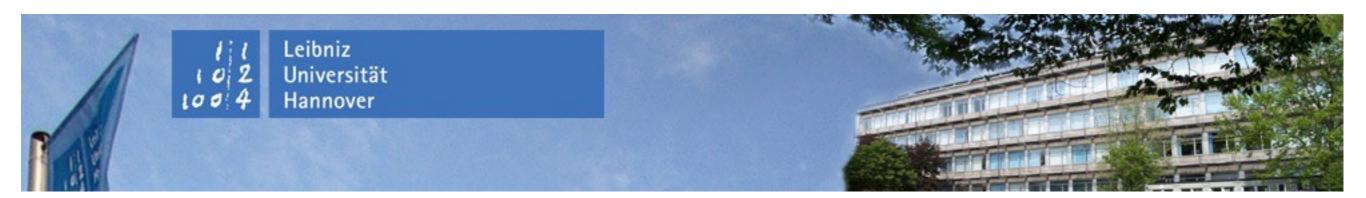


Open Access in Chemistry - A Scientist's View

Prof. Dr. Russell Cox: russell.cox@oci.uni-hannover.de



Institut für Organische Chemie











Russell John Cox

Web of Science ResearcherID © F-9190-2015

Professor of Microbiological Chemistry - Institute for Organic Chemistry, Leibniz University Hannover

167

5,119 3

38 ®

313

*** Organic Chemist**

* Ph.D. University of Durham UK, 1992

** Post-Doc Alberta, Canada and Norwich UK, 1995

***** Lecturer University of Bristol, UK 1996

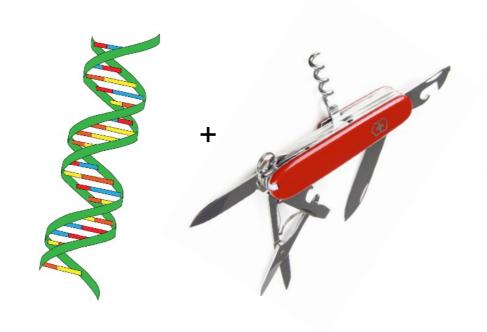
****** Full Professor, University of Bristol, UK 2008

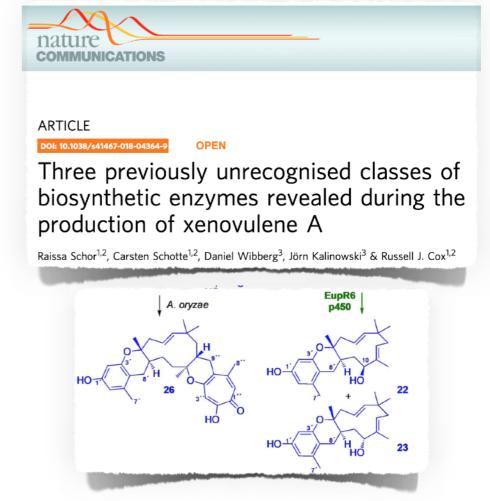
***** Full Professor, Leibniz University of Hannover, 2013

***** Editor in Chief, RSC Advances, 2018

* Research in the area of Fungal Biotechnology and Natural Products Chemistry







Working Pattern





Leibniz Universität Hannover



DAAD



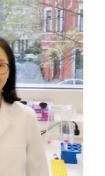


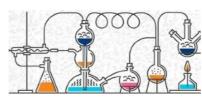


Other Scientists





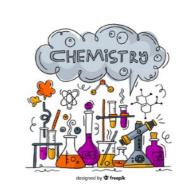


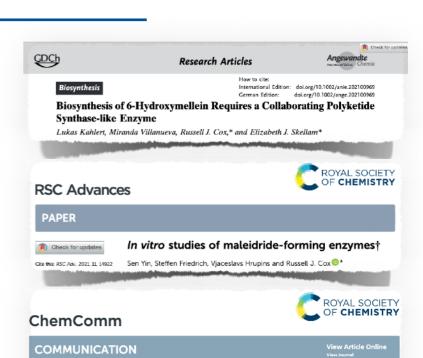












Check for updates

Evidence for enzyme catalysed intramolecular
[4+2] Diels—Alder cyclization during the
biosynthesis of pyrichalasin H†

Received 10th December 2019,
Accepted 6th January 2020

Verena Hantke,* Elizabeth J. Skellam and Russell J. Cox and the state of the state o

Mycological Progress (2020) 19:235–245 https://doi.org/10.1007/s11557-019-01552-9

Intragenomic polymorphisms in the ITS region of high-quality genomes of the Hypoxylaceae (Xylariales, Ascomycota)

Marc Stadler 1 0 · Christopher Lambert 1 · Daniel Wibberg 2 · Jörn Kalinowski 2 · Russell J. Cox 3 · Miroslav Kolařík 12.3.4 ·

Science

Cite as: S. Günther et al., Science 10.1126/science.aht7945 (2021).

DGfM

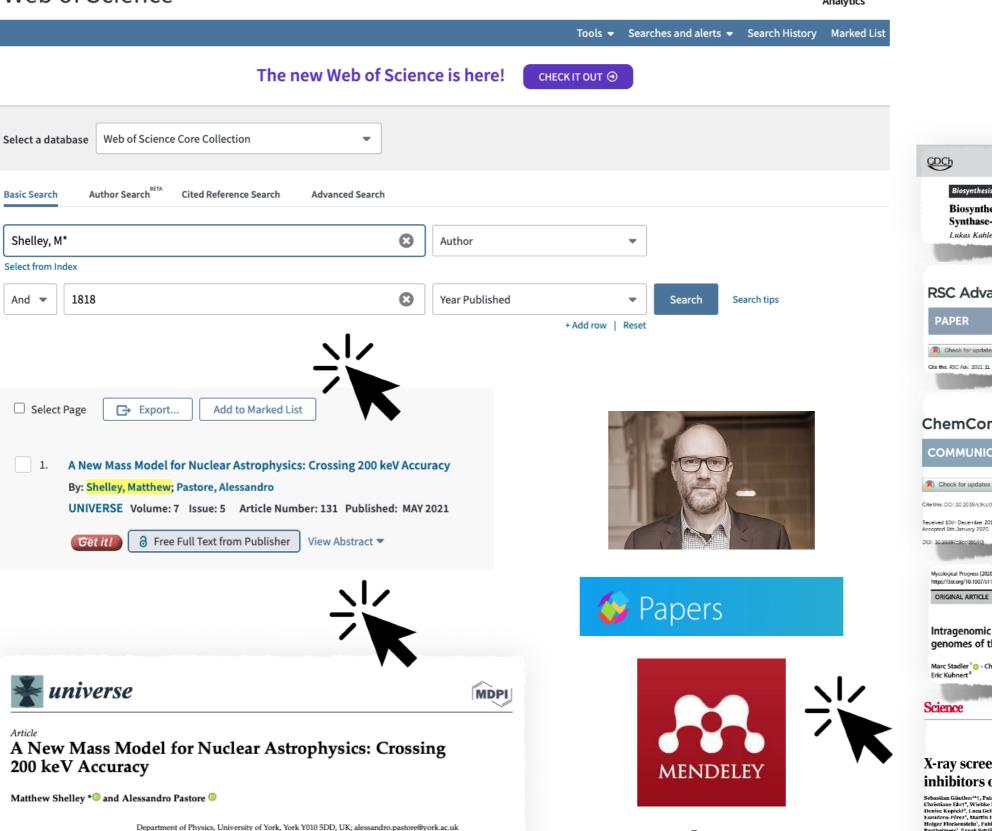
X-ray screening identifies active site and allosteric inhibitors of SARS-CoV-2 main protease

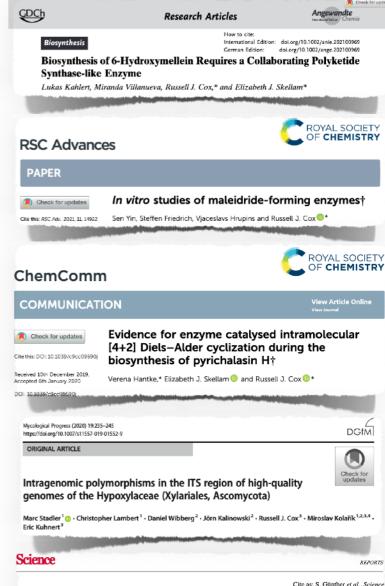
Sebastian Ginther²⁴], Patrick V. A. Beinke³⁶, Yaira Fernández-García³, Julia Lieske³, Thomas J. Lane³, Helen M. Ginn³, Fairial H. M. Koun⁴, Caristiane Ehrt², Wiebke Ewert³, Dominilo Oberthuer⁴, Oleksande Yelanow³, Susanna Meier³⁶, Kristian Lorenzen³, Loris Kriebel³, Junine Denits Kepich³, Lasor Gischio³, Wolfeng Hierbri, Hann Bunder³, Herbrides Repichel³, Harry Gischier³, Branna North Raker³, Honti Kriebel³, Junine Keedero-Pérer³, Martin Domaracky³, Soflanc Saoumen³, Alexandra Toistikowa³, Thomas A. Wihle³, Annel Arianna North Raker³, Honger Flockenstein³, Patrin Toost, Marinn Galchenkowa³, Vandous Gerovich³, Chufeng Lif, Salah Awel, Marina Peck³, Mirina Barthelmess³, Frank Schilinzen³, J. Lourdu Xavier³, Nadine Werner³, Hina Andaleeb³, Naleeb Ulahi³, Sven Falke³, Vsaundara Srinivasan³, Bruno Alves França³, Martin Schwinzer³, Hields Brognano³, Comarte Rogerei³, Diogo Meio³, Onama J. Zaisteva-Doyle^{1,3}, Juri Kinoska³, Gisel E. Peña-Murillo³, Aida Rahmani Mashhour⁴, Vincent Hennicke⁵, Pontus Fischer⁷, Johanna Hakanpäi³, Jan Meyer¹³, Philip Gribbo³, Fernhard Ellinger³, Marta Kuzikor³, Marks Wolf³, Andrea B. Eecan¹³, Gieb Bourenbo³, Paral von Stetter³, Geilbaume Pompidor³, Isabia Ginther³, Gristian Schmidt³, Rubin Schuber⁴, Hubing Han³, Juliane Boger³, Mari Barta Carcia-Alai³, Stephan Niebbing³, Christian Gehmidt³, Am Metzer Zelgert⁴, Jan Wolfenhaupt³, Christian Gehmidt³, Morthe S. Weise³, Elke Christian Schmidt³, Aleksandra Usenk^{3,5}, Juliane Boger³, Marin Barta C. F. Montelto³, Laristian Gehmidt³, Charlotte Uetrech⁴, Russell Cox⁴, Andrea Zalian³, Johas Schwigh Halling³, Charlotte Uetrech⁴, Russell Cox⁴, Andrea Zalian³, Tobias Bech^{3,5}, Matthias Rare⁴, Stephan Ginther⁴, Charnotte Uetrech⁴, Russell Cox⁴, Andrea Zalian³, Christian Gelbodo^{5,4}, Henni M. Chamman ^{4,5}, Anne Aren R. Peararon⁴, Christian Berloh⁶, Alken Mercell⁶, Alke Merce

Working Pattern *Writing: Grant Applications; Papers; Presentations; Reports

Web of Science







X-ray screening identifies active site and allosteric inhibitors of SARS-CoV-2 main protease

Sebastian Günther*1, Patrick Y. A. Reinke*0, Yaiza Fernánder-Garcia*, Julia Lieske*, Thomas J. Lane*, Helen M. Ginn*, Paisal H. M. Koua*, Christiane Plart*, Wiebke Ewert*, Dominik Oberthuer*, Oleksandr Yelanov*, Susame Meier*, Kristina Lorenzen*, Boris Krichel*, Janine Denise Kopiek*, Laca Geishof, Wolfgang Irchen*, Johna Damler*, Harndon Seychel*, Henry Gieseler*, Brenna Norton baker**, Renther Roger Pleckersten*, Pablam Post, Marcha Galeientson*, Yandan Keyer*, Windon Kopieker*, Henry Gieseler*, Brenna Norton baker**, Renther Roger Pleckersten*, Pablam Post, Marcha Galeientson*, Yandan Keyer*, Windon Galeientson*, Yandan Roger Pleckersten*, Pablam Günther*, Duxan Roger Pleckersten*, Pablam Günther*, Duxan Roger Pleckersten*, Christian Schmid*, Christian Schm Winfried Hinrichs^{6,20}, Henry N. Chapman^{1,5,50}, Arwen R. Pearson^{1,6}, Christian Betzel^{2,6}, Alke Meents¹

Correspondence: mges501@york.ac.uk

Publications - As a Reader



ChemRxiv: The Preprint Server for Chemistry
ChemRxiv

8,932 posts

22,382,646 views

4,966,951 downloads

more stats...

- *****Free to Publish and Access
- *****DOI
- ***Small Database**
- ***No Peer Review**





**Peer Review

**Trust



RSC Advances



PAPER



Sen Yin, Steffen Friedrich, Vjaceslavs Hrupins and Russell J. Cox 0 *

Cite this: RSC Adv. 2021. 11. 14922

Sen Yin, Sterien Friedrich, Vjaceslavs Hrupins and Russell J. Cox

Received 17th March 2021 Accepted 15th April 2021

DOI: 10.1039/d1ra02118d

rsc.li/rsc-advances

In vitro assays of enzymes involved in the biosynthesis of maleidrides from polyketides in fungi were performed. The results show that the enzymes are closely related to primary metabolism enzymes of the citric acid cycle in terms of stereochemical preferences, but with an expanded substrate selectivity. A key citrate synthase can react both saturated and unsaturated acyl CoA substrates to give solely anti substituted citrates. This undergoes anti-dehydration to afford an unsaturated precursor which is cyclised in vitro by ketosteroid-isomerase-like enzymes to give byssochlamic acid.

In vitro studies of maleidride-forming enzymes†

Introduction

Alkyl citrates are a class of fungal secondary metabolites derived from a polyketide or fatty acid component and oxaloacetic acid. They include relatively simple monomeric compounds such as 1 and 2, piliformic acid 3,1 oryzines A and B 4-5,2 sporothriolide 6,3 CJ-13,981 7 (ref. 4 and 5) and hexylitaconic acids6 known from Aspergillus niger (Fig. 1). More complex examples include compounds such as viridiofungin A 8 (ref. 7) and squalestatin S1 9 (ref. 8 and 9) which are potent inhibitors of squalene synthase. In many cases dehydration of the alkyl citrate affords a maleic anhydride as observed in 1 and 2, and dimerisation of these monomers leads to the formation of compounds with large alicyclic rings known as heptadrides, octadrides and nonadrides.10 Collectively such compounds are known as maleidrides.11 These include agnestadride A 10,11 zopfiellein 11 (ref. 12 and 13) byssochlamic acid 12 (ref. 14) and the selective herbicide cornexistin 13.15,16 These types of compounds are wide-spread in fungi (Fig. 1).17

To-date the main evidence for the biochemical reactions involved in the biosynthesis of alkyl citrates and maleidrides has come indirectly from *in vivo* genetic knockout or heterologous expression experiments. Thus, in the case of byssochlamic acid 12, for example, we showed that co-expression in the host *Aspergillus oryzae* of genes encoding: a fungal highly-reducing polyketide synthase (hr-PKS); an αβ-hydrolase; a citrate synthase-like protein (CS); and a homolog of 2-methylcitrate dehydratase (2MCDH) results in production of 1 and 2. Likewise, Oikawa and coworkers expressed homologous genes from the phomoidride BGC from unidentified fungus ATCC 74256 and related genes from *Talaromyces stipitatus* and showed production of anhydride monomers related to 1 and 2.¹⁸

OCI, BMWZ, Leibniz University of Hannover, Schneiderberg 38, 30167, Hannover, Germany. E-mail: russell.cox@oci.uni-hannover.de

 \dagger Electronic supplementary information (ESI) available. See DOI: 10.1039/d1ra02118d

These experiments suggest a series of events in which a polyketide synthase produces a linear acyl group attached to its acyl carrier protein (ACP) 14. This must be released (e.g. 15) and reacted with oxaloacetate to form a vinyl citrate 16 by the citrate synthase enzyme (Scheme 1). Dehydration by the 2MCDH enzyme would then provide the observed substituted maleic

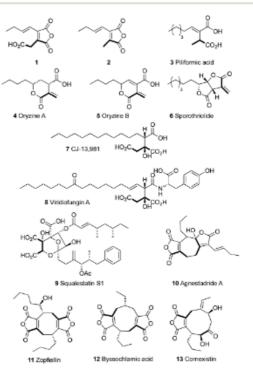


Fig. 1 Structures mentioned in the text. Bold bonds indicate atoms derived from oxaloacetate.

14922 | RSC Adv., 2021, 11, 14922-14931

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*Formatted PDF - Basic Unit of Science - Value

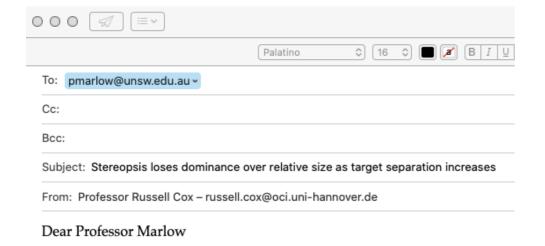
Coping with Paywalls

Stereopsis loses dominance over relative size as target separation increases
 By: Marlow, Phillip; Gillam, Barbara J.
 PERCEPTION Volume: 40 Issue: 12 Pages: 1413-1427 Published: 2011





***** Effective, but slow....



Perception, 2011, volume 40, pages 1413-1427

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doi:10.1068/p7033

Stereopsis loses dominance over relative size as target separation increases

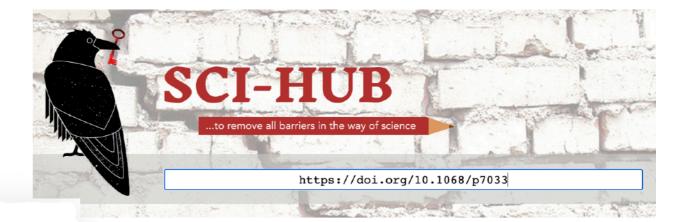
Phillip Marlow¶, Barbara J Gillam

School of Psychology, University of New South Wales, Sydney 2052, NSW, Australia; e-mail: pmarlow@unsw.edu.au
Received 8 June 2011, in revised form 13 December 2011

*****Open Access Keeps the System Honest and Fast

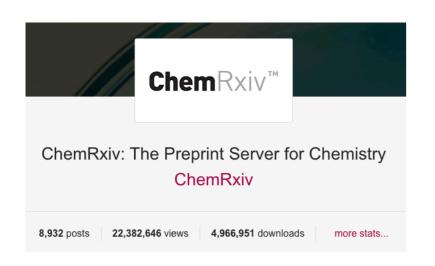


***** Effective, and fast....





Publications - As a Writer









My Priorities

- *Share the Results with my Scientific Community
- ****** Target the Right Community
- *****Financial Cost
- **DFG € 750 per year PER PROJECT Other funders do not pay
- ***UNIVERSITY Some Agreements** with Some Publishers Projekt DEAL
- *****Time and Effort

Financing Open Access

Assistance with the costs of producing Open Access publications

Fast, worldwide and free of charge - that is the aim of Open Access publications. Anyone wishing to consult these publications can do so immediately and without payment. Instead, many open access publishers - by no means all! - charge the authors who have to pay so-called Article Processing Charges (APCs) or Book Processing Charges (BPCs).

The options for covering these costs depend on the institution you belong to.

The following funds and agreements help you to cover APCs and BPCs.

Leibniz Universität Hannover's Open Access Publishing Fund

If you are a member of Leibniz Universität Hannover the fund may settle your APC - provided that your article fulfills the funding criteria. More

Leibniz Association Open Access Publishing Fund

The Leibniz Association offers central funding for journal articles and monographs published by scholars associated with one of its research institutes. More

Specific Agreements with Publishers

The TIB has special agreements with some publishers allowing members of the Leibniz Universität Hannover to publish Open Access articles without APCs. More

Open Access Publishing Fund for Lower Saxony

The fund supports Open Access publications from Lower Saxony and about Lower Saxony. More

Priorities of Others

*****H Index

***Impact Factor of Journal**

*****Policies of Funders and Universities

*****Collaborators in Academia or Industry

Publications - As an Editor







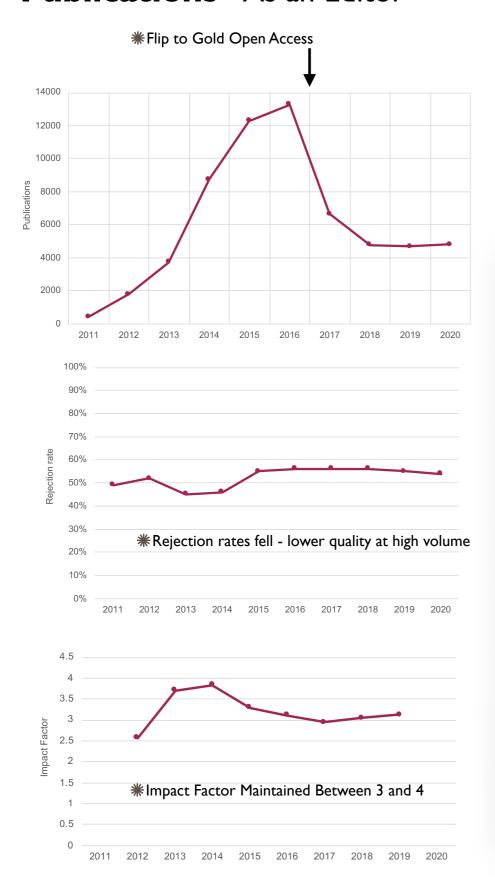
- *****Editorial Board Member since 2011
- ***Chair since 2018**

$$\mathbf{C} \mathbf{O} \mathbf{P} \mathbf{E}$$

- *****Full Breadth of Chemistry
- #4744 papers published in 2020
- ****Fully Gold Open Access since 2017**
- **High Ethical Standards
 Full Implementation of COPE Guidelines
- *****Low APC £ 750 (€ 880)
- ******Reduced APCs for Developing Nations
- *****Full APC Waiver for Research4Life Countries
- *****Society Benefits (see later)

Countries, areas and territories eligible for Research4life

Publications - As an Editor



- ***2011 2016 Traditional Subscription Model**
- ****** RSC Advances Bundled with other RSC Subscriptions
- ***Very rapid growth indicates High Demand**
- *****Very rapid growth Hard to Manage!
- *****Much more work no extra income!

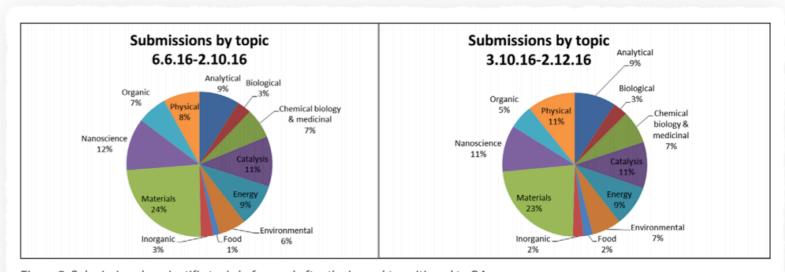


Figure 5. Submissions by scientific topic before and after the journal transitioned to OA

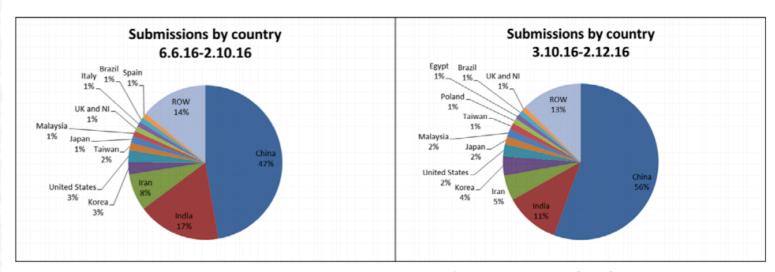
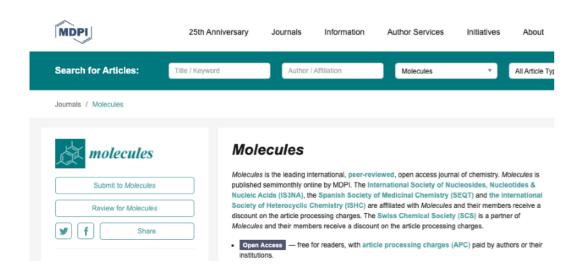


Figure 6. Submissions by country before and after the journal transitioned to OA. (The 'rest of the world' [ROW] section is made up of 71 countries and 50 countries, respectively)

Competition Since 2017



***Open Access / APC Model**

**Popular with Publishers - Especially Society Publishers

*****Scalable with Demand & Sustainable

***Opens up Competition - Drives Innovation**



Chemistry Europe

European Chemical Societies Publishing

Editor: Anne Deveson; Deputy Editor: Jonathan Faiz; Editorial Board Chairs: Didier Astruc, Hélène Lebel, An-Hui Lu Impact factor: 1.811

2019 Journal Citation Reports (Clarivate Analytics): 111/177 (Chemistry, Multidisciplinary)

Online ISSN: 2365-6549

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LATEST ISSUE >

Volume 6, Issue 23 June 21, 2021

ChemistryOpen



Editor: Francesca Rita Novara; Editorial Board Chairs: Evamarie Hey-Hawkins, Jean-Marie Lehn, Thomas Wirth, Yan Yu

Impact factor: 2.370

2019 Journal Citation Reports (Clarivate Analytics): 90/177 (Chemistry, Multidisciplinary)

Online ISSN: 2191-1363

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LATEST ISSUE >

Volume 10, Issue 6 June 2021



Society vs Commercial Publishers - A More Important Choice

*Writing and Reviewing; Editorial Boards - all this is work! Academics do this for free....

Society

Hybrid

Commercial

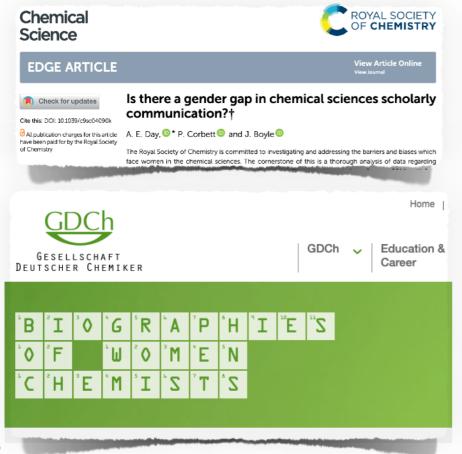


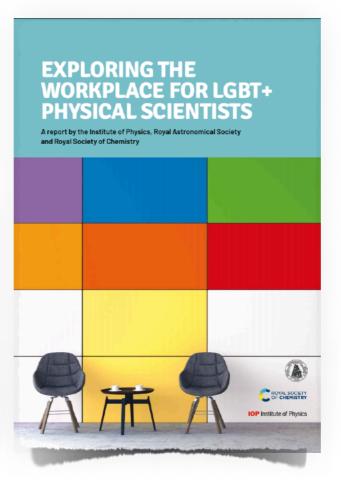






- ***Often at Forefront of Innovation**
- **Income supports Publishing and Learned Activities Conferences, Scholarships, Travel Bursaries, Awards
- #High Ethical Standards for Peer Review and Scholarship - Trust
- *****Career Support
- *****Support for Under-Represented Groups







Scientific Freedom

****** Mandated Open Access ?? Plan S, Funders, Publishers....

***** Does it Threaten Academic Freedom?

*****Freedom to Enquire, Teach and Communicate

Self Publish



Digital Age



Established Provider



****Guaranteed Freedom to Publish**

*****Some Hazards....

*****Accept Some Restrictions

***In Return for Benefits for All**

***Improves the Academic Freedom of All Readers**

**Interesting to note - if all information is easily searchable, why do 'journals' survive ?? Why not one big repository ??

Summary

Advantages of Open Access Model

- *****Fast and Free Access for all readers
- ***** Maintains Peer Review
- ******Maintains High Quality PDF
- *****Simplified System
- *****Compatibility with Past and Present
- *****More Reads, Downloads and Citations
- *****APCs can be used to support under-represented groups
- *Clears the way for other 'Open' Innovations Open Peer Review etc

Disadvantages of Open Access Model

- *****Funding Model Confused
- **Author Pays / Library pays for author
- ****Funding Model Varies Internationally**
- **Funding Model Varies by Journal (even within a single publisher)
- **APCs vary widely ca 1000 Euro to ca 10,000 Euro



*****They are out to get you!

☆ Megan Taylor
Information about special issue on
To: Russell Cox,

Reply-To: Megan Taylor

Hello Dr. Schor Raissa,

On the behalf of "Austin Child & Adolescent Psychiatry", this is a cordial invitation to publish your research work in our Journal upcoming Issue (Volume 5).

We are focused on publishing quality research articles, in-order to spread the research and development results to the world.

If you are interested in submission, please submit before June 15, 2021.

Please feel free to ask for more information about our journal.

I am looking forward to hearing from you.

Best Regards, Megan Taylor Editorial Assistant Journal of Child & Adolescent Psychiatry



☐ Junk - o...hannover.de 18:09



Publications - Where are we now?



***Old Model: The Living Dead**



**Hybrid Model:
Functional but Imperfect



***** Gold Open Access: The Future



- **Transition Movement of Budgets from Subscriptions to APCs
- *The transition itself is Painful Worse than Either Full Model
- *****Scientists are Caught Between the Funders and the Publishers
- **☀Nobody** is Really Enjoying This!

Reccomendations - What Can We Do?

Readers, Researchers, Teachers and Students

*****No Change....

Scientists

- *****Select and Support Society Journals
- *****Select and Support Open Access
- **Prioritise Reviewing and Editorial Work Cui Bono?

Funders

- *****Continue to Support and Push for Wider Open Access
- *****Accelerate Plan S
- *****Financial Support During the Transition

Publishers

- ****Only Start New Open Access Journals**
- *Flip More Journals there is little to lose and much to gain
- *****More Deals with Funders and Libraries



*****Gold Open Access: The Future

Libraries

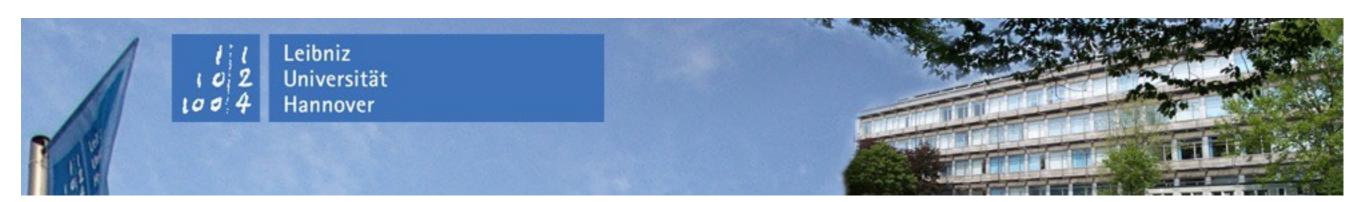
- *Keep Pushing the Publishers
 Militant Action Where Needed!
- ****Simplify and Publicise the OA Payment Options**

Personal!

Open Access in Chemistry - A Scientist's View

Thanks

- ***** Janna Neumann, LU Hannover
- **Agnieszka Wenninger, FU Berlin
- **★Cox Group and Funders**
- **Royal Society of Chemistry



Institut für Organische Chemie





Leibniz
Universität
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