



## Open Access and Author Rights

# Open Access in Chemistry

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## The Publication Landscape

### General

- **> 2.000 STM (Science, Technical, Medicine) publishers worldwide**
- **20 – 25,000 journals**
- **$\approx 1,5$  m articles from  $\approx 1,2$  m authors per year**
- **STM journals turnover worldwide per year: ca. 8 bn USD**

### ... and in Chemistry

- **1,500 core journals abstracted in CAS (total # of journals 10,000)**
- **ca. 150,000 authors**
- **market shares in % (2007)**

	Articles	Cites
ACS	17.9	33.6
Elsevier	32.0	32.4
Wiley	16.0	14.0
RSC	5.3	7.1



## Open Access in Chemistry: Journals

- **DOAJ: 98 titles (in Physics only 76)**
- **EZB: Chemistry and Pharmacy 444 titles (Physics 524)**
- **But unlike in physics only very few relevant titles**
- **Only 29% chemists but 47% physicists know OA journals (DFG)**
- **Example: *Beilstein Journal of Organic Chemistry***
  - Founded 2005 by Beilstein-Institut
  - Completely free; no costs to reader or author
  - High standards, peer reviewed
  - Prominent chemists involved as editors and in advisory board
  - Since 2005 total of 134 research articles (EurJOC  $\approx$  800 in 2008)
  - Impact Factor 2008: 0.800 (EurJOC: 3.016)
- **Example: *Chemistry Central***
  - Article fees of 1,025 EUR or 1,445 USD
  - Since 2007 total of 64 research articles
  - Impact factor 2007 (?) 0.82



## Open Access in Chemistry: Preprint Server

- *Chemistry Preprint Server at Chemweb.com*
- (Modeled after the arXiv.org server in physics)
- **Start in July 2000**
- **Ceased operation in May 2004 because of lack of success**
- **Number of articles published (in almost four years): 888**
- **Less than 0.05% of primary literature published in that period**
- **Same period: > 130,000 submissions to arXiv.org**
- **Currently no supra-regional preprint server or repository in operation in chemistry**



## Society Publishing and Open Access

- **American Chemical Society largest publisher**
- **Depends economically strongly on publications and CAS**
- **Very critical towards OA. Does not allow self archiving**
- **"Author Choice": 3,000 USD, discounts for members**
- **Royal Society of Chemistry important player**
- **Critical towards OA**
- **But allows self archiving on personal web site**
- **"Open Science": 1,000 – 2,500 GBP**



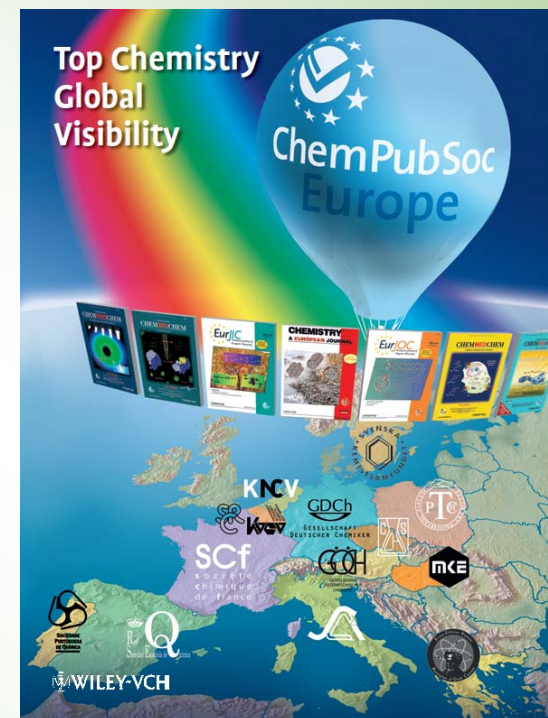
## Scientific Journals of the GDCh

### With Wiley-VCH, Weinheim

- *Angewandte Chemie* (German and English)
  - *Chemistry - A European Journal*\*
  - *European Journal of Organic Chemistry*\*
  - *European Journal of Inorganic Chemistry*\*
  - *ChemPhysChem*\*
  - *ChemBioChem*\*
  - *ChemMedChem*\*
  - *ChemSusChem*\*
  - *ChemCatChem*\* (Start in 3Q09)
- \*: ChemPubSoc  
14 European Societies

### With Springer Verlag, Heidelberg

- *Analytical and Bioanalytical Chemistry*







## Open Access at Wiley-VCH

- **Not active in Open Access**
- **No clear policy on self archiving**
  - Wiley allows self archiving of accepted manuscript on personal website
  - Wiley-VCH for e.g. *Physica Status Solidi* even on institutional repositories
  - For Angewandte Chemie and others self archiving only for submitted, i.e. pre-peer-reviewed manuscripts
- **"Online Open": 3,000 USD**



## GDCh and Open Access

- **Publication of journals laid down in statutes**
- **Important source of income for funding of charitable activities**

**Publication model must serve our mission best**

### **Essentials:**

- **Authenticity**
- **Archival**
- **Quality**
- **Access**
- **Viable business model**





## GDCh and Open Access

**Intensive discussions lead to a position paper:**

**[www.gdch.de/oearbeit/openaccess.pdf](http://www.gdch.de/oearbeit/openaccess.pdf)**

- **The GDCh in principle supports the goal of Open Access to improve access to scientific information**
- **But many questions remain still open**



## Open Access – Open Questions

### Quality control?

- **Today: Quality and reputation define success and revenues**
- **Author pays: Few rejections and cheap reviewing are of advantage**

### Ethical problems?

- **Will editors maintain their independence?**
- **What about difficult to handle manuscripts (and authors)**

### Access?

- **Really a problem?**



## Open Access – Open Questions

### **Access as authors depends on financial background**

- **Open access for readers as opposed to open access for authors**
- **Quality of contribution or possibility to pay**
- **Authors from economically disadvantaged countries**
- **Young researchers at the beginning of career**
- **Successful researchers with large outputs**

### **Fair distribution of costs?**

- **Problem of free-riders**
- **Few authors but many readers in chemical industry**
- **Research intensive institutions/countries will have to pay more**



Veröffentlichungen sind wir dann schon knapp unter einer Milliarde Euro.

Wer daher fordert, Open Access in öffentlicher Hand aufzubauen, und obendrein fordert, dieses Publikationssystem für alle öffentlich bezahlten Wissenschaftler verpflichtend zu machen, der muss dem Steuerzahler erklären, warum es attraktiver sein soll, pro Jahr mit rund einer Milliarde Euro 525 000 Open-Access-Aufsätze zu fördern, anstatt mit 785,5 Millionen Euro ein wissenschaftliches Bibliothekswesen, das 3,4 Millionen Bücher beschafft, 2,3 Millionen Kauflicenzen für digitale Medien und 580 000 Zeitschriftenabonnements mit Abermillionen von Aufsätzen verwaltet und noch dazu das Personal bereitstellt, um den interessierten Wissenschaftlern und Laien den Weg durch diese Publikationsflut zu weisen. Freilich: Um in den Genuss dieser Segnungen zu kommen, muss man sich von zu Hause oder seinem Arbeitsplatz in eine wissenschaftliche Bibliothek bewegen. Für eine Milliarde Euro kann man jetzt sitzen bleiben, bekommt dafür einen Bruchteil Wissenschaft und nennt das „freien Zugang“.

UWE JOCHUM

Der Autor ist Bibliothekar an der Universitätsbibliothek Konstanz.

FAZ vom 17.6.09

- **Price per article: 1,806 EUR (PLoS)**
- **175.000 scientists in Germany**
- **3 publications per scientist and year**



## Open Access Viable Business Model

**Publishing is not for free!**

**Traditional business models based on income from subscriptions**

**Open Access business model usually based on author fees or institutional membership, but currently heavily dependent on grants**

- **Institutional membership = traditional subscriptions**
- **Grant money = not sustainable**
- **Author fees = many problems**
- **Transition will be very difficult**





## Summary

- **Open Access is an interesting new approach to scientific publishing**
- **Needs more experimenting**
- **Many challenges, risks and open questions**
- **No panacea to solve the serials crisis**
- **For GDCh no reason to assume that as of today its mission can be served better through Open Access**