope to achieve?**
- Provide a **perspective** consistent with the nature of the journal.
- Never use more words than necessary.
  - Don't make this section into a history lesson.
- 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.
- Introduce the **main scientific publications** on which your work is based.
  - Cite a couple of original and important works, including recent review articles
- Avoid too many references irrelevant to the work, or inappropriate judgments on your own achievements.



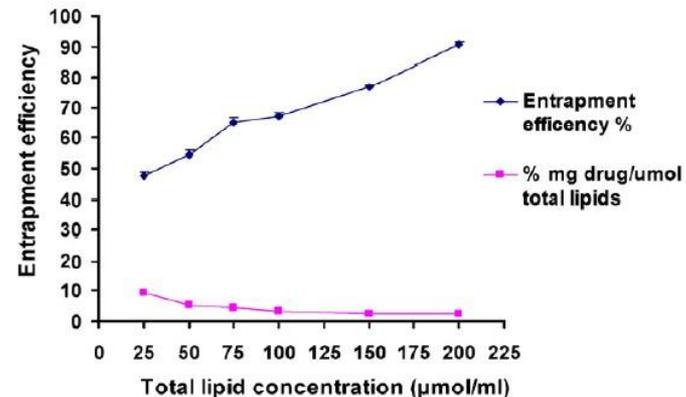
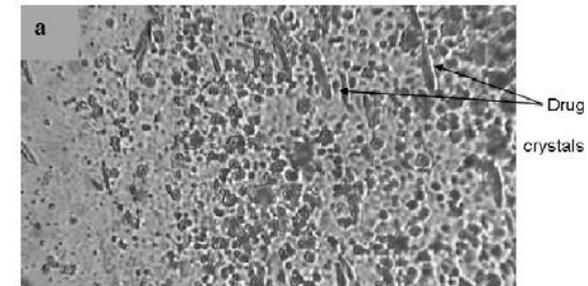
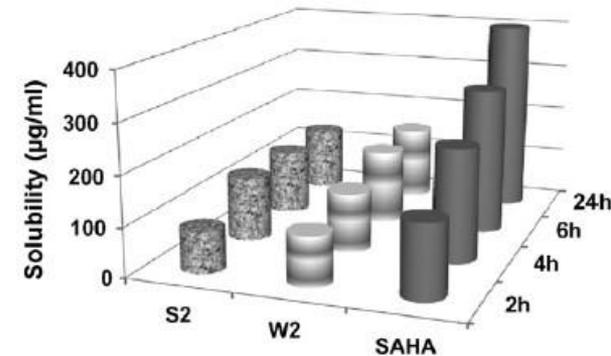
# 5. Methods – how was the problem studied

- Include detailed information, so that a knowledgeable reader can reproduce the experiment.
- However, use references and Supplementary Materials to indicate the previously published procedures.
  - Do not repeat the details of established methods. A general summary -plus reference- is sufficient.
- Reviewers will criticize incomplete or incorrect descriptions.
  - and may even recommend rejection

# 6. Results - What have you found?

## Appearance counts!

- Un-crowded plots: 3 or 4 data sets per figure; well-selected scales; appropriate axis label size; symbols clear to read and data sets easy to discriminate.
- Each photograph must have a scale marker of professional quality on one corner.
- Use color ONLY when necessary. If different line styles can clarify the meaning, never use colors or other thrilling effects.
- Color needs to be visible and distinguishable when printed out in black & white.
- Do not include long boring tables!



# 7. Discussion – What the results mean

- Here you get the chance to SELL your data!
  - Many manuscripts are rejected because the Discussion is weak
- Make the Discussion corresponding to the Results.
  - But do not reiterate the results
- You need to compare the published results with yours.
  - Do NOT ignore work in disagreement with yours – confront it and convince the reader that you are correct or better

# 7. Discussion - Watch out for the following:

- Statements that go beyond what the results can support
- Unspecific expressions such as “higher temperature”, “at a lower rate”.
  - **Quantitative descriptions are always preferred.**
- Sudden introduction of new terms or ideas
- Speculations on possible interpretations are allowed. But these should be based on something, rather than pure imagination.



## 8. Conclusions – How the work advances the field from the present state of knowledge

In summary, we have demonstrated that the mercaptoacetamide-based HDACIs possess favorable solubility, lipophilicity, permeability and plasma stability features as compared to recently FDA approved drug Vorinostat (SAHA). Based on these findings, we assume that these compounds could sufficiently be absorbed by the intestinal tract. However, further studies are needed in order to determine the pharmacokinetic disposition of these compounds.

## 8. Conclusions – How the work advances the field from the present state of knowledge

*Without clear Conclusions, reviewers and readers will find it difficult to judge the work, and whether or not it merits publication in the journal.*

- Do NOT repeat the Abstract, or just list experimental results.
  - Trivial statements of your results are unacceptable in this section.
- Provide a clear scientific justification for your work, and indicate possible applications and extensions, if appropriate.
  - You can also suggest future experiments, and/or point out those that they are underway.



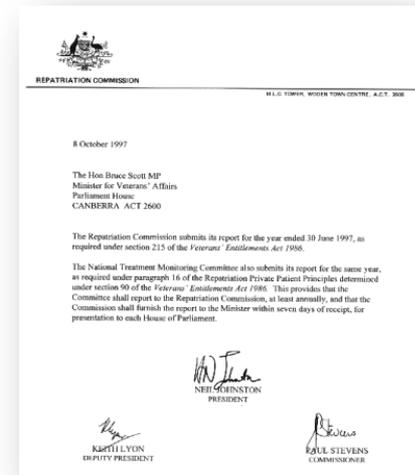
# 9. References

**Typically, there are more mistakes in the references than any other part of the manuscript.**

- Cite the main scientific publications on which your work is based
- Do not inflate the manuscript with too many references – it doesn't make it a better manuscript!
- Avoid excessive self-citations
- Avoid excessive citations of publications from the same region

# 10. Cover letter – your chance to speak to the Editor directly

- View it as a job application letter; you want to “sell” your work...
- WHY did you submit the manuscript to THIS journal?
  - Do not summarize your manuscript, or repeat the abstract
- Mention special requirements, e.g. *if you do not wish your manuscript to be reviewed by certain reviewers.*
- Albeit that most editors will not reject a manuscript only because the cover letter is bad, a **good cover letter may accelerate the editorial process of your paper.**



# Suggest potential reviewers

- Your suggestions will help the Editor to pass your manuscript to the review stage more efficiently.
- You can easily find potential reviewers and their contact details by mentioning authors from articles in your specific subject area (e.g., your references).
- The reviewers should represent at least two regions of the world. And they should not be your supervisor or close friends.
- Generally you are requested to provide 3-6 potential reviewers.

# Peer Reviewer Searching - example

SciVerse | Hub | ScienceDirect | Scopus | Register | Login | Go to SciVal Suit | Brought to you by The Scopus Team

Search | Sources | Analytics | My alerts | My list | My settings | Live Chat | Help

Quick Search  Search Library catalogue

Scopus: 574,442 | More... | Web | Patents | SelectedSources | Search your library

Your query: TITLE-ABS-KEY ( molecular sequence data ) | Edit | Save | Set alert | Set feed | View search history

### Refine results Hide

Source Title	Author Name	Year	Affiliation	Subject Area
<input type="checkbox"/> Journal of Biological Chemistry (40,970)	<input type="checkbox"/> Yokoyama, S. (262)	<input type="checkbox"/> 2010 (13,143)	<input type="checkbox"/> University of Tokyo (8,535)	<input type="checkbox"/> Biochemistry, Genetics and Molecular Biology (385,928)
<input type="checkbox"/> Proceedings of the National Academy of Sciences of the United States of America (17,572)	<input type="checkbox"/> Huber, R. (252)	<input type="checkbox"/> 2009 (22,564)	<input type="checkbox"/> Harvard Medical School (5,220)	<input type="checkbox"/> Immunology and Microbiology (137,291)
<input type="checkbox"/> Biochemistry (12,616)	<input type="checkbox"/> Gilbert, D.J. (231)	<input type="checkbox"/> 2008 (24,560)	<input type="checkbox"/> Inserm (5,086)	<input type="checkbox"/> Medicine (120,209)
<input type="checkbox"/> Nucleic Acids Research (11,884)	<input type="checkbox"/> Shuman, S. (214)	<input type="checkbox"/> 2007 (25,243)	<input type="checkbox"/> CNRS Centre National de la Recherche Scientifique (4,871)	<input type="checkbox"/> Agricultural and Biological Sciences (55,057)
<input type="checkbox"/> Journal of Bacteriology (11,021)	<input type="checkbox"/> Jenkins, N.A. (211)	<input type="checkbox"/> 2006 (25,502)	<input type="checkbox"/> University of California, San Francisco (4,736)	<input type="checkbox"/> Multidisciplinary (25,214)

Display: 5 Limit to Exclude Add categories

**Document results: 574,442** Show all abstracts Go to page: 1 of 28723 Go Next >

Download PDF | Export | Print | Email | Create bibliography | Add to My List | View citation overview | View citations | View references

Select:  All  Page Search within results  Search

	Document title (click to sort on relevance)	Author(s)	Date	Source title	Citations
1	<input type="checkbox"/> A molecular systematic framework for equine strongyles based on ribosomal DNA sequence data <a href="#">View at publisher</a>   <span>Full Text</span>   <a href="#">Show abstract</a>	Hung, G.-C., Chilton, N.B., Beveridge, I., Gasser, R.B.	2000	<i>International Journal for Parasitology</i> 30 (1), pp. 95-103	20
2	<input type="checkbox"/> Phylogenetic position of phylum nemertini, inferred from 18S rRNA sequences: Molecular data as a test of morphological character homology <a href="#">View at publisher</a>   <a href="#">Show abstract</a>	Turbeville, J.M., Field, K.G., Raff, R.A.	1992	<i>Molecular Biology and Evolution</i> 9 (2), pp. 235-249	84
3	<input type="checkbox"/> Molecular BioComputing Suite: A word processor Add-In for the analysis and manipulation of nucleic acid and protein sequence data <a href="#">View at publisher</a>   <a href="#">Show abstract</a>	Muller, P.Y., Studer, E., Miserez, A.R.	2001	<i>BioTechniques</i> 31 (6), pp. 1306-1313	6
4	<input type="checkbox"/> Molecular phylogeny of Japanese Eloecharia (Cynorhizaceae) based on ITS sequence data and	Yano, O., Katsuwawa, T., Tsubota, H.	2004	<i>Journal of Plant Research</i> 117 (5), pp. 409	16

# Copyright Issues in Publishing

Journal Authors retain the following rights:

- make copies (e-copies if e-offprint is used) for their own personal use, own classroom teaching use
- make copies of articles and distribute them to research colleagues for non-commercial purposes
- Post pre-print versions of the article on internet websites
- post an **author manuscript** of the article on the author's personal website or on his or her institutional website
- present the article at a meeting or conference and give copies to the meeting delegates
- include journal articles, in full or part, in the author's thesis or dissertation
- extend the article into book length format, or re-use portions in other works with full acknowledgement of its original publication in the journal

Example for e-offprint

Provided for non-commercial research and educational use only.  
Not for reproduction or distribution or commercial use.



This article was originally published in a journal by Elsevier, and the attached copy is provided for your personal use in instruction at your institution, for non-commercial research and educational use, or for personal or internal use of specific clients. This article is intended solely for the personal use of the individual user and is not to be disseminated broadly. For all other uses, reproduction and distribution, in any form or by any means, is prohibited. For all other uses, permission should be sought from Elsevier's Rights Department. You may contact our Rights Department at [permissions@elsevier.com](mailto:permissions@elsevier.com), or call +31 (0)20 4852616.

All other uses, reproduction and distribution, in any form or by any means, is prohibited. For all other uses, permission should be sought from Elsevier's Rights Department. You may contact our Rights Department at [permissions@elsevier.com](mailto:permissions@elsevier.com), or call +31 (0)20 4852616.

<http://www.elsevier.com/locate/permissions>

Boundary renormalisation group flows of unitary superconformal minimal models

Márton Kormos

*Institute for Theoretical Physics, Eötvös University, 117 Budapest, Párizs utca 15, Hungary*

Received 21 December 2005; accepted in revised form 2 March 2006; accepted 22 March 2006

Available online 6 August 2006

## Abstract

In this paper we investigate renormalisation group flows of superconformal minimal models generated by the boundary perturbing field  $G_{-1/2}(z)$ . Informing the Truncated Conformal Space Approach analysis the emerging pattern of the flow structure, consistent with the theoretical expectations. According to the results, this pattern can be naturally explained in those cases for which the existing predictions are uncertain. © 2006 Elsevier B.V. All rights reserved.

## 1. Introduction

Conformal field theories with boundary attract much interest recently, due to their relevance in condensed matter physics, e.g., in the Kosterlitz-Thouless problem [1] and their applications in describing D-branes in string theory [2,3]. In terms of gauge theory the renormalisation group flow generated by a boundary perturbing field corresponds to tachyon condensation and exploring these flows can help in understanding the decay of D-branes.

Many papers appeared in the literature about the boundary perturbations and the corresponding renormalisation group flows of unitary minimal models [4–8]. Up to now, a systematic charting of the boundary flows of the unitary superconformal minimal models has been missing. Although there may be lots of unitary perturbative domains, for a general study a nonperturbative tool is necessary. We choose the Truncated Conformal Space Approach (TCSA), originally proposed in the paper [9] and applied to boundary problems in [10] and [7]. The essence of the TCSA is to diagonalise the Hamiltonian of the system on a subspace of the infinite-dimensional Hilbert space.

E-mail address: [kormos@general.elte.hu](mailto:kormos@general.elte.hu) (M. Kormos).

0550-3213/\$ - see front matter © 2006 Elsevier B.V. All rights reserved.  
doi:10.1016/j.nucphysb.2006.03.018



# Ethics Issues in Publishing

## Scientific misconduct

- Fabrication : making up data or results, and recording or reporting them
- Falsification of results



## Publication misconduct

- Plagiarism
  - Different forms / severities
  - The paper must be original to the authors
- Duplicate submission
- Duplicate publication
- No acknowledgement of prior research and researchers
- No identification of all co-authors



# Publish *AND* Perish! – if you break ethical rules

- International scientific ethics have evolved over centuries and are commonly held throughout the world.
- Scientific ethics are not considered to have national variants or characteristics – there is a *single ethical standard* for science.
- Ethics problems with scientific articles are on the rise *globally*.



# Plagiarism: Tempting short-cut with long-term consequences

- Plagiarism includes inappropriate, or inadequate *paraphrasing*
  - Paraphrasing: restating someone else's ideas while not copying verbatim
- Plagiarism is considered a *serious offense* by your institute, by journal editors and by the scientific community.
- Plagiarism may result in *academic charges*, but will certainly cause rejection of your paper.
- Plagiarism will *hurt your reputation* in the scientific community.

No Copying



ELSEVIER

# RETRACTED: Matching pursuit-based approach for

N. Ruiz-Reyes<sup>a</sup>, P. Vera-Candeas<sup>a</sup>, J. Curpián-Alonso<sup>a</sup>, J.C. Cuevas

Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publisher  
<http://www.elsevier.com/locate/withdrawalpolicy>.

Reason: This article is virtually identical to the previously published article "A new algorithm for SNR improvement in ultrasonic NDT", *Independent Nondestructive International*, volume 38 (2005) 453 – 458 authored by N. Ruiz-Reyes, P. Vera-Candeas, J. Curpián-Alonso, J.C. Cuevas-Martínez and J.C. Cuevas-Martínez.

The article of which the authors committed plagiarism: it won't be removed from ScienceDirect. Everybody who downloads it will see the reason of retraction...

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost of the BP algorithm being the main drawback.

In this paper, we propose a novel matching pursuit-based signal processing method for improving SNR in ultrasonic NDT of highly scattering materials, such as steel and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated using both computer simulation and experimental results, even when the input SNR (SNR<sub>in</sub>) is lower than 0dB (the level of echoes from the microstructures is above the level of the echoes).

## 2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals  $s[n]$  as a linear expansion in terms of functions  $g_i[n]$  chosen from an over-complete dictionary. Let  $H$  be a Hilbert

space. We define the over-complete dictionary as a family  $D = \{g_i; i = 0, 1, \dots, L\}$  of vectors in  $H$ , such as  $\|g_i\| = 1$ .

The problem of choosing functions  $g_i[n]$  that best approximate the analysed signal  $s[n]$  is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing signals in terms of expansion functions chosen from a dictionary, where  $l^1$  norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear nature of the algorithm leads to compact adaptive signal models.

In each step of the iterative procedure, vector  $g_i[n]$  which gives the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the  $m$ th iteration the residue is

$$r^m[n] = \begin{cases} s[n] & m = 0, \\ s^m[n] - \alpha_{k(m)} g_{k(m)}[n] & m \neq 0, \end{cases} \quad (1)$$

where  $\alpha_{k(m)}$  is the weight associated to optimum atom  $g_{k(m)}[n]$  at the  $m$ th iteration.

The weight  $\alpha_i^m$  associated to each atom  $g_i[n] \in D$  at the  $m$ th iteration is introduced to compute all the inner products with the residual  $r^m[n]$ :

$$\alpha_i^m = \frac{\langle r^m[n], g_i[n] \rangle}{\langle g_i[n], g_i[n] \rangle} = \frac{\langle r^m[n], g_i[n] \rangle}{\|g_i[n]\|^2} = \langle r^m[n], g_i[n] \rangle. \quad (2)$$

The optimum atom  $g_{k(m)}[n]$  (and its weight  $\alpha_{k(m)}$ ) at the  $m$ th iteration are obtained as follows:

$$g_{k(m)}[n] = \underset{g_i[n] \in D}{\operatorname{argmin}} \|\langle r^m[n], g_i[n] \rangle\|^2 = \underset{g_i[n] \in D}{\operatorname{argmax}} |\alpha_i^m|. \quad (3)$$

The computation of correlations  $\langle r^m[n], g_i[n] \rangle$  for all vectors  $g_i[n]$  at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n] \rangle = \langle r^m[n], g_i[n] \rangle - \alpha_{k(m)} \langle g_{k(m)}[n], g_i[n] \rangle. \quad (4)$$



# Multiple submissions: sending a manuscript to more than one journal at the same time

- Multiple submissions save your time but waste editor's time
- The editorial process of your manuscripts will be completely stopped if the duplicated submissions are discovered.



“It is considered to be unethical...We have thrown out a paper when an author was caught doing this. I believe that the other journal did the same thing.”

**James C. Hower**  
**Editor, *the International Journal of Coal Geology***

- You should not send your manuscripts to a second journal **UNTIL** you receive the final decision of the first journal

# Duplicate Publication

- Two or more papers, without full cross reference, share the same hypotheses, data, discussion points, or conclusions
- An author should not submit for consideration in another journal a previously published paper.
  - Previous publication of an abstract in conference Proceedings does not preclude subsequent submission for publication, but full disclosure should be made at the time of submission.
  - Re-publication of a paper in another language is acceptable, provided that there is full and prominent disclosure of its original source at the time of submission.
  - At the time of submission, authors should disclose details of related papers, even if in a different language, and similar papers in press.
  - **This includes translations!**

# References & Acknowledgements – *a growing list*

- Mark Ware Consulting Ltd, Publisin and Elearning Consultancy. Scientific publishing in transition: an overview of current developments. Sept., 2006.  
[www.stm-assoc.org/storage/Scientific\\_Publishing\\_in\\_Transition\\_White\\_Paper.pdf](http://www.stm-assoc.org/storage/Scientific_Publishing_in_Transition_White_Paper.pdf)
- Guide for Authors of Elsevier journals.
- Ethical Guidelines for Journal Publishing, Elsevier.  
[http://www.elsevier.com/wps/find/intro.cws\\_home/ethical\\_guidelines#Duties%20of%20Authors](http://www.elsevier.com/wps/find/intro.cws_home/ethical_guidelines#Duties%20of%20Authors)
- International Committee of Medical Journal Editors. Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication. Feb. 2006
- <http://www.publicationethics.org.uk/guidelines>
- <http://www.icmje.org/index.html#ethic>
- <http://www.onlineethics.org/>
- <http://owl.english.purdue.edu/owl/>
- <http://www.physics.ohio-state.edu/~wilkins/writing/index.html>
- George D. Gopen, Judith A. Swan. The science of Scientific Writing. American Scientist (Nov-Dec 1990), Vol. 78, 550-558.
- Michael Derntl. Basics of Research Paper Writing and Publishing.  
<http://www.pri.univie.ac.at/~derntl/papers/meth-se.pdf>
- Thomas H Adair. Professor, Physiology & Biophysics Center of Excellence in Cardiovascular-Renal Research, University of Mississippi Medical Center. <http://dor.umc.edu/ARCHIVES/WritingandpublishingaresearcharticleAdair.ppt>
- Bruce Railsback. Professor, Department of Geology, University of Georgia. Some Comments on Ethical issues about research.  
[www.gly.uga.edu/railsback/11111misc/ResearchEthics.html](http://www.gly.uga.edu/railsback/11111misc/ResearchEthics.html)
- Peter Young. Writing and Presenting in English. The Rosetta Stone of Science. Elsevier 2006.
- Philip Campbell. Editor-in-Chief, Nature. Futures of scientific communication and outreach. June 2007.
- Yaoqi ZHOU. Recipe for a quality Scientific Paper: Fulfill Readers' and Reviewers' Expectations. <http://sparks.informatics.jupui.edu>
- EDANZ Editing training materials. 2006 <http://liwenbianji.com>, <http://www.edanzediting.com/english.html>

Questions?  
Thanks!