

**22<sup>nd</sup> Symposium on Chemistry and Science Education  
to be held at the University of Bremen, 19-21 June 2014  
(First Announcement)**

## **Science Education Research and Education for Sustainable Development**

### **Rationale**

The 22<sup>nd</sup> Symposium on Chemistry and Science Education taking place at the University of Bremen in June 2014 continues a long tradition of symposia stretching back to 1981. In 2014, the symposium will coincide the end of the United Nations worldwide Decade of Education for Sustainable Development (DESD) spanning from 2005-2014.

Already in the past, the Dortmund-Bremen-symposia on science education focused the question of how science education research can help to improve chemistry and science teaching and learning, and also which are the objectives to be followed. In recent years, debate on the challenge of the sustainable development of our future added another dimension towards this discussion. This additional focus and the coincidence with the end of the DESD provoked the organizers of the symposium to entitle the 2014 symposium: "Science Education Research and Education for Sustainable Development (ESD)".

This title simultaneously maintains and further develops many topics of the past symposia from 2002-2012, in which we discussed the orientations and directions of science education research, questions of contemporary and successful science learning, and the role of research on science teacher education for it. The symposium in June 2014 will reveal and evaluate all these aspects even more in connection to a goals and strategies focusing Education for Sustainable Development within science education.

The main questions addressed will include:

- What does science education research revealed about students' and teachers understanding of sustainability issues and ESD?
- Which curricula and pedagogies are available to strengthen ESD in science education on secondary and tertiary level and what do we know about their effects?
- What do we know from research about fostering and hindering factors concerning the implementation of science education operated by an ESD approach?
- What do we know about attitudes, motivation and PCK of practicing teachers concerning sustainability issues and ESD in science teaching?
- How is science teacher training for ESD (pre- and in-service) operated and what do we know about the development of teachers competencies in successfully applying ESD in science classes?
- Which research-based strategies do we have for implementing ESD thoroughly into to chemistry and science teaching by fostering science concepts simultaneously?
- What consequences does the interdisciplinary nature of most sustainability issues has for chemistry and science education?
- Which role might the informal and non-formal educational sector play to support ESD?

All contributions will be presented by invited lecturers and poster presenters. Suggestions for appropriate lectures and posters are welcome up to April 2014.

**Conference dates:** 19-21 June 2014

**Venue:** University of Bremen, Dep. of Chemistry, Leobener Str. NW2, D-28356 Bremen, Germany

**Conference chairs:** Prof. Dr. Ingo Eilks (Bremen) and Prof. Dr. Bernd Ralle (Dortmund)

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**Further information:** <http://www.chemiedidaktik.uni-bremen.de/symp2014/index.html> from January 01, 2013. A second announcement will follow in autumn 2013.

**Conference fees:** None. Travel costs, accommodation and social events are the responsibility of the participants. For more information see the conference website.