

Societat Catalana de Química

Barcelona. Spain

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Chemical Society Annual Report to the EuCheMS Division of Chemical Education for 2013-2014

1. Abstract

The report presents the activities related to Chemistry Education and the publications of Catalan Society of Chemistry for 2013-2014.

2. National educational policy

In the Catalan Society of Chemistry we have not competencies for issues related to with issues of National policy for education. It is because of that that there is not this information in our national report.

3. Events in chemical education

The events described in sections 4, 5 and 7 are events related to Chemicals education, so they are included in those sections.

4. Activities of the Royal Society of Chemistry

4.1. Fifth Conference on the Teaching of Physics and Chemistry

November 7-9, 2013

<http://blogs.iec.cat/scq/2013/09/24/v-jornades-sobre-lensenyament-de-la-fisica-i-la-quimica-3/>

This conference was aimed at physics and chemistry teachers at secondary and university levels.

The conference was organized jointly by Obra Social "la Caixa", the Official Association of Doctors and Graduates in the Arts and Sciences of Catalonia, the Catalan Society of Chemistry, the Catalan Society of Physics, the Department of Education of the Government of Catalonia, the Association of Physics and Chemistry Teachers of Catalonia, and the Chemical Institute of Sarrià (URL-IQS).

The topic discussed was «Inquire in the classroom». During the conference, several pedagogical and methodological proposals were presented and we had the opportunity to exchange innovative experiences and to present a wide variety of useful practical activities for improving students' motivation and the quality of the learning.

Conferences:

The main lecture was “Using demonstrations to teach inquiry” by Peter E. Childs, Emeritus Senior Lecturer in Chemistry, University of Limerick, Limerick, Ireland.



4.2. Debate on chemistry at the Institute of Catalan Studies (Debats de Química a l'IEC)

April 9, 2014

<http://blogs.iec.cat/scq/2014/03/14/xxvi-debat-de-quimica-a-linstitut-destudis-catalans/>

This debate was aimed at physics and chemistry teachers at secondary and university levels.

This year the topic discussed was the same as the monographic «The periodic table», edited in the number 15 of the magazine *Educació Química*, *EduQ* (in English *Chemical Education*). The several speakers were some of the authors of this number and the coordinator of the monographic.



Conferences:

The main lecture was “The periodic table as a cultural icon” by Dr. Santiago Alvarez (UB). There was also the presentation of a new periodic table in dual format «Atoms and elementary substances» by Dr. Jordi Cuadros (IQS-URL), specially addressed to the High School Students.

Students received the “Awards for Students of High School to Research works in the Field of Chemistry” during the ceremony and presented their winning research projects.

For the first time poster presentations of a selection of works that took part in the awards were included.

4.3. “Awards for Students of High School to Research works in the Field of Chemistry”

<http://blogs.iec.cat/scq/2014/02/10/8a-edicio-dels-premis-als-treballs-de-recerca-de-batxillerat-dins-lambit-de-la-quimica/>

Premis als Treballs de Recerca de Batxillerat dins l'Àmbit de la Química

600 €

Premi especial d'estades científiques per a l'alumnat

VUITENA EDICIÓ
desembre del 2013

Si has fet un treball de recerca de batxillerat en què la química o el seu paper està important, el podràs presentar en aquest premi i obtenir una menció, un accésit (fins a tres-cents euros) o un premi (fins a sis-cents euros).

El autor o la autora del vostre treball de recerca també rebreu una menció per l'ajuda i l'orientació que us ha ofert, i el vostre treball serà obsequiat amb un set de filles i targetes didàctiques per a l'ensenyament de la química (taules periòdiques, etc.).

A més, el vostre treball es publicarà en paper o es penjarà al web de la SCQ, o la diàlisi de la web per a la seva difusió.

Anteu-vos a participar en la vuitena edició dels Premis als Treballs de Recerca de Batxillerat dins l'Àmbit de la Química.

INFORMACIÓ

- Adreça postal:
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- Lliurament personal:
Societat Catalana de Química
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Carrer de Sant Antoni de Capmany, 14-16 - 08007 Barcelona
- El premi principal pot ser de fins a 600 euros i serà atorgat per un jurat nomenat per la Junta Directiva de la SCQ. El jurat podrà declarar el premi i l'accessit i podrà també concedir fins a dos accessits.
- Informació de contacte:
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Així mateix, caldrà a l'adreça: scq@iec.cat

This competition was open to students at upper-secondary school, who had finished the course work and gained a good mark over the 2013-2014 academic years. It assesses the quality of content, the presentation, innovative ideas, experimental work, a good approach to research and the degree of difficulty, the amount of work developed by students, and the originality of work and creativity of students.

The SCQ wish to contribute to encouraging students and high school teachers to develop a research question in one or more aspects of the field of chemistry and encouraged to submit it to the “Awards for Students of High School to Research works in the Field of Chemistry”.

4.4. Scientific stays at universities and research centers for secondary school students (18 years old)

The best students who took part in the Awards could join a Scientific stay at universities and research centers.

This competition was opened to students at upper-secondary school, who had finished the course work and gained a good mark over the 2013-2014 academic years. It assesses the quality of content, the presentation, innovative ideas, experimental work, a good approach to research and the degree of difficulty, the amount of work developed by students, and the originality of work and creativity of students.

It was organized for the first time as a part of the International Year of Chemistry (AIQ2011), and since then it has been announced every academic year.

The centers that collaborate with the Catalan Society of Chemistry and offered the scientific stays were: the Institute of Advanced Chemistry of Catalonia (CSIC-IQAC), the Institute of Environmental Assessment and Water Research of Catalonia (CSIC-IDAEA), the Institute of Materials Science of Barcelona (CSIC-ICMAB), the Faculty of Pharmacy and the Faculty of Chemistry at the University of Barcelona (UB), the Chemical Institute of Sarrià (URL-IQS), the Department of Chemistry at the Autonomous University of Barcelona (UAB), the Institute of Energy Technology at the Technical University of Catalonia (UPC), the Department of Chemistry at the University of Girona (UdG), the Department of Chemistry at the University of Lleida (UdL), the Faculty of Chemistry at the Rovira i Virgili University (URV) and the Institute of Chemical Research of Catalonia (ICIQ).

We believe that for students there is no prize more advantageous than an opportunity to participate in the research of our country. The departments offer students the possibility of joining in the work of research groups for two weeks.

Probably one of the best ways to reveal scientific vocation among young people and generate enthusiasm and interest in chemistry is to give students a scientific stay to meet and share the work of research groups.

4.5. Young Investigators Meeting of the Catalan Countries

<http://blogs.iec.cat/scq/2013/09/25/vuitena-trobada-de-joves-investigadors-dels-paisos-catalans/>

This is a biennial event where postgraduates meet and have the possibility to find out about the research topics of others groups. They have the opportunity to communicate with other investigators whose area of work belongs to another discipline.

The last edition was organized in Andorra la Vella (Andorra) in November 2013 and nearly one hundred and fifty participants between senior and junior investigators took part.



By Institut d'Estudis Catalans

4.6. The Catalan Chemistry Society Prize

http://www.iec.cat/institucio/entrada.asp?c_epigra_f_num=708

http://www.iec.cat/institucio/entrada.asp?c_epigra_f_num=708

Instituted in 1962, this was the 51st Edition. This is an annual competition open to Post University's students that presents a research paper, or bibliographic essay on chemistry.

5. Publications

5.1 Revista *Societat Catalana de Química* (Journal of the Catalan Society of Chemistry)

http://publicacions.iec.cat/PopulaFitxa.do?moduleName=revistes_cientifiques&subModuleName=&idColleccio=94



The first issue was published in 2000. It aims to be a focal point of communication between the fellows of the Catalan Chemistry Society: to inform its members about the activities and events organized by the Society, and also to disseminate scientific research on any area of chemistry. The basis of the Journal is articles written by recognized professionals. This is an annual publication.

5.2. The journal *Educació Química EduQ* (in English, *Chemistry Education EduQ*)

http://publicacions.iec.cat/PopulaFitxa.do?moduleName=revistes_cientifiques&subModuleName=&idColleccio=6090



EduQ aims to be a means of dissemination of information and the exchange of ideas for teaching chemistry at all levels, with an emphasis on Secondary level education. The journal is a tool to facilitate innovative teaching strategies and resources to improve the teaching of chemistry.

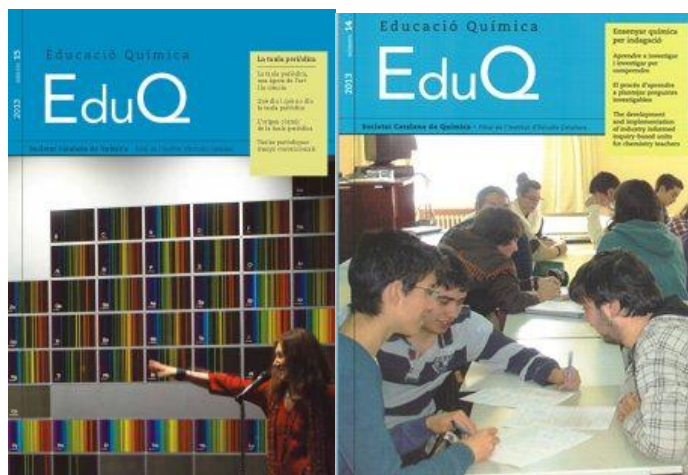
The Sections of the journal are: Chemistry Today; Chemical Concepts and Models; Curriculum Projects; Content Update; Didactic Strategies; Teacher Training; History and Nature of Chemical; Innovation in the Classroom; Language, Terminology and Communication; New Technologies; Chemistry in Context; Chemistry, Environmental Education and Sustainability; Research in Teaching Chemistry; Didactic Resources; Practical Laboratory; High School Research Papers.

EduQ is published three times a year: once every four months. Every publication has 64 pages and an average of 8-10 all colour articles.

Most of the articles are written in Catalan, but also some of them are published in Spanish, French, Portuguese, Italian and English.

The topics of the 3 monographs of the 2013 were:

- Teaching Inquired-Based Chemistry (February 2013) EduQ 14
- The Periodic Table (June 2013) EduQ 15
- History and Nature of Chemistry (October 2013) EduQ 16



5.3 Collection: The classics of chemistry (Els clàssics de la química)

The objective of this book collection is to ensure that chemists in the Catalan language area are aware of current debates and theories, as well as providing the most up-to-date developments in chemistry that has been published in scientific journals.

The last published issue was:

“On a new series of organic compounds containing metals” / Translation, introduction and commentary by Joaquim Sales and Agustí Nieto-Galan Author: Enric Moles i Ormella

Sobre una nova sèrie de compostos orgànics que contenen metalls / Traducció, introducció i comentaris de Joaquim Sales i Agustí Nieto-Galan



5.4 Others

- *Nomenclatura de química orgànica [recurs electrònic] : seccions A, B, C i H : regles definitives de 1979* / [International Union of Pure and Applied Chemistry ; edited by Àngel MESSEGUER I PEYPOCH and Miquel A. PERICÀS I BRONDO]

Entities: Institut d'Estudis Catalans. Societat Catalana de Química
 Spanish National Research Council (CSIC)
 International Union of Pure and Applied Chemistry Commission on Nomenclature of Organic Chemistry

Date of Edition: 2013

2nd Edition, corrected and extended

Electronic resource:

http://publicacions.iec.cat/PopulaFitxa.do?moduleName=catalog&subModuleName=cerca_rapida&idCatalogacio=19328

Portal de publicacions - Catàleg

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Nomenclatura de química orgànica [Recurs electrònic] : seccions A, B, C i H : regles definitives de 1979 / [Unió Internacional de Química Pura i Aplicada ; edició a cura d'Àngel Messeguer i Peypoch i Miquel A. Pericàs i Brondo]

Data d'edició: 2013
Descripció física: XXV, 371 p.
Entitats: Institut d'Estudis Catalans. Societat Catalana de Química
 Consell Superior d'Investigacions Científiques
 International Union of Pure and Applied Chemistry. Commission on Nomenclature of Organic Chemistry
Edició: 2a ed. cor. i amp.
Editorial: IEC [coedició amb] : Consell Superior d'Investigacions Científiques
Enllaç: [Nomenclatura de química orgànica : seccions A, B i C : regles definitives de 1979. 1983. \[Edició en format paper\]](#)

Referència: 51602

Resum

Dades de l'usuari/ària
 Adreça electrònica
 Contrasenya

 Alta d'usuari/ària

- Minutes of the Fifth Conference on Physics and Chemistry Teaching (Barcelona, November 7-9, 2013)

6. Liaison with the chemical industry

There is no information about this topic in this report.

7. International and European initiatives

In January 2008, the Catalan Society of Chemistry became a member of the European Association for Chemical and Molecular Sciences.

Since then the Society has joined the following divisions and working parties:

- Division of Chemistry and the Environment. Delegate: Dr. Èric Jover
- Division of Analytical Chemistry. Delegate: Dr. Romà Tauler
- Chemistry and Energy (Working Party). Delegate: Dr.. Jordi Llorca
- Division of Chemical Education. Delegates: Dr. Josefina Guitart and Dr. Aureli Caamaño
- Division of Computational Chemistry. Delegate: Dr. Ramon Sayós

Contacts have been established to participate in the Divisions below:

- Division of Organic Chemistry, Jordi Garcia <mailto:jordigarciagomez@ub.edu>
- Division of Chemistry in Life Sciences, Ramon Eritja <mailto:RECGMA@CID.CSIC.ES>