Preamble

Once upon a time in the history of the STI Open Access

THE RESEARCHER'S WORLD

THE PUBLISHER'S WORLD

A researcher

A publisher

A researcher was always looking for a good idea…

THE RESEARCHER'S SIDE

THE PUBLISHER'S SIDE

When a publisher was always looking for good authors and readers…

THE RESEARCHER'S SIDE

THE PUBLISHER'S SIDE

Sometimes, a researcher would find some really great ideas…

THE RESEARCHER'S SIDE

I have a great idea!
Open Access!

THE PUBLISHER'S SIDE

???

But which Open Access?

THE RESEARCHER'S SIDE

Open Access?

THE PUBLISHER'S SIDE

???

For the researcher : free Open Access!

THE RESEARCHER'S SIDE

THE PUBLISHER'S SIDE

Free Open Access!

?!!

But also…

THE RESEARCHER'S SIDE

THE PUBLISHER'S SIDE

For the publisher: Gold Open Access!

THE RESEARCHER'S SIDE

THE PUBLISHER'S SIDE

Gold Open Access!

?!!

To be continued…

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Open access scientific publishing: opportunities and risks for the users' community

ICIC
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Introduction

→ **Today, the situation of Open Access publishing:**

- → **Increase in STI repositories**
- → **Increase in Open Access Journals**
- → **Increase in "multiplex uses"** (multiple and complex digital uses):
  - → **various sources and formats**
  - → **multilingual information**
  - → **multimedia data**
  - → **different re-use conditions**
  - → **…**

Introduction

→ A SWOT approach to find anwsers to the following questions:

- → Impacts for researchers?
- → Advantages for users?
- → Positions of publishers?
- → Leading business models?
- → Next steps for improvement?

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➡ **This presentation will focus on 4 elements:**

1. **The STI publishing market**
2. **The Open Access routes and business models**
3. **Inventory of the STI Open Access repositories**
4. **The SWOT analysis of the STI Open Access publishing**

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1. The STI publishing market

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➡ STM publishing market was $ 8 billion in 2008

→ An oligopolistic trend market : 3 main players generating 50% of the turnover (Elsevier, Springer-Kluwer Academic Publishers and Thomson Reuters)

→ 2 000 scientific journal publishers: 40% of the publishers are European based, representing 50% of the articles published

→ 25 000 STI journal titles in 2010 (STI and Social Sciences) covering ~ 1,5 million articles published per year

➡ with Open Access

Classic publishing business model (the reader pays)
→ Open Access new business model (the author pays)

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2. The Open Access routes and business models

→ **Berlin declaration on Open Access to knowledge in the STI (2003): endorsed by 300 Universities in 2010**

→ **Several types of supports and contents:**
- → **Subject-based & Institutional Repositories**
  (articles, theses, working papers, proceedings, multimedia material…)
- → **Open access journals**
  (articles)

→ **Open Access stakeholders:**
- → **2/3 of commercial publishers and 1/3 of scholarly and academic publishers.**
- → **Around 120 000 articles published in "full" or "hybrid" OA journals in 2009 (some 8-10% of the estimated yearly global scientific output)**

Three main Open Access routes:
→ **Gold Open Access**
→ **Green Open Access**
→ **Grey Open Access**

2. The Open Access routes and business models

Basic principle :

(from the study "Open Access to the Scientific Journal Literature: Situation 2009")

20% of the total output of peer-reviewed articles "Openly Accessible"

7,7%	8,5%	3,8%
Green Open Access	Gold Open Access	Grey Open Access
Subject-based repositories	Full OA Journals	Hybrid Journals: Subscription Journals (electronic version free after a delay)	Hybrid Journals: Subscription Journals (individual open articles against payment)	Home pages of the authors or their Departments
64%	62%	14%	24%	100%
Possible mandatory deposit for researchers	Volume Strategy	Mixed Strategy	Value Strategy	Personal deposit

2. The Open Access routes and business models

➡ **20% of the total output of peer-reviewed articles "Openly Accessible"**
(from the study "Open Access to the Scientific Journal Literature: Situation 2009")

➡ **On the average, the distribution of these 20% OA peer-reviewed articles is:**

- → **Green Open Access: 40%**
- → **Grey Open Access: 20%**

] **60%**

- → **Gold Open Access: 40%**

→ **60% of these OA articles do not have any additional costs**

- → **Green and Grey Open Access: no business models**
- → **The deposit does not require a fee (free full text copies of the articles from Gold Open Access)**

→ **40% of these OA articles may have additional costs**
(¼ of these 40% are linked to the author-pays model "to pay to be in")

- → **Gold Open Access: linked to business models**
- → **The deposit of an OA article can be charged, depending on the positioning of the publisher (commercial or academic)**

2. The Open Access routes and business models

3 main strategies with 3 business models in the Gold Open Access: 2 offensive strategies, 1 defensive strategy

→ Offensive strategies

→ **Full Open Access positioning (offensive strategy based on volume)**:
- → **Offensive strategy**: increase Open Access content on its website / portal
- → **Objective**: capture new readers who will become new clients
- → **No cost should be applied** to this Open Access deposit

→ **Selective Open Access positioning (offensive strategy based on value)**:
- → **Offensive strategy**: deal individual open articles with the author (against payment)
- → **Objective**: select the best Open Access output because it is the key to success to compete against other Journals
- → **Each demand (rejected or validated) would be charged** per deposit or per year

2. The Open Access routes and business models

➔ **Defensive strategy**

→ **Mixed Open Access positioning (defensive strategy based on mixed offer)**:

→ **Defensive strategy**: control the value chain of the STI publishing

→ **Objective**: allow free open access content after a delay in order to keep actual clients and attract new ones

→ **No cost should be applied** to this Open Access deposit

2. The Open Access routes and business models

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Open Access deposit prices and re-use conditions:

➡ **Price range for the deposit of an OA article in a Hybrid Journal** (including publishing and scientific reading committee costs for validating or rejecting the article):

→ **An average cost of $ 2300 per article**

→ **A fixed annual cost (from $ 500)**

➡ **Full or optional Open access:**

→ **Gratis OA: no-cost online access**

→ **Libre OA: some additional usage rights**

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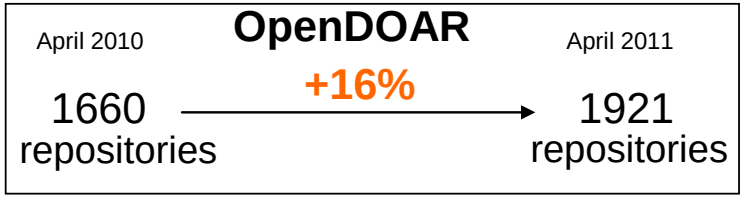
3. Inventory of the STI Open Access repositories

"No cost to be in"



→ Over 2100 Open Access Repositories as of October 2011

→ TOP 5 countries:
USA (19%), UK (9,5%), Germany (7%), Japan (6,5%), Spain (3,5%)

→ Over 18 million records

→ Prevalence of Journal articles in over 66% of the repositories

→ Most represented languages in repositories:
English (76%), Spanish (10%), German (9%), Japanese (7%), French (6%)

3. Inventory of the STI Open Access repositories

Green Open Access

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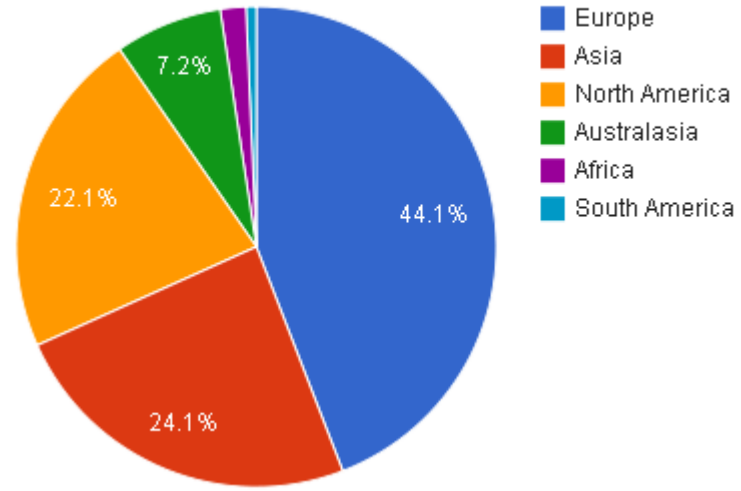
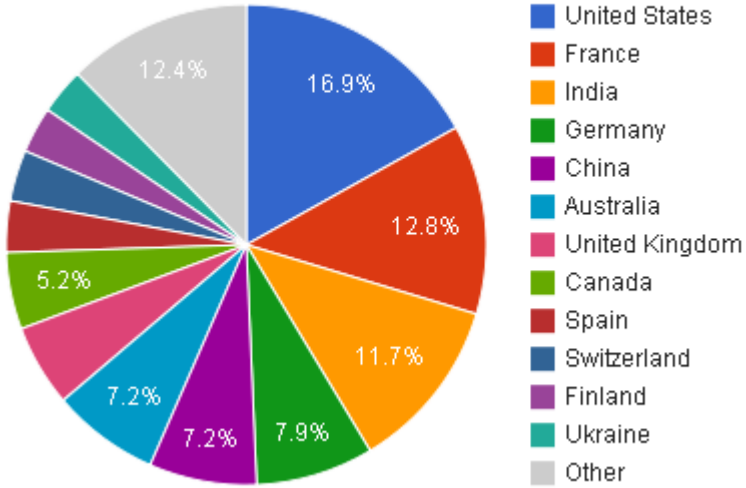
Focus on Open Access in Chemistry and Chemical Technology:

→ 2,5% of the worldwide open access repositories : 51 repositories (44% in Europe)
→ Over 1 million records
→ The 6 TOP contributing countries: USA, France, India, Germany, China, Australia (these 6 countries representing 63%)

Proportion of Repositories by Continent - Worldwide, Chemistry and Chemical Technology



Proportion of Repositories by Country - Worldwide, Chemistry and Chemical Technology



3. Inventory of the STI Open Access repositories

Gold Open Access Journals

"To pay to be in"

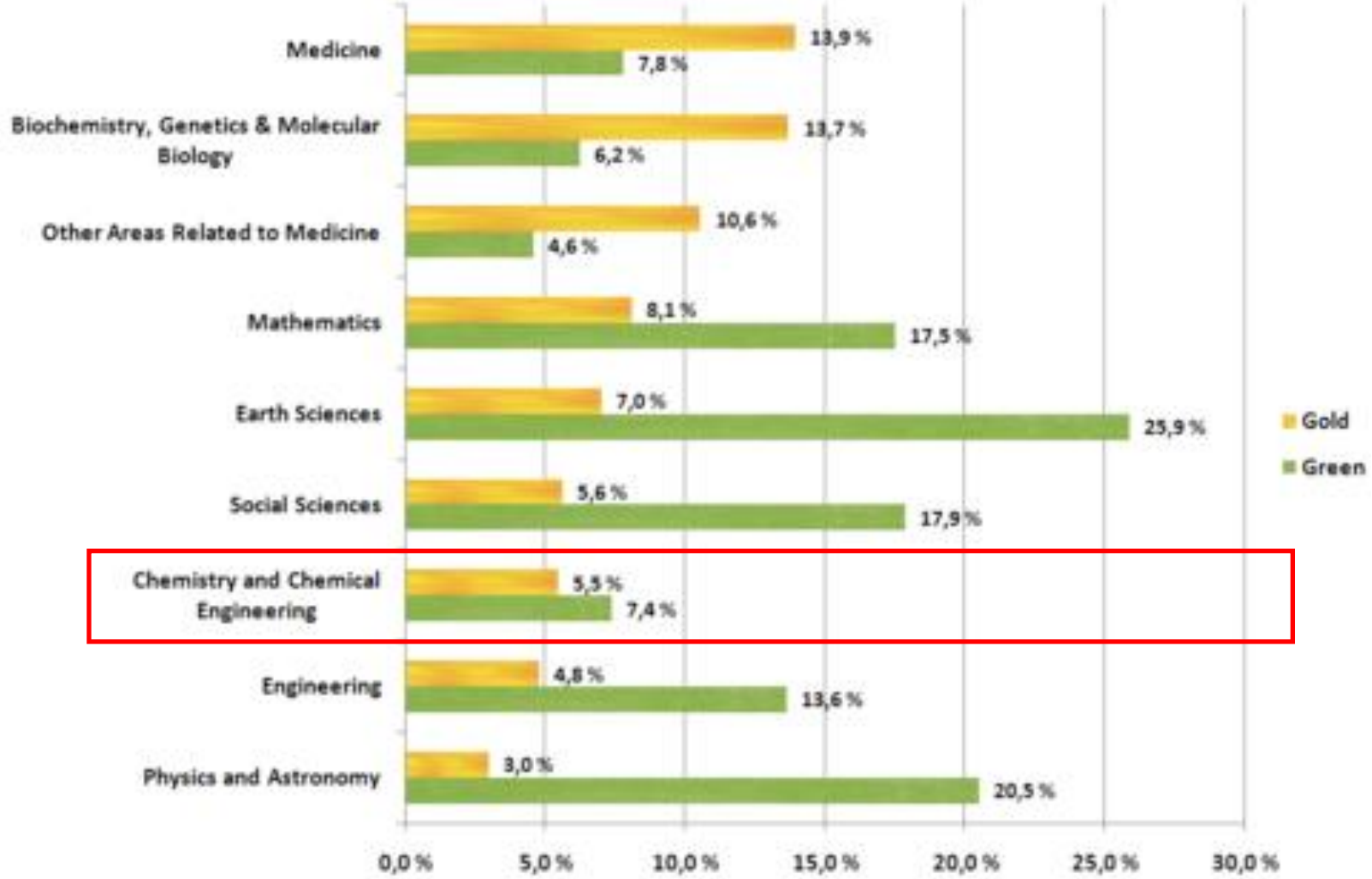
October 2010	DOAJ	October 2011
5452 titles	+31% →	7179 titles

→ Over 7100 Open Access Journals as of October 2011 (+31% since 2010)
(Directory of Open Access Journals : OA Journals with peer reviewing)

→ Over 650 000 articles as of October 2011

Subjects Chemistry: 145 journals (2% of DOAJ)
- → Analytical Chemistry (15 journals)
- → Chemical Engineering (15 journals)
- → Chemistry (General) (97 journals)
- → Inorganic Chemistry (4 journals)
- → Organic Chemistry (14 journals)

3. Inventory of the STI Open Access repositories



(from the study "Open Access to the Scientific Journal Literature: Situation 2009")

3. Inventory of the STI Open Access repositories

"No cost to be in"

websites

October 2010		October 2011
~ 253 websites	**+34%** →	~ 340 websites

Grey Open acess

→ Scientific publications available to users on the **author's personal websites**, Department's websites, blogs or social networks

→ **Deposits can depend upon agreements** with the author's publishers

→ **"Personal websites":**

- → **Referencing poorly optimized for search engines**
- → **Not always a scientific reading committee to validate the documents**
- → **Long term permanency of these websites not guaranteed**

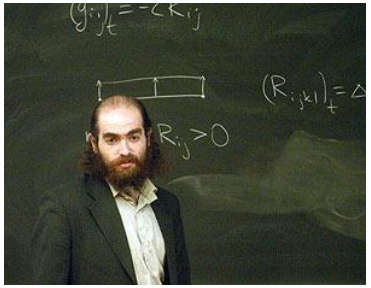
3. Inventory of the STI Open Access repositories

The example of the finest Grey/Green Open Access deposit:

In November 2002, Perelman posted the first of a series of eprints to the arXiv, in which he claimed to have outlined a proof of the geometrization conjecture, of which the Poincaré conjecture is a particular case.

Grigori Perelman

Born: 13 June 1966 (age 45)
Leningrad, Soviet Union
Fields: Mathematics
Alma mater: Leningrad State University
Doctoral advisor: Aleksandr Aleksandrov, Yuri Burago
Known for: Riemannian geometry and geometric topology
Notable awards: EMS Prize (1996), declined - Fields Medal (2006), declined - Millennium Prize (2010), declined
(WIKIPEDIA)



A high-value scientific article is no longer exclusively available on Publisher Journals.

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4. The SWOT analysis of the STI Open Access publishing

Advantages for the author

- → **Free availability of the content to readers**
- → **Quality of the OA journal** (in **several disciplines** including Life Sciences, Medicine, and Earth Sciences, journals have **Impact Factors** in the **top 1-2%** of their disciplines)
- → **Speed of publication**
- → **In some cases, no fee to be paid directly by the author**
- → **A better visibility and accessibility of the authors: Open Access encourages citations** (linked to the **H-index** for the author**…**)

Disadvantages for the author

- → **Some Open Access journals require a fee to publish**
- → **The lack of journals of sufficient quality (impact factor of the journal not often confirmed) :** many fields of research have few or no good Open Access journals
- → **The author-pays model obstructs free and open exchange of scientific results**

4. The SWOT analysis of the STI Open Access publishing

➔ Opportunities for the publisher

→ **Enhances new Open Access content by:**

→ **Increasing the interoperability due to standards (OAI, XML,…) providing solutions for agregating data and metadata**

→ **Creating smart tools and applications to connect databases and structure the information with a high-added value provided by human analysis**

→ **Proposes 2.0/3.0 Web innovative applications to:**

→ **Promote editorial content with social contribution by the users (alternate reading committee)**

→ **Improve the reliability of online documents in a collaborative mode with authors**

→ **Develops intelligent multimedia search engines with innovative functionalities to assist the user** (ontology, cross-lingual function, semantic web, multimedia search, …)

4. The SWOT analysis of the STI Open Access publishing

➔ Risks for the publisher

→ **Risk due to competition with its own author-pay readers** (despite of other Journals or publishers)

→ **Publishing value chain** is moving towards to free open access

→ **Uncontrolled new business models:**

- → Risk of not having subscription income : should find an adequate revenue stream from fees versus from subscriptions
- → Subcription vs on-demand purchases vs fees vs advertising ?

→ **Asymetric evolution of the impact factor** for journals and the **H-index** of author

4. The SWOT analysis of the STI Open Access publishing

➡ **Advantages for the user**

→ **OA offers a free & easy access to the full text**
(no IP tracking, no cost)

→ **OA complements competitive intelligence devices** by monitoring Open Access alternative sources in addition to publishers' offers by:

- → **Identifying the authors, laboratories, R&D centers and players**
- → **Tracking pre- and post-prints**
- → **Analysing STI publishing signs: mapping experts in territories, countries, topics and networks**
- → **Confirming trends**
- → **Predicting the evolution of the challenges, R&D ongoing works, partnerships and expert networks**

➡ **Disadvantages for the user**

- → **Differences in the document quality and the re-use conditions, depending on the topics, repositories, and journals**
- → **Reliability and status of the documents available** (different versions)
- → **Spending a lot of time in searching** (no database links, no cross-lingualism)

4. The SWOT analysis of the STI Open Access publishing

➡ **Preventive actions to be taken by the user:**

→ **Ascertain the presence of scientific reading committees**

→ **Differentiate between the final draft & published document**

→ **Verify the deadlines of the documents' online settings (time required to validate document by the reading committee) and the data re-use conditions (SHERPA/RoMEO database on self-archiving publishing policies)**

4. The SWOT analysis of the STI Open Access publishing

➔ Prospective elements: "new economy" and Open Access

→ A continuous increase in Open Access use and offer:
- → Open Access data retrieval covers ~ 15% of STI data retrieval
- → Could increase up to 30% - 40% in the horizon 2015-2020
- → Main information searches are in English but multilingualism is becoming prevalent

→ New devices should enhance the Open Access content with:
- → Semi-automatic translations
- → Cross–lingual searches
- → ICT innovative solutions (STT, TTS, multimedia searches…)

→ Trends in Green and Gold Open Access should optimize:
- → The share in knowledge (web 2.0, web 3.0)
- → The mobility of the users (multimode peripherals, social networks, web semantics…)

4. The SWOT analysis of the STI Open Access publishing

But uses are now multiplex…

Conclusion

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➡ **Ultimate Open Access keys to success:**

- → A **free access** to full-text documents,
- → A **better visibility** of the authors, encouraging citations
- → Important sources for complementing a professional **competitive intelligence***
- → An **additional high-value content** for publishers to be proposed in the profesional databases, publishers' portals…

➡ **Several questions remain:**

- → The **status** of the document
- → The **time and the costs involved in reviewing** for approval by experts
- → **Conditions related to data re-use** following copyright prescriptions

➡ **The challenges of Open Access are both organisational and financial depending upon:**

- → The evolution of the STI publishing **chain value**
- → The future of Open Access as a **mature and widespread process** in in the prospective scenarios for STI within 10-20 years

* Example – Open Access monitoring

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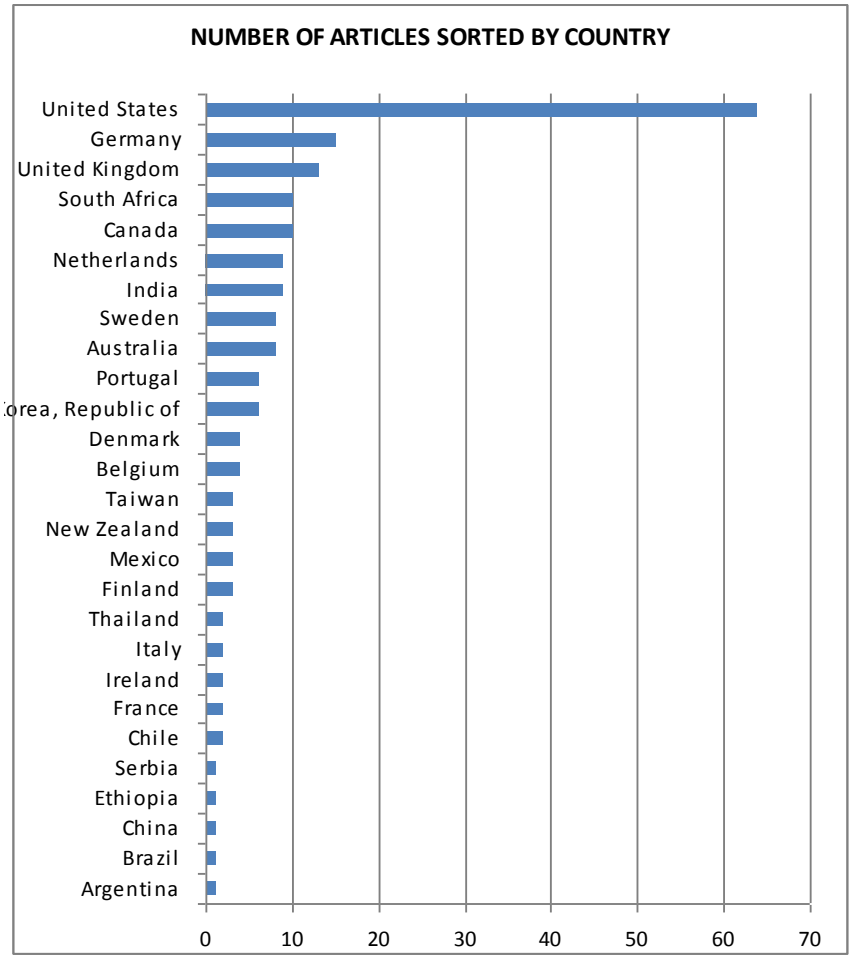
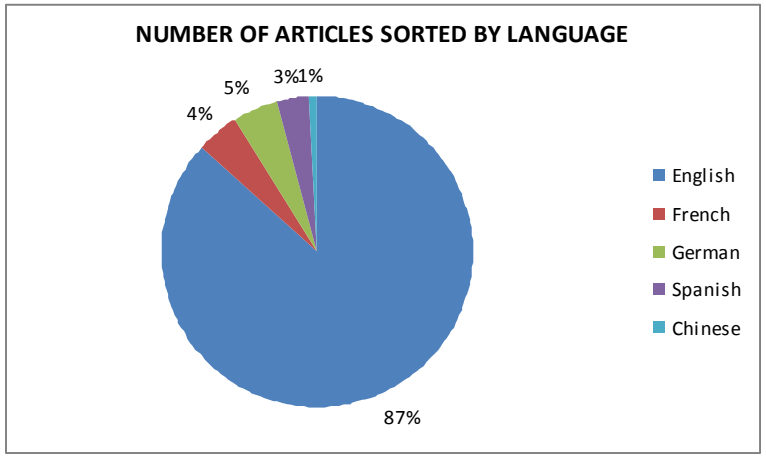
Succinic acid – Open Access results from Open DOAR (September 2011)



193 results
(number of records)



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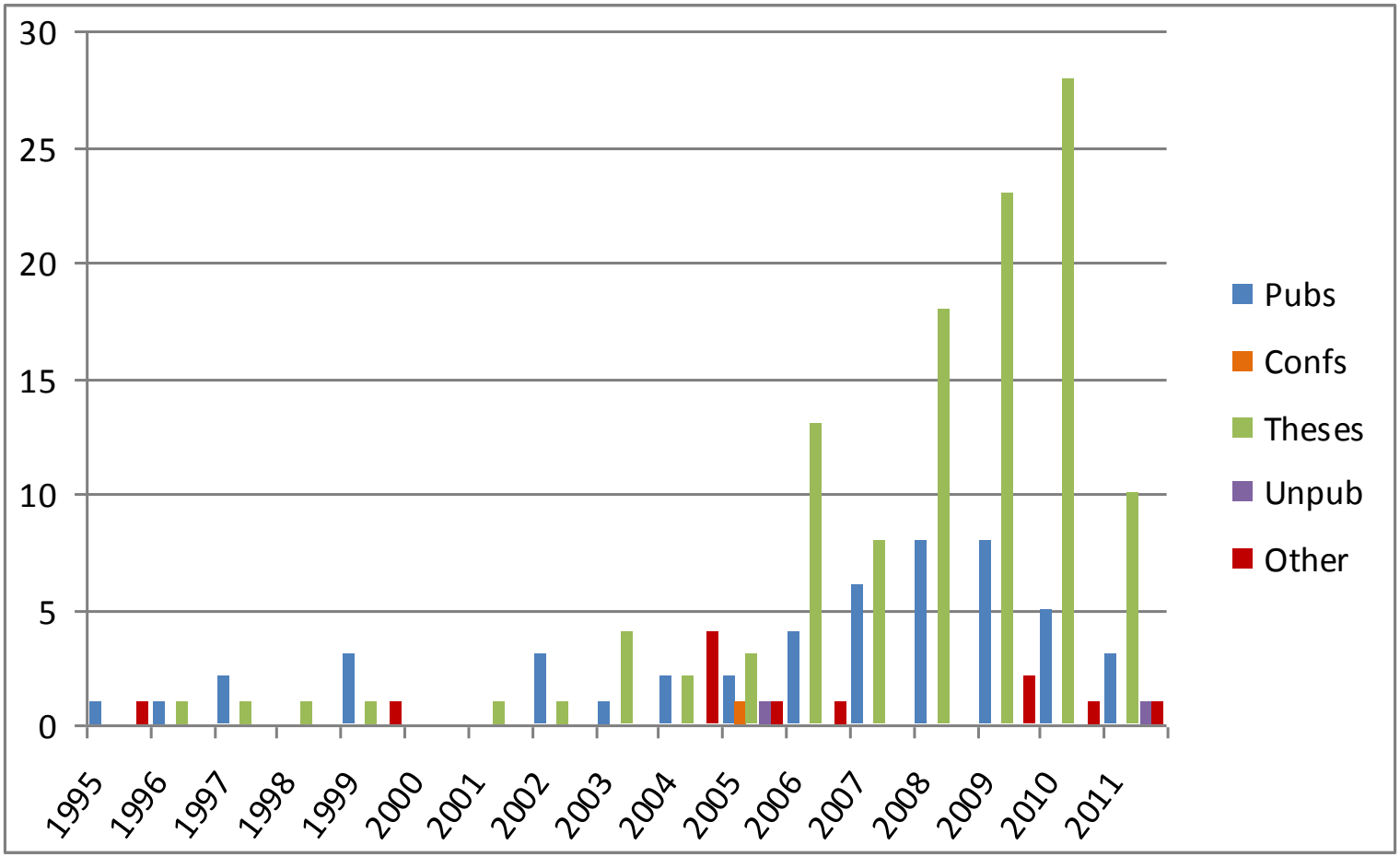

* Example – Open Access monitoring

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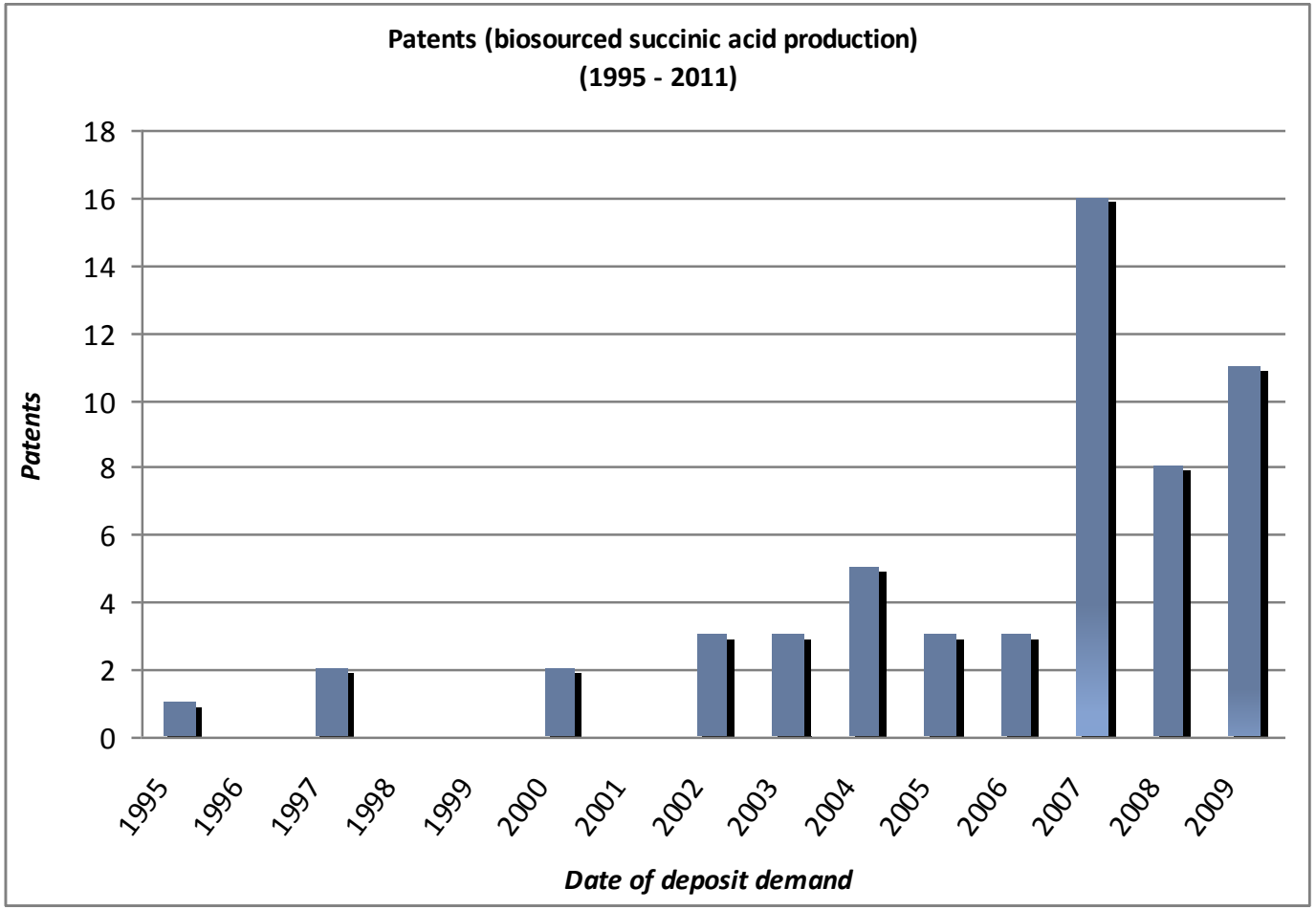
Succinic acid – Patent results from Espacenet, INPI (September 2011)



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Thank you for you attention
Any questions ?

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