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## Chemical Society Annual Report to the EuCheMS Division of Chemical Education for 2019-2020<sup>1</sup>

### 1. Abstract

During this year, almost everything has been “normal” with the events and chemistry education activities until March 2020. However, due to Covid-19, the final part of the year changed both teaching practice and research in chemistry education into a fully digital version.

### 2. National educational policy

During 2019-2020, the chemistry curriculum for school grade 0-9 has been re-written by the National Agency for Education with intentions to have fewer core content areas and to make the knowledge requirements more explicit. The plan was to implement the new curriculum from autumn 2020, but due to Covid-19, the government had to postpone the decision to finalise the formal curriculum. The date for implementation is therefore not decided.

### 3. Events in chemical education

In Sweden, most events are connected to all science subjects, for example national conferences are almost always held in science education. One example related to research on school level was the national conference Fobas19, which was held October 17-18, 2019, with all presentations in Swedish.

<https://old.liu.se/natdid/startside/1.766314/fobasnt19-program-20191001.pdf>

Both researchers and teachers presented projects from all school levels and all science subjects.

From a similar conference, only with chemistry focus held by the national resource centre in chemistry (KRC), a conference book with chemistry education chapters was published in 2019. The texts, all in Swedish, has been used by teachers and teacher

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<sup>1</sup>June 2019- May 2020, all levels of chemistry education: primary, secondary schools, universities, LLL, general and vocational education.

education to get an overview about chemistry education in Sweden: <http://liu.diva-portal.org/smash/get/diva2:1361477/FULLTEXT01.pdf>

During the spring 2020, all public events has been postponed or cancelled due to Covid-19, and only a few meetings have been held in digital format.

#### 4. Activities of the National Chemical Society

The society has in recent years unfortunately had problems attracting new members. This decline has been ongoing over the last 10 years and today the society has fewer than 2500 paying members organized in 11 divisions, where the Chemistry Education Division was one until 2016. Today this division is downgraded to a committee where the board only consists of 3 members with mainly me being active, instead of 10. Since the committee has no own funding, it has been problematic to be put time to work with chemical education issues.

- The Committee of Chemical Education co-hosts an annual two-day meeting (“Berzelius days”) where 300-400 students in the end of upper secondary school from the Natural Science Programme and Technology Programme meet and listen to chemistry lectures (often one Nobel laureate or similar). At the “Berzelius days” chemistry teachers are also having a program where they meet and discuss chemistry education. Moreover, one prize is annually given to an important person who has contributed to chemistry education. <https://www.berzeliusdagarna.se>
- Last year’s Day of Chemistry was held in October with the theme of “periodic table”, connected to the 150. Schools can order free of charge experiment packs with things to do with students in school: <https://www.ikem.se/ikem-skola/kemins-dag/> In the autumn of 2020, the theme will be “plant health”, since the UN has declared 2020 as the International Year of Plant Health (IYPH).
- In-service training days for chemistry teachers are given together with a section under The Royal Swedish Academy of Science <https://www.kva.se/en/startside> called Sveriges Nationalkommitté för kemi, <http://natkomkemi.se>. Every year the Swedish Chemical Society arrange two days for chemistry teachers in collaboration. The theme for October 2019 was water.

#### 5. Publications

Previously, The Swedish Chemical Society has until 2018 published 8 issues of a magazine (Kemisk Tidskrift - Kemivärlden Biotech) every year with chemistry news and articles about chemistry and chemistry education research. Once a year, the

journal was published in English. <https://www.kemivarldenbiotech.se>. Another magazine is now produced, but unfortunately, due to financial restrictions, only four issue are published per year, and no one in English. <https://kemisamfundet.se/kemisk-tidskrift/>

**6. Liaison with the chemical industry**

The important collaboration between chemical industry and society is through IKEM, Innovation and Chemical Industries in Sweden is an industrial and employer organization representing around 1 400 Swedish and foreign-owned companies with more than 70 000 employees. Member companies work in a broad cross-section of the chemical industry both as producers, distributors and users.

[http://www.ikem.se/in\\_english](http://www.ikem.se/in_english)

**7. International and European initiatives**

The Division of Chemistry Education has delegates as leaders in the International Chemistry Olympiad (IChO) and the European Science Olympiad (EUSO) where students participate every year.

**8. Other events and activities**

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**9. Name of delegate and deputy**

Karolina Broman and Felix Ho.

**10. Contact details of delegates.**

Karolina Broman  
Department of Science and Mathematics Education  
Umeå university  
SE-90187 Umeå  
Sweden  
karolina.broman@umu.se

Felix Ho (deputy)  
Department of Chemistry – Ångström Laboratory  
Uppsala University

Box 523  
SE-75120 Uppsala  
Sweden  
felix.ho@kemi.uu.se

**11. CV of delegate.**

Previously submitted.