



**Proposal to host the
22nd International Conference on Chemical Education
(ICCE 2012)**

Where; Università “La Sapienza”, Rome, Italy
When; 15 – 20 July 2012
Tentative Theme: Chemistry Education for Citizens of the World
Proposing Institution; Didactics Division of the Italian Chemical Society (SCI)
Proposing Committee:
Aldo Borsese, President, SCI Didactics Division
Luigi Campanella, President, SCI
Liberato Cardellini, Italian representative in IUPAC CCE
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Introduction and motivations

After a seminal meeting, hosted more than forty years ago by Professor Gabriello Illuminati, IUPAC's International Conference on Chemical Education (ICCE) has never been held in Italy.

The Italian Chemical Society (SCI), through its Didactics Division (DD-SCI) proudly proposes to hold the 22nd ICCE in Rome.

In Italy, academic research in chemical education is not generally considered as a very relevant field, at least not at the same level as other sciences such as physics or mathematics. However, in the last few years, many efforts have been spent in an attempt to raise awareness towards chemical education related issues both at the interface between secondary schools and university level instruction, but also at the primary school level.

Though often determined by specific and urgent motivations (dropping enrolment in chemistry degree programs, decreasing chemistry literacy and substantial image related problems), this renewed attention towards chemical education provides a potentially fruitful context for a serious attempt to focus this interest in an organized national structure.

DD-SCI has taken upon itself this very important task and, by bringing together worldwide experts in the field, is planning to demonstrate what chemical education research at the highest level is all about.

Furthermore, the events that will take place over the next two years, including those related to the International Year of Chemistry, will hopefully trigger interest and anticipation for ICCE.

It might worth mentioning that at the meeting of the Division of Chemical Education of EuChemS, held in July 2008 in Istanbul, Turkey, it was suggested to combine ICCE 2012 and the European Conference on Research in Chemical Education (ECRICE), Rome might be the ideal setting.

The venue

Rome needs no introduction. The history, monuments, culture and overall beauty of Italy's capital are famous worldwide.



Fiumicino "Leonardo da Vinci" International Airport is served by direct flights from many major international cities. The airport is connected to the city (Roma Termini Central railway station) by frequent trains (30' trip).

Rome Ciampino airport is the hub of several low-cost airlines serving many European and overseas destinations. There is a bus service to Roma Termini station (45' trip).

Moving around the city, particularly within the downtown area, is facilitated by two subway lines serving all major sightseeing spots.

A wide range of accommodation solutions is available. From low cost B&B to middle-class and luxurious hotels. The organizing committee will negotiate special rates for participants.

The proposed site for the Conference is Università "La Sapienza", the oldest and largest of the three state Universities in Rome.



The University campus is located within walking distance from Termini railway station and from many hotels that could be used for the conference and from many historical sites.

Most of the activities will take place in the Chemistry Department where four 200 seat, four 100 seat and several smaller, all air conditioned, lecture halls are available. In addition, laboratory space as well as multimedia facilities will be provided. The Chemistry building is equipped with wideband wireless connections to the internet. During the conference period (see below), no classes are scheduled as the summer break has just started and, therefore, all facilities will be readily available.

Plenary meetings will take place in the University “Aula Magna”, a 1500 seat, air conditioned and fully equipped lecture hall located in the Rectorate building (3’ walk from the Chemistry Department).

It is estimated that most conference attendees will find accommodation within walking distance from the campus or, at most, within 2-3 subway stops.

Date

The proposed dates, 15 – 20 July 2012, were selected according to different constraints and in order not to overlap with other meetings that are currently known to have been scheduled. In any case, it is highly recommended not to élan a large meeting in August because in Italy, and particularly in Rome, the summer break is taken very seriously and it would be very hard to obtain decent services anywhere.

In mid July the weather in Rome can be rather warm with temperatures in the 30-35 C (85 – 95 F) range but evenings can be pleasant. Hot spells are always a possibility with rather hot and humid days.

Financial matters

Since University facilities will be mainly used. Costs will presumably kept as low as possible. An overall budget of about 60 – 80 k€ has been estimated. In very rough first approximation, about half of the budget should come from registration fees and IUPAC’s support. With an estimated attendance of about 500, this should allow to fix a registration fee not too dissimilar from previous meetings, i.e. in the 300 – 400 € (\$400 – 500) range. The remaining half should come from sponsors (Italian government. Cultural organizations, banks...).

Tentative Theme

Chemistry education for citizens of the world

The proposed theme implies the importance of acquiring correct concepts and basic knowledge about Chemistry not just for specialists but as part of scientific literacy if society. Chemistry and its correct use can help in setting up and strengthening the bases for a sustainable future.

Strong emphasis will be given to education strategies encouraging an experimental and inquiry based approach putting the student at the center of the teaching/learning process.

Possible topics

Results of chemical education research and reports on evidence-based and/or research-informed practice:

- Sharing and disseminating chemistry and chemical education knowledge.
- Teaching and learning chemistry/science at the secondary and tertiary level of education (general and vocational schools).
- Practices that foster the enhancement of students' science attitude
- Life long learning in chemistry.
- New technologies in chemical education. Sharing the diverse uses of multimedia in classes. E-learning and Innovative Instructions.
- Laboratory work (Micro-scale chemistry lab, meaningful practice, safety issues).
- Promoting the globalization of Chemical Education.
- Chemistry/science teachers' education (pre- and in-service training).
- Teaching chemistry/science to students with diverse abilities (teaching gifted student, teaching students with learning difficulties).
- Critical analysis of chemistry textbooks and curricula.
- Assessment and alternative assessment of teaching and learning chemistry.
- Green chemistry and environmental chemistry education.
- Ethical issues in chemistry education and in research.
- Chemistry and Society: promoting the public understanding of chemistry.
- History and philosophy of chemistry/science.
- Chemistry and industry.
- International programmes and projects in chemistry/science education.

Expertise of the local organizing committee

SCI is among the largest chemical societies in Europe and it actively collaborates, within EuCheMS, with partner organizations. Its Didactics

Division is responsible for implementing policies on chemical education at all school levels and in Society at large. Several of its members are active in international bodies such as IUPAC or the European Chemistry Thematic Network Association (ECTNA). SCI organized the 2007 World IUPAC meeting in Turin and DD-SCI was responsible for organizing the Chemical Education session.

June 30th,2009