

Copernicus Gesellschaft e.V.

Online & Open Access Publishing: Doubts and Advantages

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Copernicus Gesellschaft e.V.



Reasons for Publishing in "classical" Journals

Aims & Scope	Content of paper matches with Journal's Aims & Scope
Peer-Review	All papers undergo a rigorous peer-review process prior to publication
Citation Index	Journal is listed by ISI in the Citation Index
Impact Factor	The Impact Factor of the Journal is high
Competent Editors	Editors (and Referees) are of high scientific standing
Fast Publication	The review and publication process is fast (few months)
High Dissemination	The Journal is international and well spread amongst colleagues
Accessibility	The Journal is also accessible online (on the web)
Free Publication	No charges for authors for publication and/or colour illustrations
Competent Publisher	Publisher is strong in marketing & promotion
Archiving	Publication is on paper and archived (Copyright Libraries)



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Copernicus Gesellschaft e.V. 	Criticism against "Classical" Publishing												
	<table border="1"> <tr> <td style="width: 30%;">Publication Process too long</td> <td>The review, typesetting & editing and production processes are too long ("old" technologies and subscription regulations)</td> </tr> <tr> <td>Publication charges too high</td> <td>Normal: High subscription rates AGU: High page charges, high extra charges for colour illustrations and high subscription charges ("old" technologies and optimizing incomes)</td> </tr> <tr> <td>Decreasing Dissemination</td> <td>Decrease in subscriptions by 2-10% per year. Total abort of subscriptions by universities and institutions</td> </tr> <tr> <td>Copyright</td> <td>Prevents free distribution of scientific information , even for scientific purposes</td> </tr> <tr> <td>No Open-Access</td> <td>Even electronic copy of journal only free for subscribers or payment online</td> </tr> <tr> <td>Unfair Refereeing</td> <td>Only one "real" referee; poor referees' reports; no relevance to the issues raised in the paper; personal insults; fraudulent delay of reports</td> </tr> </table>	Publication Process too long	The review, typesetting & editing and production processes are too long ("old" technologies and subscription regulations)	Publication charges too high	Normal: High subscription rates AGU: High page charges, high extra charges for colour illustrations and high subscription charges ("old" technologies and optimizing incomes)	Decreasing Dissemination	Decrease in subscriptions by 2-10% per year. Total abort of subscriptions by universities and institutions	Copyright	Prevents free distribution of scientific information , even for scientific purposes	No Open-Access	Even electronic copy of journal only free for subscribers or payment online	Unfair Refereeing	Only one "real" referee; poor referees' reports; no relevance to the issues raised in the paper; personal insults; fraudulent delay of reports
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Copernicus Gesellschaft e.V. 	Initiatives regarding Online and Open-Access Publication
	<p>Background:</p> <p>Timeline of the Open Access (by Peter Suber) http://www.earlham.edu/~peters/fos/timeline.htm</p> <p>News from the Open Access Movement http://www.earlham.edu/~peters/fos/fosblog.html</p> <p>SPARC Open Access Forum and Newsletter http://www.arl.org/sparc/soa/index.html</p> <p>Directory of Open Access Journals (Lund University Libraries) http://www.doaj.org</p> <p>Welcome Trust Report An Economic Analysis of Scientific Research Publishing http://www.wellcome.ac.uk/en/1/awtpubrepeas.html</p>
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Initiatives regarding Online and Open-Access Publication	
 Copernicus Gesellschaft e.V. 	<p>Open Access Statements:</p> <p>Budapest Open Access Initiative http://www.soros.org/openaccess/read.shtml</p> <p>Bethesda Statement on Open Access Publishing (status: 20 Jun 2003) http://www.earlham.edu/~peters/fos/bethesda.htm</p> <p>Welcome Trust Position Statement on Open Access (issued: 1 Oct 2003) http://www.wellcome.ac.uk/en/1/awtvispolpub.html</p> <p>Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (20 - 22 Oct 2003) http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html</p> <p>OECD Declaration on Access to Research Data from Public Funding (issued: 30 Jan 2004) http://www.oecd.org/</p>
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Initiatives regarding Online and Open-Access Publication	
 Copernicus Gesellschaft e.V. 	<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;">  <p style="font-size: small; margin: 0;">Conference on Open Access to Knowledge in the Sciences and Humanities <small>MAX-PLANCK-GESellschaft</small> 20 - 22 Oct 2003, Berlin</p> <p style="font-size: x-small; margin: 0;">Signatories</p> </div> <p>German research organisations:</p> <ul style="list-style-type: none"> <li style="display: inline-block; width: 45%;">• Fraunhofer Society <li style="display: inline-block; width: 45%;">• Leibniz Association <li style="display: inline-block; width: 45%;">• Wissenschaftsrat <li style="display: inline-block; width: 45%;">• Helmholtz Association <li style="display: inline-block; width: 45%;">• HRK <li style="display: inline-block; width: 45%;">• German Research Foundation <li style="display: inline-block; width: 45%;">• Max Planck Society <li style="display: inline-block; width: 45%;">• Deutsches Forschungsnetz
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	<h2>Initiatives regarding Online and Open-Access Publication</h2>
	<div data-bbox="443 432 890 521">  <p>Conference on Open Access to Knowledge in the Sciences and Humanities EAC-PLANCA-GESSELLSCHAFT 20 - 22 Oct 2003, Berlin</p> <p>Signatories</p> </div> <p><u>National & International Signatories:</u></p> <ul style="list-style-type: none"> • Centre National de la Recherche Scientifique (CNRS) • Academia Europaea • Deutscher Bibliotheksverband • Central European University Budapest • Open Society Institute • FWF Austrian Science Fund • Fund for Scientific Research – Flanders • National Hellenic Research Foundation • Estonian Academy of Sciences, Estonia • Generalsekretär der Volkswagenstiftung • Chinese Academy of Sciences • Fonds National de la Recherche Scientifique (FNRS), Belgium • European Geosciences Union (EGU), France / Germany • Institut Pasteur, Paris, France • SPARC / SPARC Europe • Indian National Science Academy • CERN • National Science Foundation China (NSFC) • The Royal Netherlands Academy of Arts and Sciences • Ministry of Science and Research, North Rhine-Westphalia • President of the Austrian Rectors' Conference

	<h2>Realization of Initiatives by Copernicus</h2>
	<p><u>Publishing with strong, international scientific associations & organizations</u></p> <ul style="list-style-type: none"> • timely publications • up-to-date aims and scope • substantial "reservoir" of competent editors and referees • large "reservoir" of "intelligent" authors for preparing manuscripts, figures, illustrations and movies in "computer-ready" formats • substantial decrease in costs for promotion and marketing • contribution to a membership bonus programme

Realization of Initiatives by Copernicus	
	<p>Realization of Initiatives by Copernicus</p> <p><u>Inverting "Print -> Online" to "Online -> Print"</u></p> <ul style="list-style-type: none"> • Two-stage Publication Process per Journal <p>Stage 1 (totally online Web-based)</p> <p>Submission -> Review -> Editing -> Copy-Editing -> Galley Proof -> pdf -> Web upload (online)</p> <p>Stage 2 (print version)</p> <p>pdf -> digital printing -> (copyright) libraries</p> <ul style="list-style-type: none"> • Publication of journals in real "online style" • Electronic submission of manuscripts • Reduction of the peer-review process from months to weeks by a full automatic electronic Online editorial support system • Extending the classical peer-review to an "open peer-review", i.e., publishing the referees' comments (anonymous or attributed)
Copernicus Gesellschaft e.V. 	9

Realization of Initiatives by Copernicus	
	<p>Realization of Initiatives by Copernicus</p> <p><u>Inverting "Print -> Online" to "Online -> Print"</u></p> <ul style="list-style-type: none"> • Extending the open peer-review process further by including interactive public discussions and thereby maximizing the effectiveness and transparency of scientific quality assurance (innovative two-stage review process) • Reduction of the production process, incl. galley-proof reading and (optional) copy-editing, from weeks/months to hours/few days by a (semi) automatic electronic online publication system and sophisticated word2tex, tex2html + PDF Latex software technologies • Innovative editing -> formatting -> inclusion of figures -> pdf transformation via pdf LaTeX only • Immediate publication online (hard-copy only after completion of an issue) • Efficient new way of publishing "comments" and "answers to comments" next to the original article • Efficient new way of publishing Special Issue
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Atmos. Chem. Phys. Discuss., 4, 7725–7755, 2004
www.atmos-chem-phys.org/acpd/4/7725/
SRRef-ID: 1680-7375/acpd/2004-4-7725
European Geosciences Union



ACPD

4, 7725–7755, 2004

Air mass history dependency of aerosol water and ethanol uptake

T. Petäjä et al.

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Interactive Discussion	

Effects of SO₂ oxidation on ambient aerosol growth in water and ethanol vapours

T. Petäjä¹, V.-M. Kerminen², K. Hämeri¹, P. Vaattovaara³, J. Joutsensaari³, W. Junkermann⁴, A. Laaksonen⁵, and M. Kulmala⁵

¹Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Finland

²Air Quality Research, Finnish Meteorological Institute, Finland

³Department of Applied Physics, University of Kuopio, Finland

⁴Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Germany

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Atmos. Chem. Phys. Discuss., 4, 7725–7755, 2004
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Abstract

Hygroscopicity (i.e. water vapour affinity) of atmospheric aerosol particles is one of the key factors in defining their impact on climate. Concentration of sulphate and nitrate less hygroscopic particles is expected to increase their hygroscopicity and hence their cloud condensation nuclei (CCN) activity. In the study differences in the hygroscopic and ethanol uptake properties of sulfate aerosol particles in the Arctic air masses with a different exposure to anthropogenic sulfur pollution were examined. The main discovery was that Arctic marine particles having been exposed to polluted air were more hygroscopic and less soluble in ethanol than other transported dust. This aging process was attributed to sulfur dioxide oxidation and subsequent condensation during the transport of these particles to our measurement site. The hygroscopicity of naturally fresh aerosol particles in the same field was approximately the same as all the cases, being indicative of a relatively similar chemical composition despite the differences in air mass transport routes. These particles had also been produced close to the observation site typically 3–8 h prior to sampling. Apparently, these particles did not have an opportunity to accumulate organic acid on their way to the site, and instead their chemical composition (hygroscopicity and ethanol solubility) resembled that of particles produced in the local or near-regional ambient conditions.

1 Introduction

Ambient aerosol particles influence the global climate directly by scattering and absorbing solar radiation and indirectly by acting as cloud condensation nuclei (CCN) (Coakley et al., 2003). While the magnitude of both these effects is highly uncertain, there are some indications that the indirect effect might contribute over the direct one to the global atmosphere (Coakley and Searls, 2002; Sinagra et al., 2003). The ability of atmospheric aerosol particles to act as CCN, and hence their potential indirect climatic effects, are dependent on their size and chemical composition. One of the key

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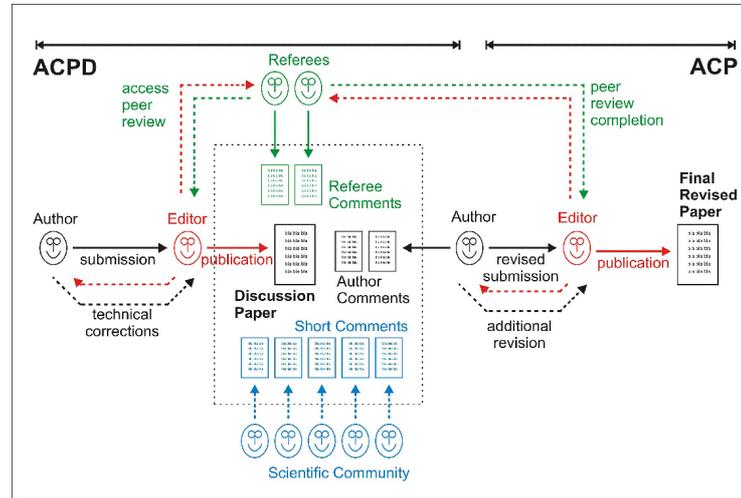
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The screenshot shows the Copernicus website interface in a Microsoft Internet Explorer browser window. The page title is "Atmospheric Chemistry and Physics". The main content area is titled "Interactive Discussion" and displays a list of discussion entries. The first entry is a "Discussion Paper" published on 07.10.2004, titled "Parametric sensitivity and uncertainty analysis of dimethylsulfide oxidation in the remote marine boundary layer" by D. D. Lucas, R. O. Pinn, and others. Below the list, there are icons for "AC: Author Comment", "RC: Referee Comment", "SC: Short Comment", "EC: Editor Comment", "OV: Online Version", and "PV: Print Version". The right sidebar contains a "Quick Search" box, a "Personal Name" login form, and "Special Services" including "Printer-friendly Version", "Bookmark", and "Tell a Friend".

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	Realization of Initiatives by Copernicus
Copernicus Gesellschaft e.V. 	<p><u>Extending the Advantages of the "classical" Publication</u></p> <ul style="list-style-type: none"> • Include print version for citation index and impact factor purposes • Keep the classical citation of an article (unique citation) • Add the universal URL address of an article, such as DOI, URN or SRef etc. (unique electronic citation) • Keep the archiving of a journal through its printed version (copyright libraries) • Use the new facilities of archiving and even long-term archiving of E-Journals by various international libraries (Deutsche Bibliothek, DOAJ, ADS etc.) • Use the pdf files of the E-Journal as the print-files for the Print-Journal by applying the new technology of digital-printing or print-on-demand (enhanced quality; no extra charges for colour illustrations; no stockholding; fast printing etc.)
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	Realization of Initiatives by Copernicus
Copernicus Gesellschaft e.V. 	<p><u>Open-Access publication to the web</u></p> <ul style="list-style-type: none"> • Personalised full-article publication alert service • Full text and read-immediately search engine • Widest possible dissemination • Maximum possibility for maximum impact • Short and long term archiving by any private computer or any institution, organization, library etc. incl. the copyright libraries • Substantial reduction of subscription costs due to cost-sharing: <p style="margin-left: 20px;">Production Stage 1: Online Publication paid by author(s) and therefore free for any subscriber</p> <p style="margin-left: 20px;">Production Stage 2: Print Publication paid by subscriber</p>
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 Copernicus Gesellschaft e.V. 	<p>Service Charges for Authors from 20,- EUR/page</p> <ul style="list-style-type: none"> • Slightly smaller than in case of BioMed • Smaller than UK inquiry (1.000,- US\$ per article) • Smaller than page charges for many "classical" journals (e.g. AGU) • Substantially higher than for many European "classical" journals for which in many cases no service/page charges at all are levied <p>Proposal: Transfer subscription charges into service charges</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>Classic EU:</td> <td>20.000 journals x 500 subscribes x 1.000 US\$ sub. cost</td> <td style="text-align: right;">= 10x10⁹US\$</td> </tr> <tr> <td>Classic AGU:</td> <td></td> <td style="text-align: right;">= 25x10⁹US\$</td> </tr> <tr> <td>Open Access:</td> <td>20.000 journals x 100 subscribes x 15 pages</td> <td style="text-align: right;">= 1x10⁹US\$</td> </tr> <tr> <td colspan="2" style="border-top: 1px dashed black;"></td> <td></td> </tr> <tr> <td>Savings</td> <td></td> <td style="text-align: right;">~ 10x10⁹US\$</td> </tr> </table>	Classic EU:	20.000 journals x 500 subscribes x 1.000 US\$ sub. cost	= 10x10⁹US\$	Classic AGU:		= 25x10⁹US\$	Open Access:	20.000 journals x 100 subscribes x 15 pages	= 1x10⁹US\$				Savings		~ 10x10⁹US\$
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Savings		~ 10x10⁹US\$														
18																



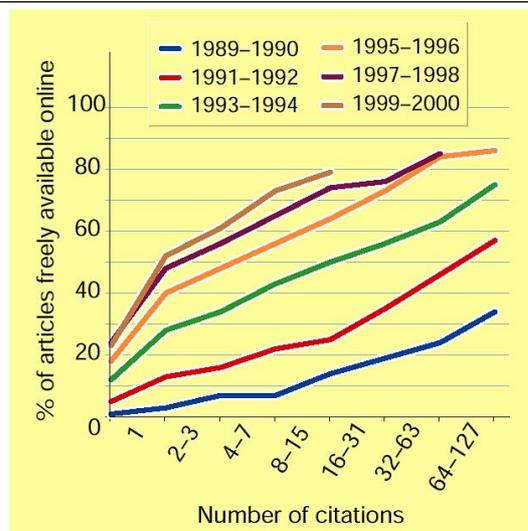
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Advantages of Going Open-Access with Copernicus

- Same advantages as for "classical" journals regarding aims & scope, competent editors and referees, citation index and impact factor, citation, archiving etc.
- Enhanced quality assurance by interactive per review
- Faster publication
- Open and free of charge access
- Higher dissemination and impact
- Personalised full-article alert service
- Better online quality
- Better print quality
- Much smaller subscription rates for print version
- Personalised copyright
- Overall savings of about 10 billion US\$ per year



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Online and Open Access Publications by Copernicus	
	<p>Online and Open Access Publications by Copernicus</p> <p><u>Including Full Peer Review and Interactive Public Discussions</u> (main Journal plus Discussion Journal)</p> <ul style="list-style-type: none"> • Atmospheric Chemistry and Physics (ACP/D) • Biogeosciences (BG/D) • Hydrology and Earth System Sciences (HESS/D) • Ocean Science (OS/D) <p><u>In preparation for 2005</u></p> <ul style="list-style-type: none"> • Bioanalytical Chemistry (BC/D) • Chemical Research (CR/D) • Climate: Past, Present and Future (CL/D) • Geosciences Express (GE/D) • Planetary and Solar System Sciences (PSSS/D)
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Copernicus Gesellschaft e.V.</p> 	21

Online and Open Access Publications by Copernicus	
	<p>Online and Open Access Publications by Copernicus</p> <p><u>Full Peer Review</u> (main Journal only)</p> <ul style="list-style-type: none"> • Advances in Geosciences (ADGEO) • Advances in Radio Science (ARS) • Annales Geophysicae (ANGEO) • Astrophysics and Space Sciences Transactions (ASTRA) • Natural Hazards and Earth System Sciences (NHESS) • Nonlinear Processes in Geophysics (NPG) • Social Geography (SG) • Stephan Mueller Special Publication Series (Book Series)
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Copernicus Gesellschaft e.V.</p> 	22

Online and Open Access Publications by Copernicus	
 Copernicus Gesellschaft e.V. 	<p>Access Review</p> <p>Periodicals</p> <ul style="list-style-type: none"> • European Conference on Radar Meteorology (ERAD) • Geophysical Research Abstracts (GRA) <p>Single Publications</p> <ul style="list-style-type: none"> • 6th International School/Symposium on Space Plasma Simulation (ISSS 6) • 7th International Conference on Gas Geochemistry (ICGG 7)
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Online and Open Access Publications by Copernicus											
 Copernicus Gesellschaft e.V. 	<p>Copernicus is the Number 2 Online and Open Access publisher in the World (after BioMed)</p> <p>In Geosciences and Planetary and Space Sciences Copernicus is even the Number 1 Online and Open Access Publisher</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">1. Full Peer Review plus Interactive Public Discussions</td> <td style="text-align: right; padding: 2px;">= 9 x 2 Journals</td> </tr> <tr> <td style="padding: 2px;">2. Full Peer Review</td> <td style="text-align: right; padding: 2px;">= 8 Journals</td> </tr> <tr> <td style="padding: 2px;">3. Access Review</td> <td style="text-align: right; padding: 2px;">= 2 Periodicals</td> </tr> <tr> <td colspan="2" style="border-top: 1px dashed black; padding: 2px 0 2px 20px;"></td> </tr> <tr> <td style="padding: 2px;">Total</td> <td style="text-align: right; padding: 2px;">= 28 Publications</td> </tr> </table>	1. Full Peer Review plus Interactive Public Discussions	= 9 x 2 Journals	2. Full Peer Review	= 8 Journals	3. Access Review	= 2 Periodicals			Total	= 28 Publications
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