

WEBINAR SERIES

From Research to Publication: A Researcher's Guide to Open Access

# ChronosHub

Why should I care about Open  
Access?

February 24, 2022

CHRONOSHUB WEBINAR

# PRESENTING TODAY

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Publisher Relations at  
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Researcher at ChronosHub

Why should I care about open access?

# TODAYS AGENDA

1

What's Open Access

2

The Basics

3

Benefits of Open Access

4

Resources

# LET'S GET POLLING!

How much do you know about open access?

# WHAT IS OPEN ACCESS?

**Open access (OA)** is a broad international movement that seeks to grant free and open online access to academic information, such as publications and data.

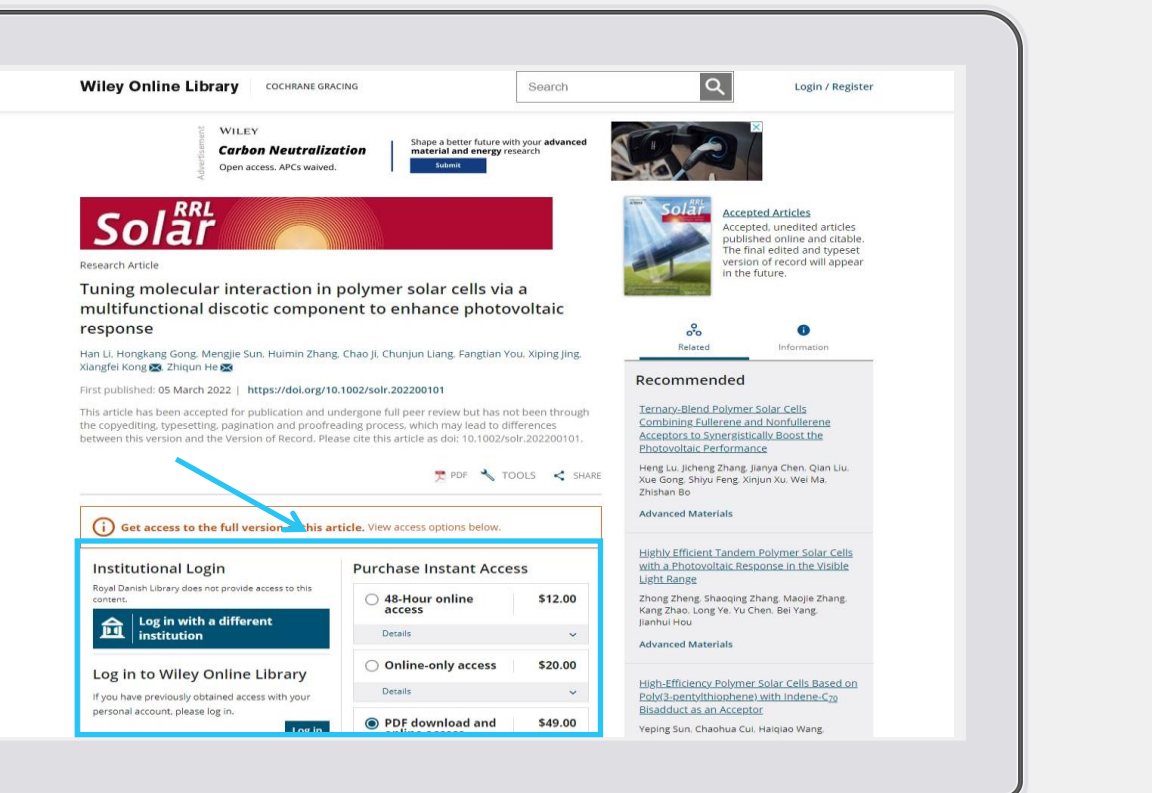
A publication is defined 'open access' when there are no **financial, legal or technical** barriers to **accessing** it - that is to say when anyone can read, download, copy, distribute, print, search for and search within the information, or use it in education or in any other way within the legal agreements.



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Open Access lifts the  
barrier to accessing and  
reading research  
articles

”



# EXAMPLE CLOSED ACCESS

Subscription or paywalled article.

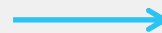
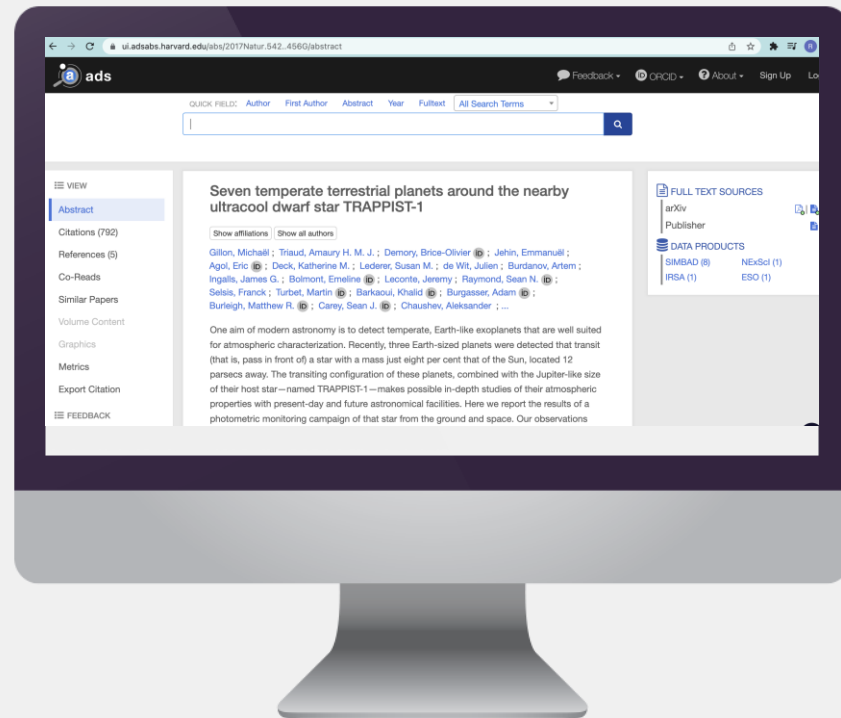




example

# ARTICLE ARCHIVED OA IN IR

Example of an article that has been archived in open access in an institutional repository.



# VERSIONS OF ARTICLES

## Submitted Version

The version that the author submitted to the publisher's submission system

## Author Accepted Manuscript – AAM

The version of the article that was accepted by the publisher: includes reviews of the article (subject to acceptance) but without final editing, layout, typesetting, etc.

## Version of Record – VoR

Final publisher's PDF

### Seven temperate terrestrial planets around the nearby ultracool dwarf star TRAPPIST-1

Michaël Gillon<sup>1</sup>, Amaury H. M. J. Triaud<sup>2</sup>, Brice-Olivier Demory<sup>3,4</sup>, Emmanuel Jehin<sup>1</sup>, Eric Ago<sup>5,6</sup>, Katherine M. Deck<sup>7</sup>, Susan M. Lederer<sup>8</sup>, Julien de Wit<sup>9</sup>, Artem Burdanov<sup>1</sup>, James G. Ingalls<sup>10</sup>, Emeline Bolmont<sup>11,12</sup>, Jeremy Leconte<sup>13</sup>, Sean N. Raymond<sup>13</sup>, Franck Selsis<sup>13</sup>, Martin Turbet<sup>14</sup>, Khalid Barkaoui<sup>15</sup>, Adam Burgasser<sup>16</sup>, Matthew R. Burleigh<sup>17</sup>, Sean J. Carey<sup>10</sup>, Aleksander Chaushev<sup>17</sup>, Chris M. Copperwheat<sup>18</sup>, Laetitia Delrez<sup>14</sup>, Catarina S. Fernandes<sup>1</sup>, Daniel L. Holdsworth<sup>19</sup>, Enrico J. Kotze<sup>20</sup>, Valérie Van Grootel<sup>1</sup>, Yaseen Almlleak<sup>21,22</sup>, Zouhair Benkhaldoun<sup>15</sup>, Pierre Magain<sup>1</sup>, Didier Queloz<sup>1,23</sup>

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One focus of modern astronomy is to detect temperate terrestrial exoplanets well-suited for atmospheric characterisation. A milestone was recently achieved with the detection of three Earth-sized planets transiting (i.e. passing in front of) a star just 8% the mass of the Sun 12 parsecs away<sup>1</sup>. Indeed, the transiting configuration of these planets combined

## PERSPECTIVE



### Electrodeposition as a Versatile Preparative Tool for Perovskite Photovoltaics: Aspects of Metallization and Selective Contacts/Active Layer Formation

Diego Di Girolamo\* and Danilo Dini\*

Perovskite-based photovoltaics (PV) is expected to play a central role in sustainable energy production during the next decades. Several companies are investing intensively to develop a market-ready product with efficiency and stability rapidly improving. The craft of making perovskite solar cells (PSCs) consists in the art of thin-film deposition, with electrodeposition (ED) representing one of the most versatile techniques available. The ED's role in the development of perovskite PV with its advantages, drawbacks, and perspectives is analyzed herein. The ED of inorganic or organic/polymeric selective contacts enables high-efficiency devices. Moreover, by exploiting properly designed functional barriers it is possible to rely on ED for the metallization of perovskite solar cells through the deposition of copper. The latter aspect could be particularly relevant for the development of silicon/perovskite tandem PV at the TW scale. On the other hand, the ED of the active layer is less successful to date mainly due to solubility issues of the perovskite in electrochemical polar solvents.

the need for vacuum as most printing/coating techniques. In contrast, ED allows a strict and direct control over nucleation and growth of the target film like gas phase-based techniques. As it will be discussed in the conclusive part of this perspective article (vide infra), ED is gaining momentum in the photovoltaics (PV) industry mainly due to the promising results on copper metallization with the primary intention of replacing the screen-printed silver busbars in silicon PV. However, in thin-film PV, the versatility of ED could be exploited much more intensively with respect to what is presently accomplished with ED in the ambit of PV. Perovskite PV is the emerging thin-film technology within PV and with regard to ED, the surface enclosing the potentialities of PV has been just scratched. In this perspective article, we will report a concise description of the fundamental theory of ED in the initial section. In the successive section, the advancements concerning the ED of selective contacts will be reviewed including a discussion of the potentialities and limits of active layer electroplating. In the final section, the recent developments on metallization for perovskite solar cells (PSCs) via ED will be highlighted.

#### 1. Introduction

In general terms, electrodeposition (ED) can be defined as the electrochemical technique that allows the deposition of thin films onto a conductive substrate the deposited film being a product of a redox reaction driven electrochemically. To a certain extent, ED could be considered a hybrid approach that shares most of the advantages of both chemical and physical thin-film deposition techniques. ED is conducted from precursor solutions without

#### 2. ED for PV Purposes: General Features

Figure 1 shows the experimental electrochemical setup (an ordinary three-electrode cell) for the conduction of an ED process (sketch 1a), and the voltammogram (plot 1b) and the chronoamperogram (plot 1c) recorded with the apparatus of 1a when a hole-transporting layer of NiOOH is electrodeposited onto indium tin oxide (ITO).<sup>11</sup> This specific case is characterized by the presence of a nucleation loop in the voltammogram (Figure 1b), which is originated from the succession of the redox processes of oxidative electrodeposition of NiOOH and oxygen evolution reaction (OER) when the potential is scanned in the region of oxidative ED. The loop is originated by the increasing electrochemical activity of the ITO substrate (working electrode (WE)) after the NiOOH is deposited on ITO. In the cathodic branch, the deposit of NiOOH is reduced to the Ni(II) hydroxide Ni(OH)<sub>2</sub>. With the appearance of the loop, cyclic voltammetry becomes a useful technique to identify the potential range within which ED takes place. The chronoamperogram starts with a low current value

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DOI: 10.1002/solr.202100993



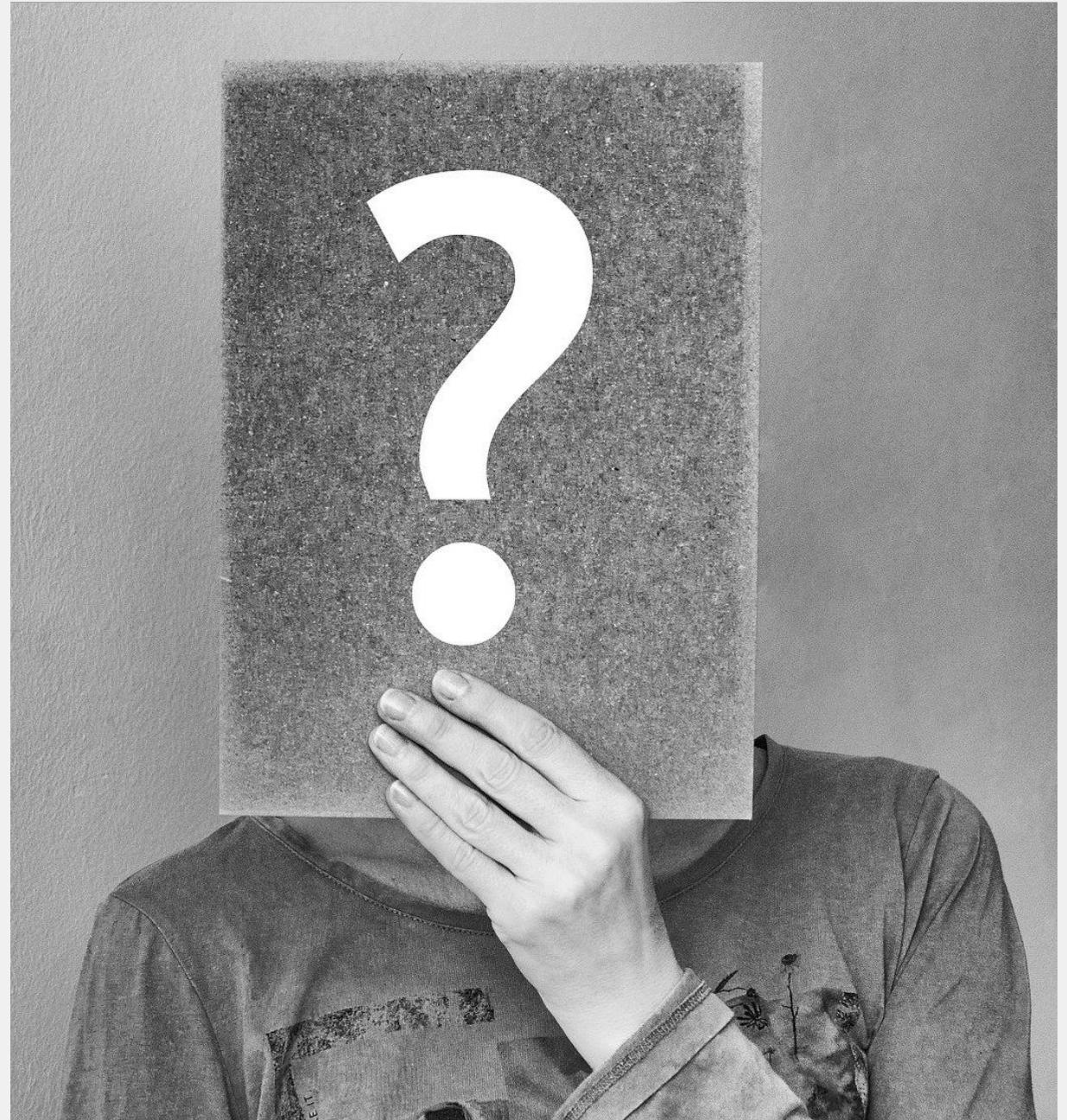


# QUESTION

Frequently asked question from  
ChronosHub Customer Support



Which version is peer  
reviewed?





## PUBLISHING OA

- The VoR (final PDF) is made OA immediately upon official publication in the journal
- No delay
- It is available to read for free on the publisher's website
- No action required from author
- Under an open license
- Depends on author's choice
- Possible cost to the author

VS



## ARCHIVING

- The author needs to put their AAM into an institutional (or subject) repository
- Sometimes an embargo (6-12 months)
- The AAM is only accessible via the repository, the VoR is still behind closed access on the publisher's site
- No action from the publisher in making the article OA
- Usually, no license applies
- Depends on publisher's permissions
- No cost to the author (some exceptions)



# ARTICLE PROCESSING CHARGE (APC)

- An Article Processing Charge (APC) is a fee that author pays to the publisher to have their article published in open access
- APCs cover the cost of article publication including but not limited to running peer-review systems, copy-editing and typesetting, hosting the article in perpetuity on dedicated servers and marketing
- The APC is paid after an article has been peer-reviewed and accepted for publication

# OPEN ACCESS VS CLOSED ACCESS



If you publish your article in closed access, you don't pay an APC – however, only those with a subscription to the content can read the article.

If you publish your article in open access, you usually have to pay an APC – then everyone can read the article, no need to pay for access.

Note: some journals allow publishing OA for free!



# JOURNAL TYPES

- **SUBSCRIPTION ONLY**  
Subscription only journals – no possibility to publish articles OA
- **FULLY OPEN ACCESS**  
Fully OA journals, also called Gold Journals – publishing article OA is the only option, no closed access articles
- **HYBRID**  
Hybrid journals – a mix of closed and open access articles. The author can choose between publishing OA (usually with an APC) or publishing in closed access (no APC).
- **ARCHIVING**  
For closed access articles you might be allowed to archive in OA

Other - Subscribe 2 Open, or sponsored OA models

# MOST COMMON TYPES OF OPEN ACCESS



**Hybrid Open Access = Open Access Publishing:** Some publishers allow immediate Open Access to some of their articles on condition that an 'Article Processing Charge - APC' is paid. In such journals, two types of articles coexist: those freely accessible and others only accessible through a subscription. Although being mainly responsible for the recent rise in available Open Access publications, 'hybrid Open Access' doesn't take away subscription costs for those journals. Note: hybrid journals are NOT listed in the "Directory of Open Access Journals" (DOAJ).



**Gold Open Access = Open Access publishing:** Gold, or fully open access journals are journals that include only open access articles. Publishing in a gold or fully open access journal provides immediate Open Access to the articles published. Some gold journals charge APCs, others do not.



**Green Open Access = archiving:** Publish in the journal of your choice, deposit a version of the publication (the final publisher version, or Version of Record, or the Author Accepted Manuscript (AAM) in a repository and make it publicly available in Open Access, sometimes after an embargo period set by the publisher.





# QUESTION

Frequently asked question from  
ChronosHub Customer Support



I would like to publish in a journal that offers a 'Gold Route' - is this the same as a gold OA journal?

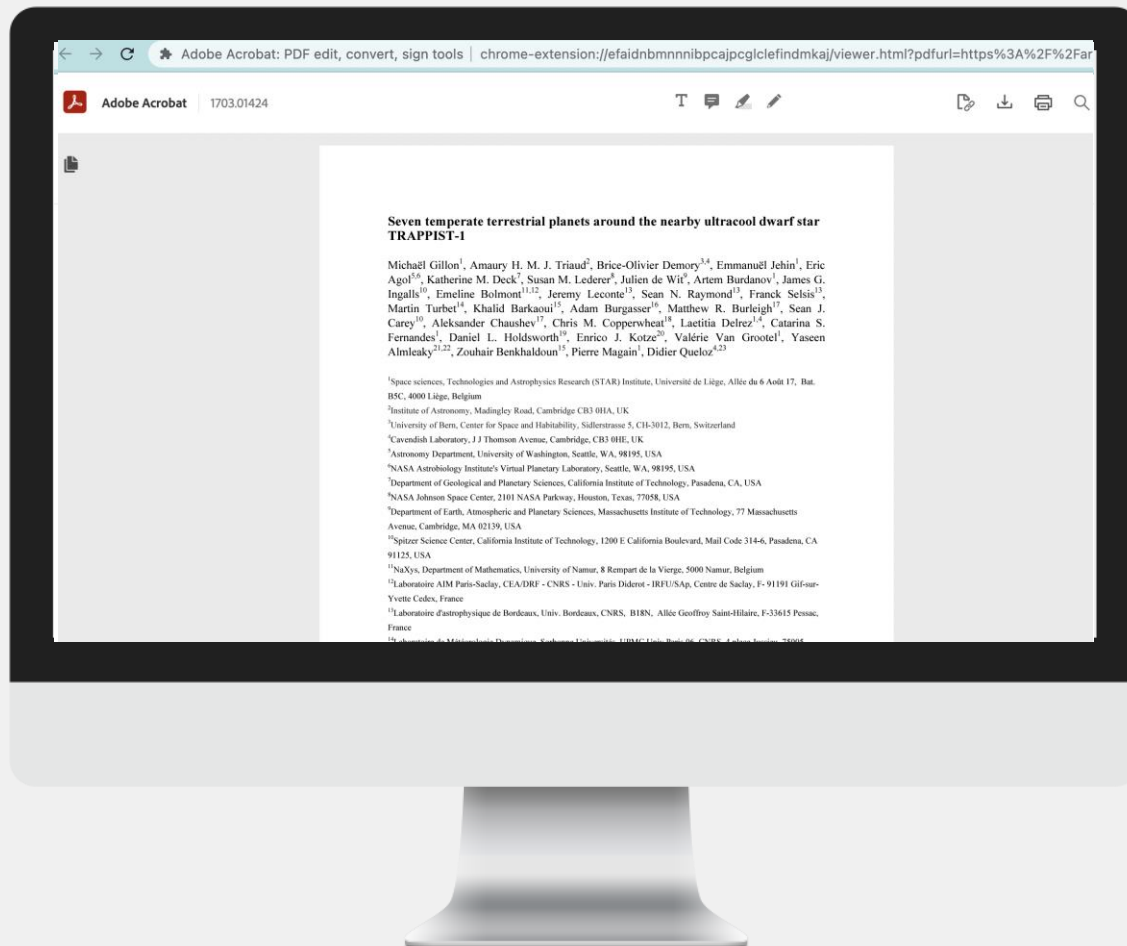


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Some articles are  
published in closed  
access,  
but archived in open  
access

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# EXAMPLES

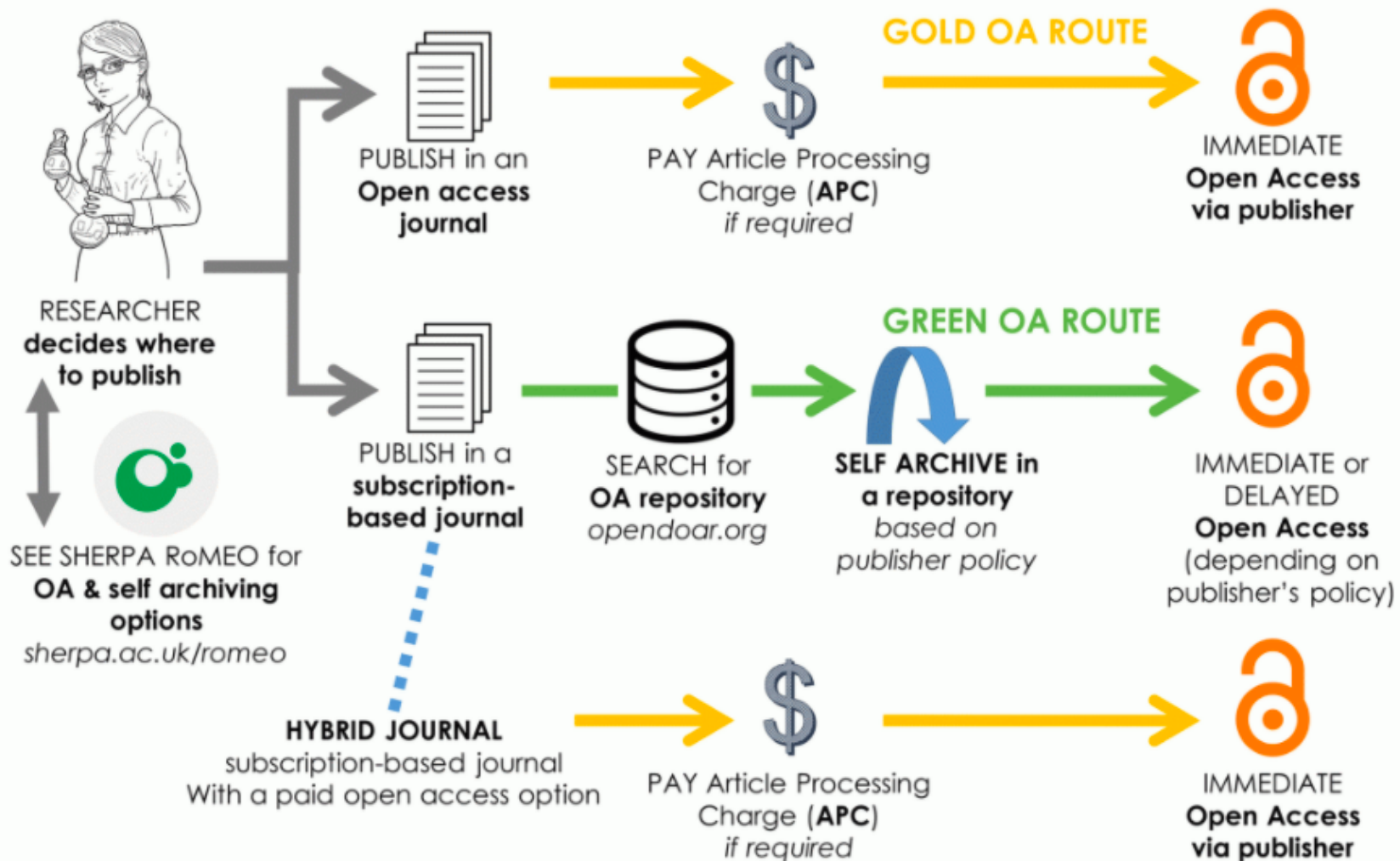


Closed access article

Google the title of the article

Same article but archived version

# Open Access Publishing





# LICENSES



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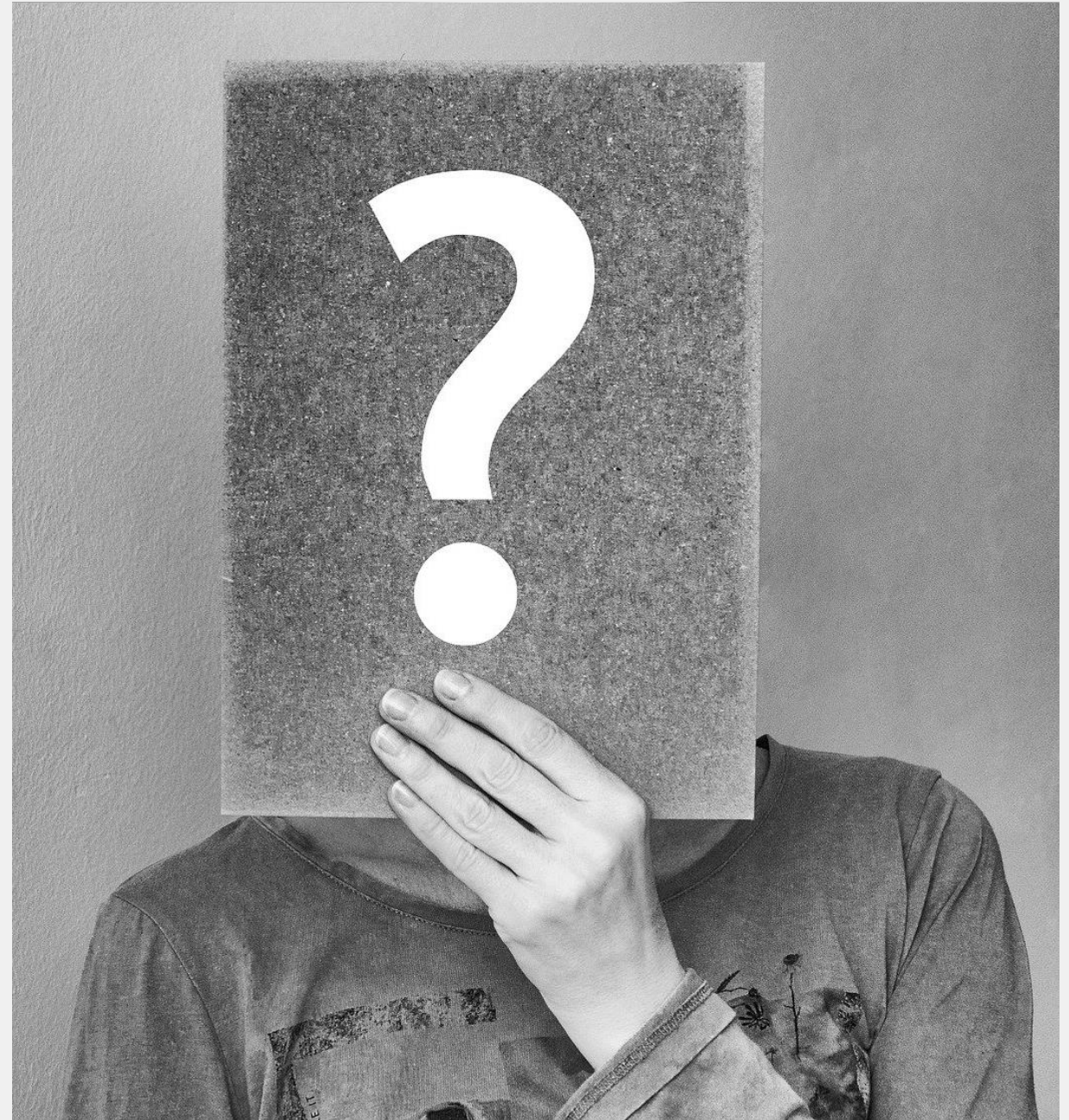
# QUESTION

Frequently asked question from  
ChronosHub Customer Support



Do I need to be worried about  
plagiarism if I choose a CC  
BY licence?

The publisher offer their own OA  
licence. Is this the same as a  
Creative Commons licence?



# LET'S GET POLLING!

Have you published OA?



# WHY DO AUTHERS PUBLISH OPEN ACCESS?

● **Mandates:** funders, institutional policy, national strategy

- If you are funded by public money, the research should be available publicly
- Requirements for payment eligibility, f.ex. has to have CC BY license, must be in a fully open access journal, will only pay up to \$XXX in APCs

● **Choice:** authors want to their research to be open



# BENEFITS OF OPEN ACCESS



## READERS

- No barriers to access - anyone from around the world can read the published article
- No subscription costs for libraries



## AUTHORS

- Wider readership of your articles
- More engagement
- Greater exposure means a higher usage of open access content: more downloads, more citations, more references... more impact!





# RESOURCES

Check what you're allowed to do with an article (archiving)

- [Sherpa Romeo](#)

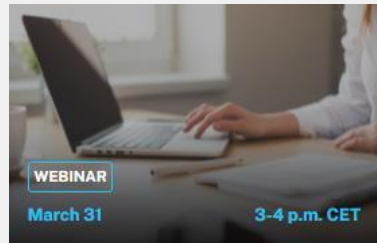
## FIND JOURNALS WITH OPEN ACCESS OPTIONS

- Publisher's websites, usually split into lists for fully OA journals, and hybrid journals (author choice OA)
- DOAJ lists 17,000 fully open access journals
- ChronosHub Journal Finder 46,000+ journals, filter by journal type and other criteria – includes information about archiving options, and licenses

The screenshot displays the Sherpa Romeo website interface. At the top, the URL is v2.sherpa.ac.uk/romeo/. The navigation bar includes 'Jisc Digital Resources > Open Access' and 'Sherpa Romeo'. Below the navigation bar are tabs for 'About', 'Search', 'Statistics', 'Help', 'Support Us', 'Contact', and 'Admin'. The main content area features a welcome message and a search input field labeled 'Journal Title or ISSN'. Below the search field, there are two overlapping preview cards for journal articles. The top card is for 'AACN Advanced Critical Care' by the American Association of Critical Care Nurses, with a 'Select' button. The bottom card is for 'Materials Journal'. On the right side of the page, there is a vertical sidebar with statistics: '7,263,851 ARTICLE RECORDS', '17,503 JOURNALS', '12,296 JOURNALS WITHOUT APCs', '130 COUNTRIES REPRESENTED', and '80 LANGUAGES'. A search bar is also present in the sidebar.

## WEBINAR SERIES

# From Research to Publication: A Researcher's Guide to Open Access



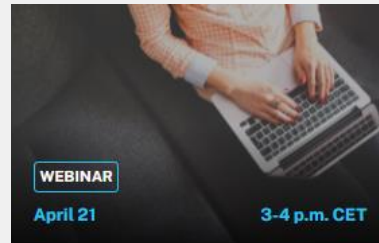
WEBINAR

March 31

3-4 p.m. CET

### What's Up with APCs and How Do I Deal with Them?

For the second session in this webinar series, you can look forward to becoming a full expert on article processing charges (APCs)! We'll be joined by APC-expert from ChronosHub, Romy Beard, along with a library representative (TBD) who'll put their heads together and discuss APCs from a to z.



WEBINAR

April 21

3-4 p.m. CET

### How Does Open Access Fit with Funder Requirements?

Understanding different funder requirements and the specific terms of a grant in relation to OA publishing is certainly no cakewalk. Tune in for our third session in our webinar series where we look closer at how Open Access fit with funder requirements.



WEBINAR

May 12

3-4 p.m. CET

### What Do Open Access Agreements Entail?

Join us as we wrap up our researcher-centric webinar series with a final session where we'll look into why OA agreements are needed and how they come about in a practical sense. Because what exactly do these agreements entail? And what role do discounts, vouchers, and waivers play in this?



Sign up: [chronoshub.io/events/](https://chronoshub.io/events/)

QUESTIONS

# KEEP IN TOUCH



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