

Communication scientifique, écrite et orale, en langue anglaise

Second session

How to publish a paper – Part II.

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1. Question periode

When there is a need to communicate our results at an international level?

What is “deontology” of publishing?

Who can be co-author?

How to estimate the extent of contribution of a co-author?

What are the main rules for the order of the co-authors?

2. Timing and partition of scientific work

The research work conducted for the solution of a given problem can be considered to be finished only when its publication appears in a periodical. The Table below illustrates the different stages of the work.

Total time

Research work (from ~3 months to ~2 years)		Publishing procedure (from ~3 months to ~1 year)						
New results are worked out	Preparation of manuscript		Journal Editor chooses Referees	Referees examine the paper (less than 6 months)	Editor accepts the paper Corrections +	Waiting + Printer prepares the proofs	Proofs correction	Paper appears
	Figures making	Writing body text						

3. Identification of the journal – the Impact factor

The final format of the paper depends on the journal where you would like to make your paper to appear (length, references, etc.). Another important point is that the journals are not at the same “level”, which means that the difficulty to get a paper accepted varies from one journal to another.

The impact factor

The rank of a journal is expressed by the so-called impact factor, which indicates how often a paper in that journal is cited in other papers (per year). This measure - to characterize the quality (rank) of journals - was introduced in the ‘60s.

Examples:

a. Calculation of impact factor over a period of two years in a given year (1998) for a given journal:

A= number of articles published in 1996-97 in the journal

B= 1998 citations from all journals to articles published in 1996-97 in the given journal

D= B/A = 1998 impact factor of the journal for 2 years

b. Calculation of impact factor over a period of five years in a given year (1998) for a given journal:

A= number of articles published in 1993-97 in the journal

B= 1998 citations from all journals to articles published in 1993-97 in the given journal

D= B/A = 1998 impact factor of the journal for 5 years

Example for a journal, Acta Crystallograph. D:

1999 Impact factor (calculated for 1997-98): 2.24

1999 Impact factor (calculated for 1994-98): 4.84

[Complete list of impact factor of Journals in 2000, see file attached.](#)

Citation half-life:

After a certain number of years, the number of citations decreases, because old journals are more rarely read (and more difficult to access) than the recent ones. The citation half-life is the characteristic time during which the number of citations for papers published in a journal and in a given year decreases by a factor of two.

Here we give a partial list of impact ratios and citation half-life for journals in mechanics and in materials in 1995 (over a period of 2 years):

ENGINEERING MECHANICAL:	Impact factor	cited half- life (years)
ENG COMPUT	1,19	5,7
INT J IMPACT ENG	0,96	5,2
COMPUT METHOD APPL M	0,94	8,0
INT J PLASTICITY	0,77	5,2
INT J MECH SCI	0,47	>10

FATIGUE FRACT ENG M	0,40	4,4
J TRIBOL-T ASME	0,39	5,5
J FLUID STRUCT	0,37	5,0
INT J FATIGUE	0,35	5,4
EXP TECHNIQUES	0,22	
MECH ENG	0,07	>10

MATERIALS SCIENCE:

MAT SCI ENG R	5,71	4,8
ADV MATER	3,30	2,8
PROG MAT SCI	3,20	9,2
ACTA METALL MATER	2,05	9,1
METALL TRANS A	1,73	8,4
PHILOS MAG A	1,50	7,0
MATER SCI TECH SER	0,98	>10
SCRIPTA METALL MATER	0,91	5,5
MECH MATER	0,90	5,9
INT J PLASTICITY	0,77	5,2
J MATER SCI	0,72	8,0
MATER LETT	0,72	4,1
J ELASTICITY	0,49	>10
J MATER SCI LETT	0,43	5,8
INT J FATIGUE	0,35	5,4
J MAT PROCESS TECH	0,13	3,3

MECHANICS:

ANNU REV FLUID MECH	5,63	8,5
J RHEOL	2,12	8,5
J PHYS II	1,93	>10
J MECH PHYS SOLIDS	1,90	>10
PHILOS MAG B	1,23	6,0
COMPUT METHOD APPL M	0,94	8,0
MECH MATER	0,90	5,9

INT J SOLIDS STRUCT	0,88	8,9
INT J PLASTICITY	0,77	5,2
COMPUT MECH	0,62	3,7
INT J FRACTURE	0,60	>10
INT J MECH SCI	0,47	>10
ACTA MECH	0,39	8,4
MECH COMPOS MAT	0,10	>10

Compare, for example, JMPS (Journal of Mechanics and Physics of Solids) with J. Mat. Sci. (Journal of Material Science). The impact factors are: 1.9 and 0.72, respectively. One has to estimate correctly the significance of his subject, the value of the obtained results, their originality, etc, in order to make a good decision.

A journal can be considered to be a good one starting from about an impact factor of about 0.5.

Impact factors and citation half-life of journals in biology in 1996 (for two years):

BIOLOGY

1	FASEB J	13.771	5.1
2	CURR BIOL	6.276	2.1
3	BIOESSAYS	6.227	3.4
4	PLANT J	5.666	3.0
5	BIOL REV	3.243	> 10.0
6	MOL PHYLOGENET EVOL	3.080	3.1
7	P ROY SOC LOND B BIO	2.867	8.9
8	PHILOS T ROY SOC B	2.832	8.4
9	MOL BIOCHEM PARASIT	2.639	4.9
10	Q REV BIOL	2.565	> 10.0
11	LIFE SCI	2.352	8.2
12	CONSERV BIOL	2.189	4.0
13	CHEM-BIOL INTERACT	2.164	7.2
14	BIOSCIENCE	2.069	7.7
15	J EVOLUTION BIOL	2.022	4.6
16	J BIOL RHYTHM	1.961	5.6
17	BIOFACTORS	1.889	5.2
18	EVOL ECOL	1.850	5.3
19	J EXP BIOL ²	1.829	8.5
20	CLADISTICS	1.762	7.1
21	ROUX ARCH DEV BIOL	1.681	> 10.0
22	HUM BIOL	1.474	> 10.0
23	MICROSC RES TECHNIQ	1.327	3.0
24	BIOL BULL	1.166	> 10.0
25	POLAR BIOL	1.122	5.6
26	BIOMETALS	1.117	2.6
27	BIOLOGICALS	1.096	3.6
28	BIOL J LINN SOC	0.932	7.7
29	ANN HUM BIOL	0.889	> 10.0
30	ORIGINS LIFE EVOL B	0.863	8.9
31	P JPN ACAD B-PHYS	0.850	6.7
32	BIOL RHYTHM RES	0.775	
33	BIOTROPICA	0.754	9.8
34	ARCH PROTISTENKD	0.725	> 10.0
35	J HIST BIOL	0.688	6.8
36	AM J HUM BIOL	0.687	4.1
37	BIOSYSTEMS	0.648	7.2
38	ARCH ITAL BIOL	0.625	> 10.0
39	ENDOCYT CELL RES	0.577	
40	FOLIA BIOL-PRAGUE	0.500	6.7
41	NAT AREA J	0.486	5.4
42	ANN APPL BIOL	0.482	> 10.0
43	J BIOSCIENCE	0.397	6.1
44	ZH OBSHCH BIOL	0.343	> 10.0
45	FOLIA BIOL-KRAKOW	0.314	
46	ACTA BIOTHEOR	0.281	> 10.0
47	J BIOL REG HOMEOS AG	0.269	5.2
48	BIOL ZBL	0.250	> 10.0
49	P BIOL SOC WASH	0.245	> 10.0
50	ACTA BIOL HUNG	0.239	> 10.0
51	GROWTH DEVELOP AGING	0.167	> 10.0
52	IZV AKAD NAUK BIOL+	0.128	5.9
53	BIOLOGIA	0.110	7.0
54	ARQ BIOL TECNOL	0.093	
55	ANN BIOL-PARIS	0.091	
56	RFV BIOL TROP	0.076	> 10.0

Impact factors and citation half-life of journals in chemistry in 1996
(for two years):

CHEMISTRY

1	CHEM REV	17.112	6.4
2	ACCOUNTS CHEM RES	10.546	8.1
3	ANGEW CHEM INT EDIT	8.184	5.6
4	CHEM SOC REV	6.223	5.3
5	J AM CHEM SOC	5.948	9.4
6	CHEM-EUR J	4.814	1.2
7	TOP CURR CHEM	4.278	8.9
8	J PHYS CHEM REF DATA	4.025	> 10.0
9	CHEM RES TOXICOL	3.190	4.2
10	CHEM COMMUN	3.107	6.5
11	J COMPUT CHEM	3.044	6.9
12	BIOCONJUGATE CHEM	2.584	3.6
13	SUPRAMOL CHEM	2.382	2.4
14	HELV CHIM ACTA	2.369	> 10.0
15	INFLAMM RES	2.231	1.4
16	PHARMACEUT RES	2.203	4.1
17	CHEM-BIOL INTERACT	2.164	7.2
18	ENVIRON TOXICOL CHEM	2.142	4.5
19	MAR CHEM	1.975	6.4
20	CHEM BER-RECL	1.958	> 10.0
21	NEW J CHEM	1.813	5.9
22	J CHEM INF COMP SCI	1.777	4.3
23	ISRAEL J CHEM	1.707	> 10.0
24	J CONTROL RELEASE	1.674	5.2
25	CHEM LETT	1.631	6.7
26	PURE APPL CHEM	1.630	8.7
27	RECL TRAV CHIM PAY B	1.598	> 10.0
28	LIEBIGS ANN-RECL	1.549	> 10.0
29	SOLVENT EXTR ION EXC	1.403	5.7
30	J PHARM SCI	1.400	> 10.0
31	ULTRASON SONOCHEM	1.373	
32	CHEM PHARM BULL	1.309	8.7

J KA FKOL	1.243	5.2
CAN J CHEM	1.172	> 10.0
RES CHEM INTERMEDIAT	1.148	3.3
B SOC CHIM FR	1.146	> 10.0
B CHEM SOC JPN	1.118	> 10.0
AGENTS ACTIONS	1.115	6.5
CHEM BRIT	1.115	5.5
AUST J CHEM	1.093	> 10.0
COMPUT CHEM	1.028	9.6
USP KHIM+	1.023	> 10.0
MAGN RESON CHEM	1.009	5.1
J PHYS CHEM SOLIDS	0.992	> 10.0
PHARM WORLD SC	0.987	
CONCEPT MAGNETIC RES	0.966	
J INCLUS PHENOM MOL	0.964	5.2
ACTA CHEM SCAND	0.950	> 10.0
J CHEM TECHNOL BIOT	0.927	6.1
J CHEM ENG DATA	0.919	> 10.0
GAZZ CHIM ITAL	0.792	> 10.0
J MATH CHEM	0.792	4.6
STRUCT CHEM	0.784	4.3
ADV CHEM SER	0.749	> 10.0
SEPAR SCI TECHNOL	0.737	7.4
ADV MATER OPT ELECTR	0.711	3.0
MENDELEEV COMMUN	0.667	3.1
ACS SYM SER	0.657	7.0
ARZNEIMITTEL-FORSCH	0.640	9.5
ARCH INT PHARMACOD T	0.639	> 10.0
J CHEM RES-S	0.604	6.0
CROAT CHEM ACTA	0.595	> 10.0
ARCH PHARM	0.577	8.9
B SOC CHIM BELG	0.572	> 10.0
CHEM UNSERER ZEIT	0.554	6.2
J PRAK CHEM-CHEM ZTG	0.551	2.5
MONATSH CHEM	0.550	> 10.0
COLLECT CZECH CHEM C	0.549	> 10.0
HETEROATOM CHEM	0.538	4.0
FLUORIDE	0.531	8.0
POL J CHEM	0.492	4.1
PHARMAZIE	0.487	6.6
CHIMIA	0.450	9.8
J CHIN CHEM SOC-TAIP	0.443	4.4
B KOR CHEM SOC	0.428	3.2
P INDIAN AS-CHEM SCI	0.400	5.0
INDIAN J CHEM A	0.395	8.5
BOL SOC CHIL QUIM	0.370	4.6
HUNG J IND CHEM	0.333	4.3
SCI CHINA SER E	0.332	5.7
J AUTOM CHEM	0.321	
DRUG CHEM TOXICOL	0.317	7.4
ZH OBSHCH KHIM+	0.314	> 10.0
J MOL MODEL	0.313	
S AFR J CHEM S-AFR	0.310	8.5
J CHEM EDUC	0.304	> 10.0
RUSS CHEM B+	0.245	2.3
ACTA CHIM SINICA	0.218	6.7
B POL ACAC SCI-CHEM	0.216	> 10.0
AFINIDAD	0.206	5.7
ACH-MODELS CHEM	0.197	
ACTA PHARMACOL SIN	0.197	7.4
ANN CHIM-SCI MAT	0.190	> 10.0
CHEM LISTY	0.186	> 10.0
REV ROUM CHIM-	0.162	6.9
TURK J CHEM	0.161	
NIPPON KAGAKU KAISHI	0.158	> 10.0
KOREAN J CHEM ENG	0.142	
J INDIAN CHEM SOC	0.141	> 10.0
CHEM PAP-CHEM ZVESTI	0.140	5.8
AN ASOC QUIM ARGENT	0.136	9.0
REV CHIM-BUCHAREST	0.126	7.2
AN QUIM	0.124	> 10.0
J CHEM SOC PAKISTAN	0.117	
MAGY KEM FOLY	0.107	8.6
VESTN MOSK U KHIM+	0.095	7.6
PRZEM CHEM	0.050	8.3
MANUF CHEMIST	0.039	
IZV VUZ KHIM KH TEKH	0.032	9.8
ACTA POLYTECH SC CH	0.000	

ANALYTICAL CHEMISTRY

Perhaps the most important and recent use of the impact factor is in the process of academic evaluation. The impact factor can be used to provide a gross approximation of the prestige of journals in which individuals have been published.

Publication fee

The publication of a paper by an author is not a business. He/she is not payed for the paper. On the contrary, in some journals, the authors have to pay for their paper. In most of the paying journals, the authors are asked to contribute to the expenses of their publication voluntarily.

4. Composition of a paper

What is a paper? A paper is a *story*. You have to present your results in a readable way, like a story, so that each section and each sentence is linked to each other in a logical way.

The sequence of different parts is as follows.

- a. Title
- b. Authors
- c. Addresses of authors
- d. Abstract
- e. Key words
- f. Introduction
- g. Main sections
- h. Discussion
- i. Summary or conclusions
- j. Acknowledgements
- k. References
- l. Appendices
- m. Figure captions
- n. Tables
- o. Figures

5. The title of the paper

Examples:

Choose the right one(s):

Effective strain rate sensitivity of a composite.

The effective strain rate sensitivity of composites

Effective strain rate sensitivity of composites

Effective Strain Rate Sensitivity of Composites

Effective Strain Rate Sensitivity Of Composites

On the effective strain rate sensitivity of composites

Effective strain rate sensitivity of the composites

Effective strain rate sensitivity

Good solutions:

Effective strain rate sensitivity of composites

Effective Strain Rate Sensitivity of Composites

On the effective strain rate sensitivity of composites