

23rd Symposium on Chemistry and Science Education
to be held at the TU Dortmund University, 26-28 May 2016
(First Announcement)

Science Education Research and Practical Work

Rationale

The 23rd Symposium on Chemistry and Science Education will continue a long tradition begun in 1981 with the first symposium on chemical education organized by Hans-Jürgen Schmidt. The upcoming symposium will continue this tradition. It will be held at TU Dortmund University for its 2016 session. The 2016 symposium is titled **“Science Education Research and Practical Work”**.

There is unanimous agreement that learning in the laboratory and experiments are essential parts of any student-oriented science education. However, many promises related to learning in the laboratory proved in the past not to be self-evident. Research suggests that just using demonstrations or confirmatory type experiments will not dig out the vast potential of learning with experiments neither for developing an adequate understanding of the Nature of Science, nor will it contribute to the development of problem-solving and inquiry skills. A lot of research has been done in the last 40 years on learning in the laboratory, however there are still many questions unanswered yet.

The symposium's main questions will address:

- What does research say about the most promising strategies, pedagogies and practices when it comes to practical work in science education?
- What competences are needed to successfully learn with experiments, and how can they be developed?
- What are the challenges for a sustainably connection of theory and practise?
- What topics and pedagogies are the most promising for promoting students' skills in practical work?
- Which role can the informal and non-formal educational sectors play for practical work in science education?
- Which influences do learners' cultural backgrounds have on practical work in science education?
- How can science teachers be educated to create and operate practical work successfully?
- What types of problems arise due to missing capabilities when it comes to practical work in the science classroom?
- How can learning with practical work be assessed in the classroom and beyond?

All contributions will be presented by invited lecturers. There will be key-note lectures and short presentations. Suggestions for appropriate presentations are welcome up to June 1, 2015. Please contact Prof. Ingo Eilks, University of Bremen: ingo.eilks@uni-bremen.de.

Conference dates: May 26-28, 2016

Venue: TU Dortmund University, Internationales Begegnungszentrum, Emil-Figge-Str. 59, 44227 Dortmund, Germany

Conference language: English

Conference chairs: Prof. Dr. Bernd Ralle, TU Dortmund University, bernd.ralle@tu-dortmund.de
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Further information: <http://www.chemiedidaktik.uni-bremen.de/symp2016/index.html>. A second announcement will follow in Autumn 2015.

Conference fees: None. Travel costs, accommodation and social events are the responsibility of the participants.