



EDUCACION QUIMICA GUIDE FOR AUTHORS

Introduction

Educación Química is an open access Journal that tries to fulfill the communication and expression gaps between teachers, students and researchers in science education, particularly in chemistry education. In order to do so, it provides a forum of orientation and analysis that favors the improvement of the teaching-learning process of chemistry by promoting the application in everyday classes of the findings on educational research and the pedagogical content knowledge of outstanding teachers and authors. Through the communication of chemistry and its best ways of teaching the Journal pretends to collaborate with the social, economic, environmental and cultural development of the Ibero-American region in the context of the global society.

Educacion Quimica pretends to become the most prestigious Ibero-American chemistry education journal. Given its international perspective, the works related with a broad outlook will be preferred over local scope ones. By now, at the beginning of 2013, the Journal has published almost 500 original papers written by non Mexican authors and more than 800 written by Mexican ones, adding almost 1,400 papers published that can be consulted in the page <http://educacionquimica.info/> in an open access mode.

Educacion Quimica's creation was promoted by the Facultad de Química of the National Autonomous University of Mexico (Universidad Nacional Autónoma de México, UNAM), that is responsible for its edition. Additionally the Journal established new agreements with other professional associations (The Mexican Chemical Society remains as a partner) and educational institutions. Nowadays it has a Mexican Editorial Board, with members from several organizations and universities, and an International Editorial Board, with participants from eleven different countries: Argentina, Brazil, Canada, Chile, Colombia, Cuba, Panama, Puerto Rico, Spain, United States of America and Venezuela.

Educacion Quimica has completed 23 years of punctual quarterly appearance, since January 1990, with the exception of year 2000 when a strike in the UNAM kept the Journal from publishing during 8 months, after which it reappeared in its "second period". The Journal also had an introductory issue numbered as Volume 1 Issue 0 in July 1989; therefore *Educacion Quimica* is 23 years old since July

2012. *Educacion Quimica* preferably publishes articles written in Spanish, because it is the majority language in Ibero-America and we want that our readers become chemistry teachers and pupils who give and take their classes in good Spanish. Nevertheless, we also encourage our readers to manage fluently in other important languages of the region, so we accept papers written in English, French and Portuguese. Furthermore, in the future it will be promoted the insertion of articles in English, since it is the most widespread language in the scientific international scene. Each issue of the Journal will have at least one paper written in English.

Sections of the Journal

The authors or the Director of the Journal will select a Section for each one of the papers published, among the following:

SECTION	DESCRIPTION
Attitudes and values	Attitudinal aspects of education.
Chemical Engineering	Directed to chemical engineering and technology
Chemistry Didactics	Didactic strategies for chemistry teaching
Chemistry Education for Sustainability	Ecological protection
Curriculum	Innovative Syllabi and Curriculum in a large scale
Demonstrations	Experimental Demonstrations
Educative Evaluation	Facets of chemistry teaching and learning evaluation
Educative Research	Rigorous and original studies on chemistry educational research
Emergent Topics on Chemistry Education	Innovations in chemical education
Green Chemistry	The twelve principles of Anastas & Kirchhoff
How it is... analyzed? calculated? constructed? synthesized? Illustrated? modeled?	Description of innovative experiences for aspects on analytical, experimental, graphical, theoretical, technological or problem solving
ICT and chemical education	Information and Communication Technologies in chemical education

Interphase	Between the end of the career and the professional development
Microscale Chemistry	The editor of this section is Jorge Ibáñez (jorge.ibanez@uia.mx).
N years ago	Anniversaries of facts or scientists that turn around the history of chemistry
Quimotrivia-Rejecta or Nature of Science	Papers on what is science and how it develops
Reactives	Exchange of instruments for the evaluation of learning
Review	Books reviewed
Science Dissemination	Proposals of new focus on chemistry facts dissemination
Science for children and youth people	Experiences for science/chemistry teaching in basic education
Science, Technology and Society	Exploring the STS dimension
Secondary chemistry topics	High School Chemistry teaching and learning
Student's Conceptions	Alternative conceptions and conceptual change
Teaching as research	Participation of students on science activities
Teachers' Training	Original ways of training teachers
Tepache	Mistakes in textbooks
To take the dust away	Chemistry in History for teaching
To know, experiment and simulate	Educative proposals that merge these three kind of strategies
Updated professors	Field reviews for teaching
Web	Entertainment to learn chemistry

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Editorial Norms

All the contributions must be original articles, not submitted before to any other publication. They must be incorporated in the following URL:

http://educacionquimica.info/flujo_registro.php

Educación Química has a system of editorial review; that is, all the articles received are sent to at least two referees suggested by the members of the Editorial Board in order to decide their acceptance or rejection. The Director of the Journal tries to select referees from different institutions and countries for each paper received.

Every article must follow these norms:

1) The length must be up to 15 double spaced pages, including figures. In terms of characters it is expected that the articles will not have more than 30,000. Any contribution longer may be immediately rejected by the Director. Authors must register to upload their paper written with Microsoft Word at the URL:

http://educacionquimica.info/2013/flujo_de_articulos.php?lang=en. After having filled the data requested when registering, the author must fill his/her username and the password to upload the paper. It will be the author responsibility to memorize the username and the password selected in order to have access to the same URL afterwards, when the evaluation process of the paper will proceed.

2) In case there is any trouble when uploading the article in that page, it will be possible to send it by e-mail to andoni@unam.mx. The article will be placed in the page and the authors will be informed of the assigned username and password to continue the evaluation process.

3) Articles will be headed by a text written in separated boxes containing the title, author/s name/s, institution, country of origin, electronic mails and English abstract of 100-200 words, as well as four to five key words. This is because since 1993 the journal is indexed by the *Chemical Abstract Services* and since 2010 by Scopus.

Author names must include name(s) and last name(s) (if the author uses two last names it is recommended to unite them by a hyphen) and they must not include academic titles.

4) Immediately the paper in Word Format will be uploaded, headed only by the title, the abstract and the keywords, without mentioning the authors in any place to fulfill the double blind evaluation process (the authors do not know the referees and vice versa). Even the authors references will be hidden in the text by writing them the generic word 'Authors' as ('Authors', year), and in the references' list as 'Authors, *Journal*, year' without mentioning title, volume, issue, and pages.

5) Each article will be a self-sufficient information unit with the necessary background for its understanding, without expecting the reader to have specialized knowledge on the topic.

6) Written references will be placed into the text itself by the author(s) name(s) and the year of edition, both indicated between parenthesis, or only the year if the author(s) name(s) appear in the text itself. Examples:

...that is not the viewpoint of the Copenhagen School (Heisenberg, 1958, pp. 44-58), that insists on...

... as Szabadváry and Oesper (1964) pointed out, pH...

... In a study of secondary students' thinking about the burning process (Driver, 1985)...

At the end of the article the complete set of 'References' will be quoted **in strictly alphabetical order**.

Each reference to a book will follow this scheme:

Author(s), *book name in italics*, city, country: publishing company, year of publication.

Example:

Heisenberg, W., *Physics and Philosophy. The Revolution in modern science*, New York, USA: Harper Torch Books, 1958.

Each reference to an article must follow this order:

Author(s), article's name, *journal's complete name in italics*, volume in boldtype, issue in parenthesis (in case there is an issue number), initial and final pages number, year of appearance.

Example:

Szabadváry, F. y Oesper, E. E., Development of the pH concept, *Journal of Chemical Education*, **41**(2), 105-107, 1964.

Chapters in books must follow the order:

Author(s), chapter name, "in" editor(s), *quoted book's name in italics*, ("Pp." quoted pages), city, country: publishing company, year of publication.

Examples:

Driver, R., Beyond Appearances: The conservation of Matter under Physical and Chemical Transformations, in Driver R., Guesne, E. y Tieberghien, A. (editors), *Children's ideas in science*, (pp.145-169).Milton Keynes, Philadelphia, USA: Open University Press, 1985.

Brooke, J. H., Avogadro's hypothesis and its fate: a case-study in the failure of case-studies, in Brooke, J. H. (editor), *Thinking about matter. Studies in the history*

of chemical philosophy, (Pp. 235-273), Great Yarmouth, Gran Bretaña: Varorium, 1995.

7. Electronic references will follow the American Psychological Association (APA) format found in <http://www.apastyle.org/elecref.html>. They consist basically in the following general rules:

7.1 Articles found in Internet, whether in html format, Word or pdf, from any source, particularly from electronic magazines. Examples (Acevedo y Vázquez-Alonso, 2002; Avogadro, 1811; Barker, 2000):

Acevedo, J. A. y Vázquez-Alonso, A., Las relaciones entre ciencia y tecnología en la enseñanza de las ciencias, [electronic version] *Revista Electrónica de Enseñanza de las Ciencias* 2(3) MONOGRAFICO “Las relaciones entre ciencia y tecnología en la enseñanza de las ciencias”, Editorial, retrieved December 30th, 2008, from URL <http://www.saum.uvigo.es/reec/>

Avogadro, A., Essai d'une manière de déterminer les masses relatives des molécules élémentaires des corps, *Journal de Physique* 73, 58-76, 1811. An electronic version in English of this article was retrieved December 12th, 2008, from URL <http://webserver.lemoyne.edu/faculty/giunta/avogadro.html>

Barker, V., Beyond Appearances: Students' misconceptions about basic chemical ideas, A report Prepared for the *Royal Society of Chemistry*, 2000, retrieved January 20th, 2013, from URL

<http://www.chemsoc.org/networks/learnnet/miscon.htm>.

7.2 Non periodical documents, without autor nor date. Quote these examples with the first words in the document title and the consulted date.

Example: (Chemical Heritage Foundation, 2006; Nobel Prize in Chemistry, 2008):
Chemical Heritage Foundation, Retrieved January 18th 2006, from URL

<http://www.chemheritage.org/>

Nobel Prize in Chemistry. Laureates. Retrieved January 12, 2008, from URL

<http://www.nobel.se/chemistry>

8. In relation to the article text, the language will be simple and straightforward, avoiding long paragraphs.

9. When using a technical name or a word understandable only for experts in such topic, its meaning must be explained afterwards in the simplest possible way (in a foot note if desired or inside the text).

10. The articles will have attached all the graphs and illustrations needed for its publication as originals ready to be printed in the magazine. The author must be sure that the size of the characters contained in the originals is big enough as to undergo reduction when printed without becoming illegible. The author will be responsible to get the authorizations needed to print graphs and illustrations already printed in other sources.

11. Articles from any industry referring to a technical problem or an interesting topic for the industry need to be officially credited by the industry in question. If the responsibility is the authors', it must be clearly stated.

Refereeing criteria

It is convenient that the authors know the refereeing criteria followed during the evaluation process. Referees have been suggested to judge the contributions according to the following guidelines:

- i. Is the article subject matter relevant? Will the readers obtain new ideas after reading it? Will it contribute to improve chemical education in the Ibero-American region?
- ii. Is the contribution's objective made explicit? Are the question that tries to solve and the objective that pretends to develop meaningful? Is it plenty justified?
- iii. Is the contribution development adequate? Is it possible to follow it with no trouble? Are every step taken and each conclusion obtained justified? Is it properly illustrated?
- iv. If it is a quantitative field research, are the sample definition, the statistical value, the techniques and analysis method adequate? Is there a complete explanation or are there any obscure steps?
- v. Are there rigor, pertinence and originality into the conclusions? Do they strictly derive from the development of the article? Are the conclusions obtained predictable from the beginning? Are there any innovations?
- vi. Are the writing and the language precision appropriate? Which words, paragraphs, or text portions must be improved in that respect?
- vii. Is the quoted bibliography pertinent? Is it extensive enough? Does it consider the majority of the previous contributions in the field? Is it missing an important one?
- viii. Is the article adjusted to the maximum approved extension of 15 double space pages? Do the bibliography and the quotes adjust to the editorial norms?

Based on the previous considerations, the referees will recommend one of the following options:

- 1) acceptance,
- 2) conditioned acceptance, or
- 3) rejection of the article.

In the second case, the aspects that must be eliminated, enhanced or added will be explicitly mentioned, by means of general notes or margin notations in the original. In the third case the referee will emit a justification based on the failure to comply with one or several of the 8 previous points. Any discrepancy between the referees will be solved by the Director of the Journal.