

# SAMTAL@SU

Science and Mathematics Teaching and Learning Seminars

## SEMIOTIC RESOURCES IN CHEMISTRY EDUCATION

**Susanne Wikman**

**Date and time: Wednesday 23 October 12:10-13:00**

**Place: K433 Svante Arrhenius Väg entrance 16C**

*Lunch seminar 1210-13 followed by optional informal discussion (samtal) over coffee 13-13:30*

*To register for the seminar and a sandwich, go to <https://doodle.com/poll/4nkw3cm37suf92y>*

### Abstract

Learning chemistry poses a number of challenges for students. One such challenge is that chemistry concepts are created using a range of semiotic resources such as written and spoken words, images, chemical formulae, diagrams, graphs, physical models, visualizations, gestures etc. Learning chemistry can be seen as a function of how students are able to interpret and use these specialized semiotic resources.

To demonstrate this, cases in which university students actively engage with molecular models in stereochemistry will be discussed. Here, like much of chemistry, phenomena are microscopic and thus not directly discernible to students. I demonstrate how, by moving between different semiotic systems, students combine disciplinary convention with their own alternative invention to create resources that they can engage with in a meaningful way.

*Susanne Wikman is docent in organic chemistry at Linnæus University where she has received awards for her work in undergraduate and postgraduate education. Susanne's research interests range from metallo-organic chemistry to enzyme catalysis of organic reactions. For the last 10 years she has focussed on visual representations in chemistry education.*



SAMTAL@SU seminars are arranged in collaboration with:

**The Department of Mathematics and Science Education  
The Centre for the Advancement of University Teaching**



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