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Scientific Writing

May 10, 2016

Aina Svensson, Electronic Publishing Centre
Uppsala University Library



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Content

- About DiVA
- What is Open Access
- Journals – different models
- Research funders
- How to publish Open Access
- Library support



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Electronic Publishing Centre (EPC)

- About us
 - We give support to researchers and staff on publishing issues diva-helpdesk@ub.uu.se
 - We handle the entire publication process for doctoral theses and give advice in graphic design.
 - We work for increased open access publishing at Uppsala University.
 - We lead the development of the database DiVA.

We are located in
Carolina Rediviva





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What is DiVA?

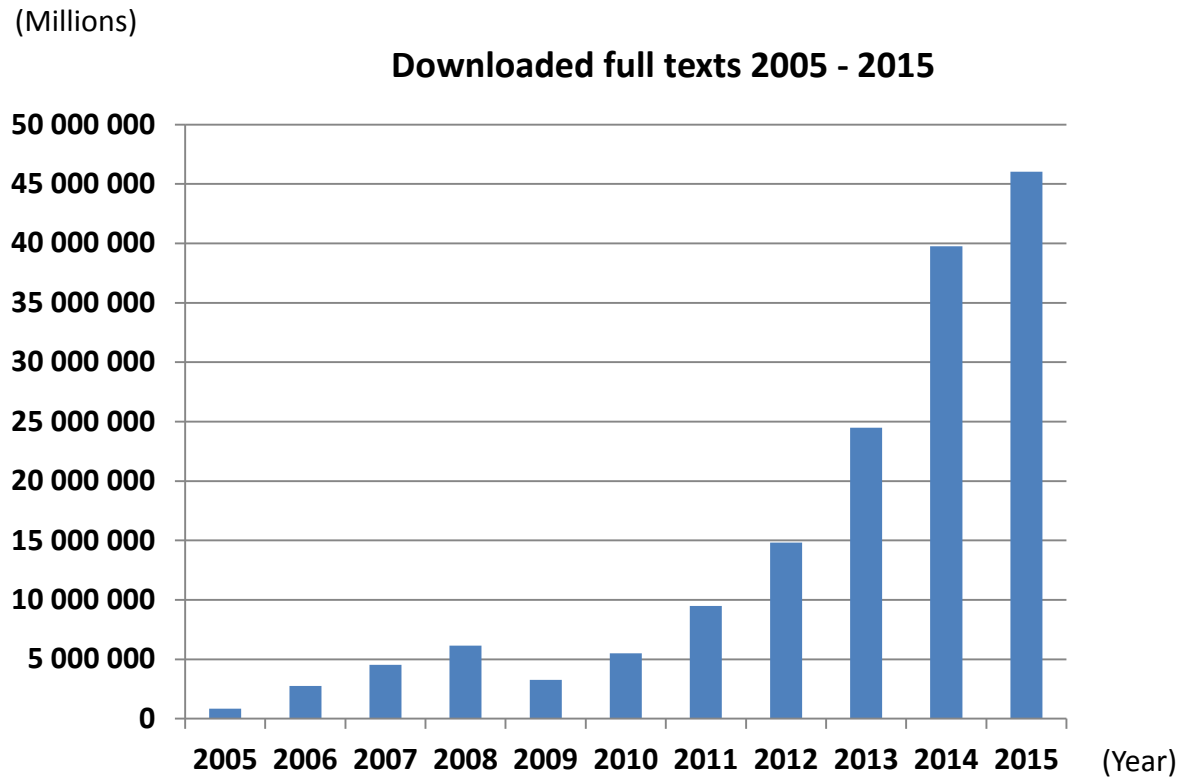
- DiVA is an institutional repository for scholarly publications.
 - Contains all kind of publications produced by researchers, teachers and students.
 - Open to everyone to search, full texts in DiVA are free to read and download.





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DiVA web statistics



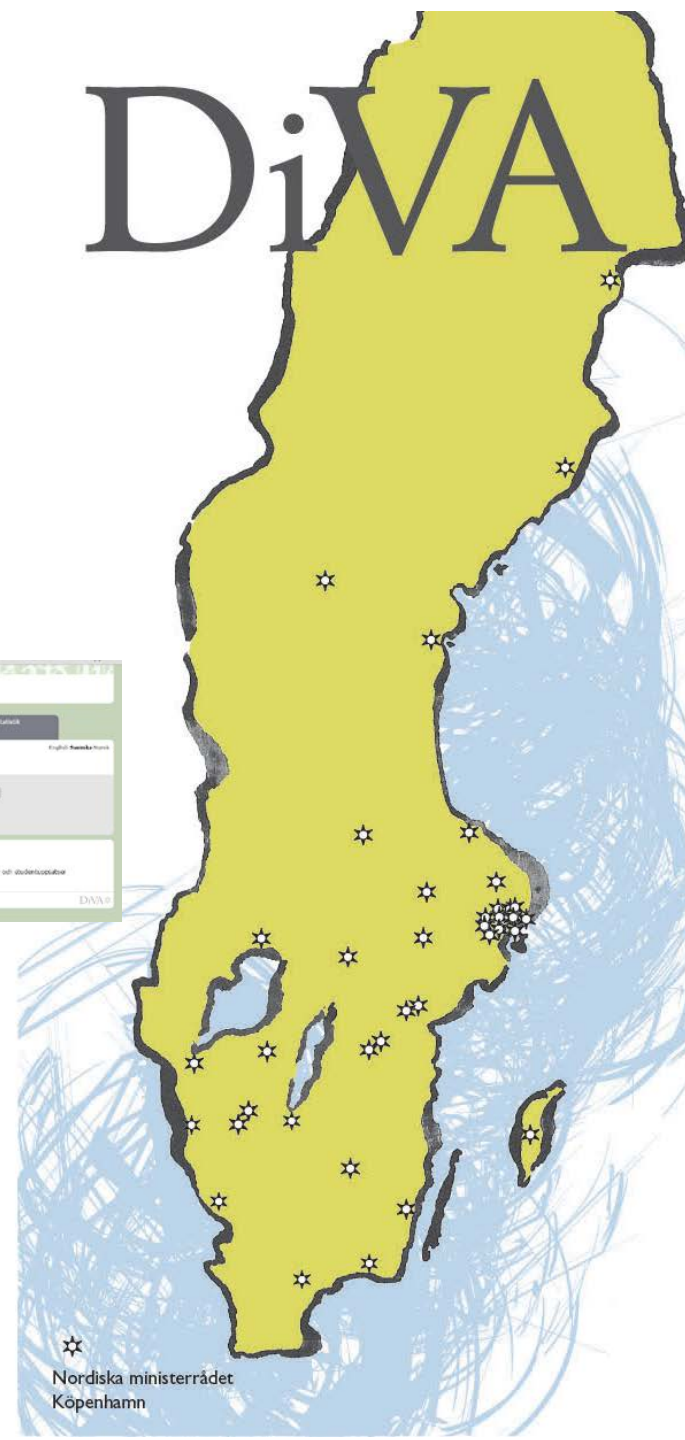
DiVA-portal contains 230 000 full texts (830 000 references)



DiVA publishing system:

- Used by 40 universities and other organisations
- Common layout but different colours and logos – local search interface
- A common search tool: DiVA-portal
- Joint financing by members

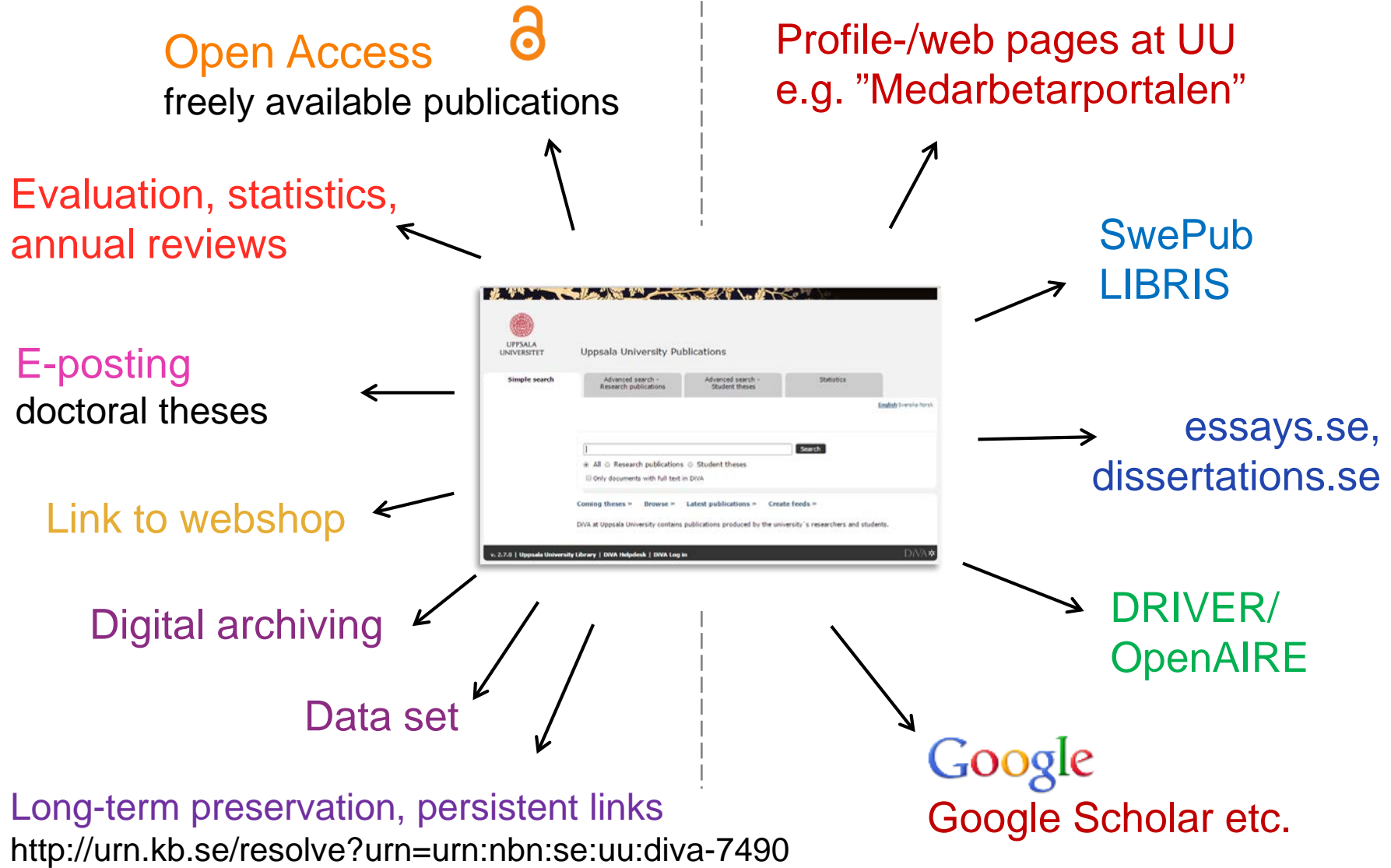
DiVA





How DiVA is used

Dissemination





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Search interface – DiVA at Uppsala University

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Uppsala University Publications

Simple search Advanced search - Research publications Advanced search - Student theses Statistics

[English](#) Svenska Norsk

☒ All ☐ Research publications ☐ Student theses

☐ Only documents with full text in DiVA

[Coming theses >>](#) [Browse >>](#) [Latest publications >>](#) [Create feeds >>](#)

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Coming PhD theses for public defence





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🏠 ▶ **Coming theses**

1 - 45 of 45 [Link to result list](#)

Public defence: 2016-05-11 09:15 Rudbecksalen, Uppsala

▶ Baliakas, Panagiotis

Reappraising prognosis in chronic lymphocytic leukemia

2016

Doctoral thesis, comprehensive summary (Other academic)

PDF

▶ Abstract [en]

Public defence: 2016-05-11 09:15 Polhemsalen, Ångströmlaboratoriet, Uppsala

▶ Jeong, Seung Hee

Soft Intelligence: Liquids Matter in Compliant Microsystems

2016

Doctoral thesis, comprehensive summary (Other academic)

PDF

▶ Abstract [en]

Public defence: 2016-05-13 09:15 Å80101, Ångströmlaboratoriet, Uppsala

▶ Lüder, Johann

Complex Excitations in Advanced Functional Materials

2016

Doctoral thesis, comprehensive summary (Other academic)

PDF

▶ Abstract [en]

Public defence: 2016-05-13 09:15 Auditorium Minus, Museum Gustavianum, Uppsala

▶ Rosqvist, Fredrik

Dietary Fatty Acids, Body Composition and Ectopic Fat : Results from Overfeeding Studies in Humans

2016

Doctoral thesis, comprehensive summary (Other academic)

PDF

▶ Abstract [en]



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Open Access or not?

- The PhD thesis as an example
 - The comprehensive summary of the PhD thesis is freely available to read and download from DiVA – Open Access
 - But what about the included articles, already published (or accepted) in a journal...??

The comprehensive summary – open access in DiVA

The screenshot shows the Uppsala University Publications website. At the top is the Uppsala University logo and name. Below it are search options: Simple search, Advanced search - Research publications, Advanced search - Student theses, and Statistics. A language selector shows English, Svenska, and Norsk. A search bar contains the text 'Change search'. Below the search bar, a breadcrumb trail reads: Simple search > Result list (kinetic energy storage) > Kinetic Energy Storage and Magnetic Bearings: for Vehicular Applica... The page shows 'References' with a pagination bar indicating '2 of 19' records. A 'Link to record' button and a 'Share' button are visible. The main content area displays the title 'Kinetic Energy Storage and Magnetic Bearings: for Vehicular Applications' by Abrahamsson, Johan. It includes the author's affiliation (Uppsala University, Department of Engineering Sciences, Electricity), the year (2014), and the language (English). The document type is 'Doctoral thesis, comprehensive summary (Other academic)'. An 'Abstract [en]' section follows, describing the challenges of electric cars and the design of a composite shell. To the right of the abstract is a thumbnail image of the thesis cover. Below the thumbnail, the text 'Open Access in DiVA' is circled in blue. Under this, it says 'fulltext (87514 kB)' and '2286 downloads'. Below that is a 'Buy this publication >>' link. At the bottom, there is a 'Search in DiVA' section with 'By author/editor' (Abrahamsson, Johan) and 'By organisation' (Electricity).

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Uppsala University Publications

Simple search Advanced search - Research publications Advanced search - Student theses Statistics

English Svenska Norsk

Change search

Simple search > Result list (kinetic energy storage) > Kinetic Energy Storage and Magnetic Bearings: for Vehicular Applica...

References 1 2 3 4 5 6 7 2 of 19 Link to record

<<Back to result list Share

Kinetic Energy Storage and Magnetic Bearings: for Vehicular Applications

Abrahamsson, Johan
Uppsala University, Disciplinary Domain of Science and Technology, Technology, Department of Engineering Sciences, Electricity.

2014 (English)
Doctoral thesis, comprehensive summary (Other academic)

Abstract [en]

One of the main challenges in order to make electric cars competitive with gas-powered cars is in the improvement of the electric power system. Although many of the energy sources currently used in electric vehicles have sufficiently high specific energy, their applicability is limited due to low specific power. It would therefore be advantageous to create a driveline with the main energy storage separated from a smaller energy buffer, designed to have high power capabilities and to withstand frequent and deep discharge cycles. It has been found that rotating kinetic energy storage in flywheels is very well suited for this type of application.

A composite shell, comprising an inner part made of glassfiber and an outer part made of carbonfiber, was analyzed analytically and numerically, designed, and constructed. The shell was fitted onto a metallic rotor using shrinkfitting. The cost of the shell, and the complexity of assembly, was reduced by winding the glass- and carbonfiber consecutively on a mandrel, and curing the complete assembly simultaneously. Thereby, the shell obtained an internal segmentation, without the need for fitting several concentric parts onto each other. The radial stress inside the composite shell was kept compressive thanks to a novel approach of using the permanent magnets of the integrated electric machine to provide radial mechanical load during rotation.

Two thrust bearing units (one upper and one lower) comprising one segmented unit with the permanent magnets in a cylindrical Halbach configuration and one non-segmented unit in a up/down configuration were optimized, constructed and tested. Each thrust bearing unit generated 1040 N of repelling force, and a positive axial stiffness of 169 N/mm at the nominal airgap of 5 mm.

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Abrahamsson, Johan
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Electricity

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Simple search

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Research publications

Advanced search -
Student theses

Statistics

Coming theses ▶ Exploring Organic Dyes for Grätzel Cells Using Time-Resolved Spectroscopy...

English Svenska Norsk

References

<<Back to result list

4 of 36

Link to record

Share

Exploring Organic Dyes for Grätzel Cells Using Time-Resolved Spectroscopy

El-Zohry, Ahmed M.

Uppsala University, Disciplinary Domain of Science and Technology, Chemistry, Department of Chemistry - Ångström.

2015 (English)

Doctoral thesis, comprehensive

Abstract [en]

Grätzel cells or Dye-Sensitized Solar Cells (DSSCs) convert the sun's energy into electricity. A Grätzel cell is based on a photosensitizer which can be a metal complex or a dye. The resulting in cheaper dyes than cells based on metal-free, or on the electron dynamics. The recombination, and regeneration of the cells' performance.

In this thesis, the electron dynamics are studied using time-correlated single photon counting (TCSPC) and femtosecond pump-probe spectroscopy. Using these techniques, new insights into the electron transfer processes have been obtained. These processes include photoinduced electron transfer. These deactivation processes are avoided. For instance, the photoinduced electron transfer in isomers with unknown performance has been shown before, but is shown to occur in several organic dyes, among them D149, D102, L0 and L0Br. In addition, D149 forms ground state complexes with the standard iodide/triiodide electrolyte, which directly affect the electron dynamics on TiO₂. Also, new dyes were designed with the aim of using ferrocene(s) as intramolecular regenerators, and their dynamics was studied by transient absorption.

Available from: 2015-10-22 Created: 2015-09-27 Last updated: 2015-10-27

List of papers

1. Isomerization and Aggregation of the Solar Cell Dye D149
2. Photoisomerization of the cyanoacrylic acid acceptor group - a potential problem for organic dyes in solar cells
3. Ultrafast Twisting of the Indoline Donor Unit Utilized in Solar Cell Dyes: Experimental and Theoretical Studies
4. Fine-Tuning of the Twisted Intramolecular Charge Transfer (TICT) Energy Level by Dimerisation - An Overlooked Piece of the TICT Puzzle
5. Concentration and Solvent Effects on the Excited State Dynamics of the Solar Cell Dye D149: The Special Role of Protons
6. Dimer formation for Indoline Dyes in Solutions and Proton Impact on Surfaces
7. Interactions with Iodide Electrolyte Affect the Electrons Dynamics in Grätzel Cells
8. Ferrocene as a Rapid Charge Regenerator in Grätzel Cells

References

<<Back to result list

4 of 36

Link to record

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What about the included articles
– Open Access or not?

Article 1: Accessible only for subscribers

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Isomerization and Aggregation of the Solar Cell Dye D149

Ahmed El-Zohry, Andreas Orthaber, and Burkhard Zietz*
Department of Chemistry - Ångström Laboratories, Box 523, SE-751 20 Uppsala, Sweden

J. Phys. Chem. C, 2012, 116 (50), pp 26144–26153
DOI: 10.1021/jp306636w
Publication Date (Web): November 26, 2012
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*E-mail: burkhard.zietz@kemi.uu.se

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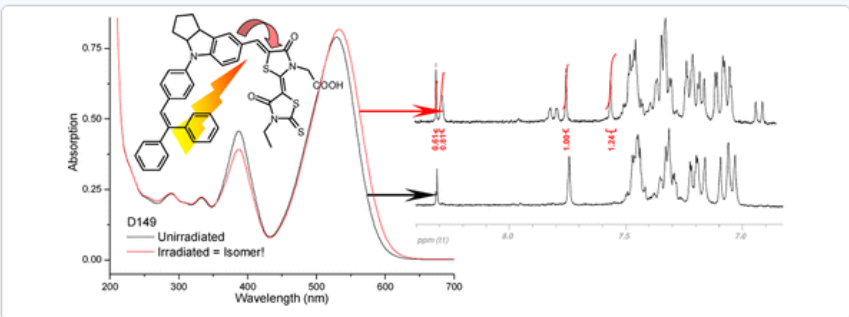
☒ Author of this Article
☐ Any Author
☐ Research Topic

El-Zohry, Ahmed

Tools & Sharing

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Abstract



D149, a metal-free indoline dye, is one of the most promising sensitizers for dye-sensitized solar cells (DSSCs) and has shown very high solar energy conversion efficiencies of 9%.

Article 2: Accessible for all (open access)

Journal Home Previous Article Next Article

Physical Chemistry Chemical Physics Issue 6, 2014

High quality research in physical chemistry, chemical physics and biophysical chemistry.

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Communication

Photoisomerization of the cyanoacrylic acid acceptor group – a potential problem for organic dyes in solar cells

Burkhard Zietz,^{*a} Erik Gabrielsson,^b Viktor Johansson,^c Ahmed M. El-Zohry,^a Licheng Sun^b and Lars Kloo^{*c}

Show Affiliations

Phys. Chem. Chem. Phys., 2014, **16**, 2251-2255
DOI: 10.1039/C3CP54048K
Received 04 Oct 2013, Accepted 28 Nov 2013
First published online 28 Nov 2013

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☐ Burkhard Zietz
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- or check for information on the journal's website!



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List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Johansson T., Bengtsson O., Lotfi S., Vestling L., Norström H., Olsson J., Nyström C. (2013) A +32 dBm LDMOS power amplifier for WLAN in 65 nm CMOS technology. *European Microwave Integrated Circuits Conference*, p. 53-56
- II Lotfi S., Bengtsson O., Olsson J. (2014) 65 nm CMOS integrated LDMOS for WLAN and X-band applications. Submitted to *IEEE Transactions on Electron Devices*
- III Lotfi S., Olsson J. (2013) Investigating reliability and stress mechanisms of DC stressed CMOS 65 nm RF-LDMOS by full gate current characterization. Submitted to *IEEE Transactions on Device and Materials Reliability*
- IV Lotfi S., Li L-G., Vallin Ö., Norström H., Olsson J. (2012) Fabrication and Characterization of 150 nm Silicon-on-Polycrystalline-Silicon Carbide Substrates. *Journal of Electronic Materials*, 41(3):480-487
- V Lotfi S., Li L-G., Vallin Ö., Vestling L., Norström H., Olsson J. (2012) LDMOS-transistors on semi-insulating silicon-on-polycrystalline-silicon carbide for improved RF and thermal properties. *Solid-State Electronics*, 70:14-19
- VI Lotfi S., Vestling L., Olsson J. (2013) RF losses, crosstalk and temperature dependence for SOI and Si/SiC hybrid substrates, *Solid-State Electronics*, accepted for publication.

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Scientific journals

- Different models
 - Subscription-based journals
 - Hybrid journals
 - Open access journals

In common: peer-review!



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Subscription-based journals

- Articles available only to readers with subscriptions
 - eg. at University campus
- Copyright is transferred to the publisher/journal
- Usually no general publishing fees
 - exception for colour images etc

→ University libraries pay annually (with money from faculties)
for access to articles





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Hybrid journals

- Many subscription-based publishers have an option for authors to have their particular article made OA
 - For an additional fee (ca \$ 3000 per article)

→ Libraries pay for subscriptions AND researchers pay for wider dissemination





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Open access journals

- Articles are freely available for everyone
 - Authors retain copyright – free to reuse article
 - No subscription costs
 - Cover their expenses through article-processing fees (APCs), sometimes sponsorship
 - Publishing fees ca \$200 - \$3000
- ➔ Business model: pay once per article for *publishing* no extra cost for access





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Who pays for the OA-publishing costs?

Since the OA-model is quite new, there is not one single model

- Research funders, the research project
- University/University Library
 - Membership in OA publishing houses
 - BioMed Central at UU
 - Universities with central OA funds
 - not yet at UU (in Sweden only Lund and Chalmers have OA funds)
- For OA options in subscription based journals
 - Sometimes discounts are offered, due to the fact that the library subscribes to one or more of the publisher's products (e.g. RSC, ACS)

Check out - discounts on the article-processing fee at UU:

<https://mp.uu.se/c/perm/link?p=1367619>



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To summarize - what is open access?

- Free availability of scientific publications on the Internet
 - Free for everyone to read, download, share – taking full account of the authors' copyright

Meaning ...

- More people can get access to scientific publications
- Research findings can be used to a larger extent
- And cited more!

To make best use of today's technology!



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Important to consider

Who are the readers – do they have access to your research findings?



- Other researchers
 - in the same discipline
 - in related disciplines
 - in places with restricted access
- Academics/practitioners outside the University
 - authorities, industry, health care centers etc.
- The public



Publicly funded research should be freely available to everybody



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Research funders with OA mandates (examples)

- Wellcome Trust, 2005-
- National Institute of Health (NIH), 2008-
- European Research Council (ERC), 2008-
- Swedish Research Council (VR), 2010-
- Formas, 2010-
- Riksbankens Jubileumsfond (RJ), 2010-
- Knut och Alice Wallenberg Foundation, 2010-
- FORTE, Swedish Research Council for Health, Working Life and Welfare, 2012-
- Swedish Environmental Protection Agency, 2014-
- Horizon 2020, EU, 2014
 - Complete list at: <http://www.sherpa.ac.uk/juliet/>



➔ Publications (journal/conference articles) must be made freely available!



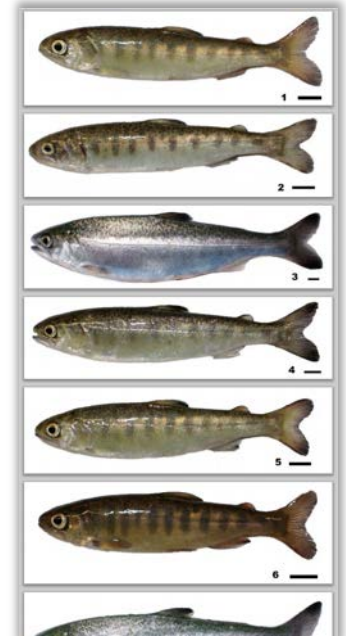
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Research data – open science

- Many funders also have requirements for research data.
 - A "data management plan" - a document outlining how the research data collected or generated, will be handled during and after a research project. And if possible make it open.
- Open data is data that is free to access, reuse, repurpose, and redistribute (exception for sensitive data).
 - To increase research quality, transparency and scientific progress.
- Data archives
 - Subject-specific archives/databases.
 - DiVA - Data sets can be archived and published in DiVA.

Article in DiVA with data set

Survey_ID	Fish_ID	Genotype	Fish_type	W1	L1	W2	L2	Centroid_LX	Centroid_LY
1	13c36e52	W	Wm					156.4	1.23E-03
2	2c406080	T	Ts					150.4	2.01E-03
3	3 W250	W	Wm					139.8	0.98E-04
4	4 F0e13728	T	Ts					147.7	-5.14E-03
5	5 F0e125c1	T	Ts					157.2	-4.41E-04
6	6 F0e1090c	W	Wm					157.4	-4.41E-04
7	7 W254	W	Wm					157.4	-4.41E-04
8	8 F0e1048c	T	Ts					157.4	-4.41E-04
9	9 F0e102ac	T	Ts					157.4	-4.41E-04
10	10 F0e102ac	W	Wm					157.4	-4.41E-04
11	11 F0e10493	T	Ts					157.4	-4.41E-04
12	12 W244	W	Wm					157.4	-4.41E-04
13	13 F0e108fa	T	Ts					157.4	-4.41E-04
14	14 F0e102ac	T	Ts					157.4	-4.41E-04
15	15 F0e1092a	T	Ts					157.4	-4.41E-04
16	16 F0e1092a	W	Wm					157.4	-4.41E-04
17	17 F0e1092a	W	Wm					157.4	-4.41E-04
18	18 F0e1092a	T	Ts					157.4	-4.41E-04
19	19 F0e1092a	T	Ts					157.4	-4.41E-04
20	20 F0e1092a	W	Wm					157.4	-4.41E-04
21	21 F0e1092a	W	Wm					157.4	-4.41E-04



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Simple search

Advanced search -
Research publications

Advanced search -
Student theses

Statistics

Change search

Simple search ▶ Result list (fredrik sundström accuracy) ▶ Accuracy of nonmolecular identification of growth-hormone-transgeni...

References

1 of 1

Link to record

Share

Accuracy of nonmolecular identification of growth-hormone-transgenic coho salmon after simulated escape

▶ Sundström, Fredrik
Uppsala University, Disciplinary Domain of Science and Technology, Biology, Department of Ecology and Genetics, Animal ecology.
ORCID ID: 0000-0002-3157-7289

▶ Löhmus, Mare
Karolinska Institute Stockholm, Sweden.

▶ Devlin, Robert
DFO Centre for Aquaculture and Environmental Research, West Vancouver, Canada.

2015 (English)

In: Ecological Applications, ISSN 1051-0761, E-ISSN 1939-5582, Vol. 25, no 6, 1618-1629 p.

Article in journal (Refereed) Published

Abstract [en]

Concerns with transgenic animals include the potential ecological risks associated with release into the natural environment, and a critical requirement for assessment of ecological effects is to distinguish transgenic animals from wild type. Here, we explore geometric morphometrics and human expertise to distinguish growth-hormone-transgenic coho salmon (*Oncorhynchus kisutch*) specimens from wild type. First, we simulated an escape of 3-month-old hatchery-reared transgenic fish to an artificial stream, and reconstructed them at the time of simulated escape.

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65 downloads
- Codes for rawdata (1 kB)
43 downloads
- Photos for survey (1774 kB)
33 downloads
- fulltext (431 kB)
48 downloads

Other links

Publisher's full text



SUPPLEMENTAL MATERIAL

Data Availability

Data associated with this paper are available from Uppsala University: <http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-242002>



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Publish open access

- How to comply with OA requirements?
 - Largely depend on the policy of the publisher of the journal you are intending to publish in.
 - Different options ...



Consider before submitting

Is there a suitable
open access journal?

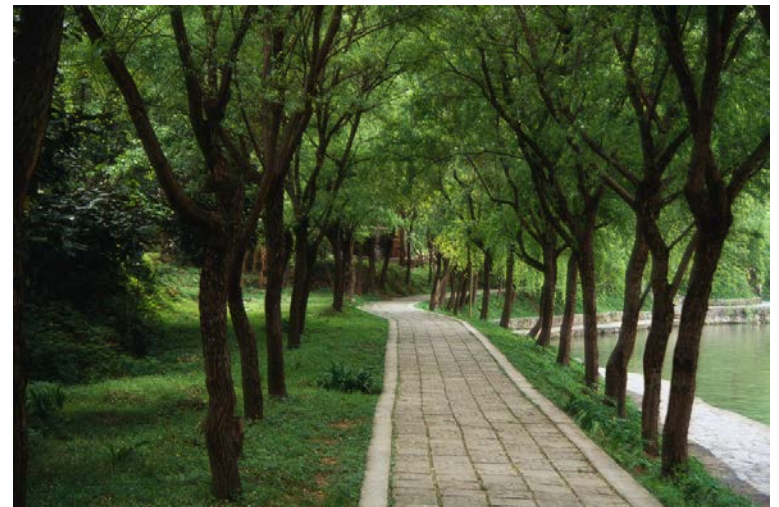
Gold OA option



Hybrid OA option

Is it possible to publish in
a non-OA journal and to
self-archive in e.g. DiVA?

Green OA option





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OA publishers (examples)

- BioMed Central, Chemistry Central, Springer Open
 - 400+ journals, mainly in medicine and biology, chemistry
- PLOS – Public Library of Science
 - 7 journals; PLOS ONE ("mega-journal")
- Hindawi Publishing Corporation
 - about 500 journals in science, technology and medicine
- Frontiers
 - 28 journals; medicine, biology, chemistry - also engineering
- Copernicus
 - 28 journals; geoscience, civil engineering and Math/Data/Informatics



Find more OA journals in DOAJ – Directory of Open Access Journals <http://doaj.org/>



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Grey zone OA publishers

Check before submitting a paper to an unknown journal:

- Is there adequate information about ownership?
Which country?
- Clear information about the peer-review process
- Who is on the editorial board? Including full name and home university
- Are the terms in their “License to publish” reasonable?
- Is there adequate contact information?

Members of OASPA (Open Access Scholarly Publishers Association): <http://oaspa.org/membership/members/>

List of grey zone or predatory OA publishers:
<http://scholarlyoa.com/publishers/>

Think-check-submit: <http://thinkchecksubmit.org/>

The options - consider before submitting

Is there a suitable
open access journal?

Gold OA option



Hybrid OA option

Is it possible to publish in
a non-OA journal and to
self-archive in e.g. DiVA?

Green OA option





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What about the publishers?

- Many publishers allow self-archiving under certain conditions:
 - Usually **the accepted author version** must be used
 - not the publisher's version/PDF
 - Usually there is an embargo period or other restrictions



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What is an "accepted author version"?

Same content, different layout

1. The author's final manuscript of the article, accepted for publication (author's post-print in SHERPA/RoMEO)
2. Includes revisions after peer review

What differs?

- The author version lacks the publisher's layout and pagination

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Council's requirements!**

Final manuscript

Oscillatory control of insulin secretion

Anders Tengholm and Erik Gylfe

Department of Medical Cell Biology, Biomedical Centre, Box 571, SE-751 23 Uppsala, Sweden


Key words: Insulin secretion, oscillations, metabolism, Ca^{2+} , cAMP, phospholipase C, PIP_2 , PI3-kinase , PIP_3

Correspondence:

Anders Tengholm
Department of Medical Cell Biology
Uppsala University
Biomedical Centre Box 571
SE-75123 Uppsala
Sweden
Phone: +46-18-4714481
Fax: +46-18-4714059
E-mail: anders.tengholm@mcb.uu.se

Cover page with full reference and link to the reference

Cover page


<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper published in *Molecular and Cellular Endocrinology*. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

Tengholm, A., Gylfe, E. (2009)
Oscillatory control of insulin secretion.
Molecular and Cellular Endocrinology, 297(1-2): 58-72
<http://dx.doi.org/10.1016/j.mce.2008.07.009>

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

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Final manuscript

Oscillatory control of insulin secretion

Anders Tengholm and Erik Gylfe

Department of Medical Cell Biology, Biomedical Centre, Box 571, SE-751 23 Uppsala, Sweden

Key words: Insulin secretion, oscillations, metabolism, Ca^{2+} , cAMP, phospholipase C, PIP_2 , PIP_3

This is the accepted version of a paper published in *Molecular and Cellular Endocrinology*. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

Tengholm, A., Gylfe, E. (2009)
Oscillatory control of insulin secretion.
Molecular and Cellular Endocrinology, 297(1-2): 58-72
<http://dx.doi.org/10.1016/j.mce.2008.07.009>

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Oscillatory control of insulin secretion

Tengholm, Anders

Uppsala University, Disciplinary Domain of Medicine and Pharmacy, Faculty of Medicine, Department of Medical Cell Biology.

Gylfe, Erik

Uppsala University, Disciplinary Domain of Medicine and Pharmacy, Faculty of Medicine, Department of Medical Cell Biology.

2009 (English)

In: Molecular and Cellular Endocrinology, ISSN 0303-7207, E-ISSN 1872-8057, Vol. 297, no 1-2, 58-72

Article, review/survey (Refereed) Published

Abstract [en]

Pancreatic β -cells possess an inherent ability to generate oscillatory signals that trigger insulin release. Coordination of the secretory activity among β -cells results in pulsatile insulin secretion from the pancreas, which is considered important for the action of the hormone in the target tissues. This review focuses on the mechanisms underlying oscillatory control of insulin secretion at the level of the individual β -cell. Recent studies have demonstrated that oscillations of the cytoplasmic Ca^{2+} concentration are synchronized with oscillations in β -cell metabolism, intracellular cAMP concentration, phospholipase C activity and plasma membrane phosphoinositide lipid concentrations. There are complex interdependencies between the different messengers and signalling pathways that contribute to amplitude regulation and shaping of the insulin secretory response to nutrient stimuli and neurohormonal modulators. Several of these pathways may be important pharmacological targets for improving pulsatile insulin secretion in type 2 diabetes.

Keyword [en]

Insulin secretion, oscillations, metabolism, Ca^{2+} , cAMP, phospholipase C, PIP2, PIP3

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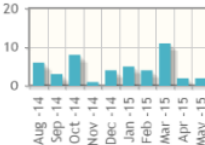
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Cellular control of insulin secretion

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ABSTRACT

Insulin is the only blood glucose-lowering hormone, its secretion is controlled by the β cells of the pancreatic islets and is a process with great relevance to human health. Insulin secretion is a highly regulated process involving a number of steps, from the release of insulin from the β cells to the action of insulin on the target tissues. The process is controlled by a number of factors, including glucose, calcium, and the endoplasmic reticulum (ER) chaperones. The ER chaperones are involved in the folding and quality control of proteins, and their dysfunction can lead to the accumulation of misfolded proteins, which can trigger the ER stress response. The ER stress response is a cellular defense mechanism that aims to restore ER homeostasis and prevent the accumulation of misfolded proteins. The ER stress response is activated by a number of factors, including glucose, calcium, and the ER chaperones. The ER stress response is a highly regulated process involving a number of steps, from the release of insulin from the β cells to the action of insulin on the target tissues.

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1. Introduction

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Activation effects during hydrogen release and uptake of MgH₂.
[International journal of hydrogen energy](#), 39(18): 9888-9892 | [DiVA](#)

Frykstrand, S., Strietzel, C., Forsgren, J., Ångström, J., Potin, V. et al. (2014).
Synthesis, electron microscopy and X-ray characterization of oxymagnesite, MgO·2MgCO₃, formed from amorphous magnesium carbonate.
[, 16: 10837-10844](#) | [DiVA](#)

Kamali, S., Shahmiri, N., Garitaonandia, J., Ångström, J., Sahlberg, M. et al. (2013).
Effect of mixing tool on magnetic properties of hematite nanoparticles prepared by sol-gel method.
[Thin Solid Films](#), 534: 260-264 | [DiVA](#)

Ångström, J., Johansson, R., Rude, L., Gundlach, C., Scheicher, R. et al. (2013).
Hydrogen storage properties of the pseudo binary laves phase (Sc_{1-x}Zr_x)(Co_{1-y}Ni_y)(2) system.
[International journal of hydrogen energy](#), 38(23): 9772-9778 | [DiVA](#)

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(2015). *Hydrogen-sorption properties of $Nb_4M_{0.9}Si_{1.1}$ ($M = Co, Ni$) hydrides*.

International journal of hydrogen energy, 40(6): 2692-2697

[\[Mer information\]](#)

Ångström, J., Sahlberg, M., Berger, R.

(2015). *Real-time in-situ monitoring of the topotactic transformation of $TiCu_3Se_2$ into $TiCu_2Se_2$* .

Journal of Alloys and Compounds, 15: 321-325

[\[Mer information\]](#)

Höglin, V., Ångström, J., Andersson, M., Balmes, O., Nordblad, P. et al.

(2015). *Sample cell for in-field X-ray diffraction experiments*.

Results in Physics, 5: 53-54

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Candy Wrapper for the Earth's Inner Core
Mattesini, M.
Belonoshko, A. B.
Tkalcic, H.
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Uppsala universitet, Teknisk-naturvetenskapliga vetenskapsinstitutionen för fysik och astronomi, Materialteori.
Dölj övriga och affilieringar
2013 (Engelska)
Ingår i: Scientific Reports, ISSN 2045-2322, Vol. 3, 2096-
Artikel i tidskrift (Refereegranskat) Published
Abstract [en]
Recent global expansion of seismic data motivated a number of studies of the Earth's inner core that proposed the existence of increasingly complex structures. Meanwhile, new hypotheses of dynamic mechanisms have been put forward. Here, the nature of hemispherical dichotomy and anisotropic observations of PKP(bc-df) differential travel-times with the iron from first-principles methods. The Candy Wrapper velocity model provides a dynamic picture of the inner core (i.e., the eastward drift of material shapes can be stabilized at the two hemispheres. We show that such a rather complicated, mosaic-like, structure of the inner core, where iron crystals compose the anisotropic western hemispherical region and indistinguishable iron phases builds-up the weakly anisotropic eastern hemisphere.

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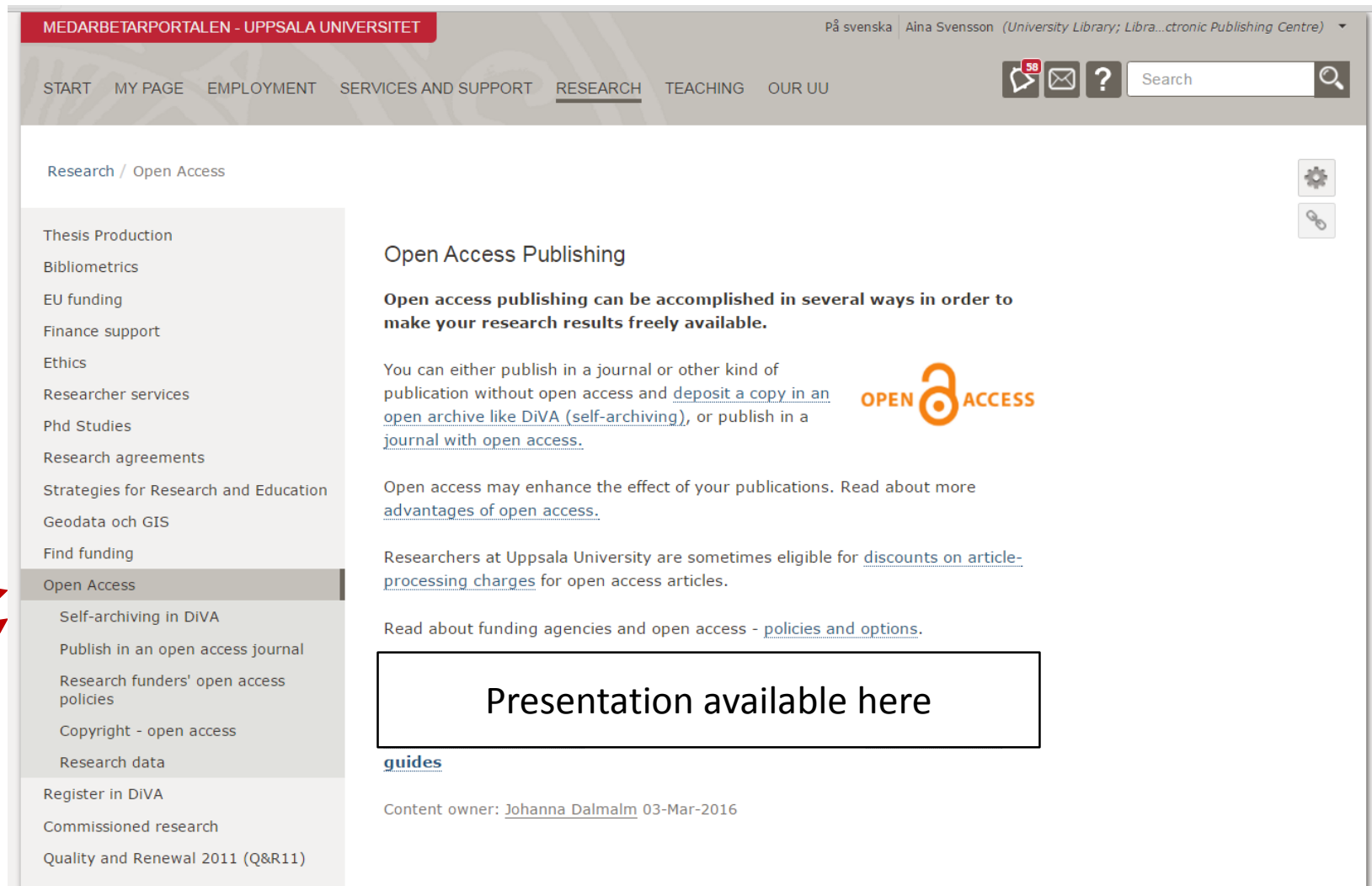
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