

Program Nordic Chemistry Learning Conference, NCL2024

DAY 1 – Monday, September 23rd

Location: Royal Academy of Sciences (Kungl. Vetenskapsakademien), Stockholm

9.00	Welcome	Karolina Broman, Umeå University, SE Agnes Rinaldo Matthis, The Swedish Chemical Society, SE Jenny Olander, Stockholm University, SE
9.15	Shining light on the hydrogen bond	Jan Lundell, University of Jyväskylä, FI
9.45	Green transition of Swedish metal industries	Ida Heinz, SWERIM, Luleå, SE
10.15	Coffee and posters	
10.45	Promoting Science for Life Through Chemistry Education	Miia Rannikmäe, University of Tartu, EE
11.15	The selection of a Nobel Prize Laureate	Peter Brzezinski, the Nobel Committee for Chemistry. SE
12.00	Panel discussion <ul style="list-style-type: none"> • What chemistry (teaching) skills do you think society needs the most in 2034? • How can schools, industry and academia collaborate to meet future demands of chemistry knowledge? • Questions from the audience 	Jan Lundell, Ida Heinz, Miia Rannikmäe, Peter Brzezinski Moderator: Karolina Broman
12.30	Lunch and posters (round trip in the house)	
14.00	Teaching to learn to do chemistry in the laboratory	Hendra Y. Agustian, University of Copenhagen, DK
14.30	Digital chemistry education, from learning material (as DinKemi and ChatGPT) to teaching methods to improve students' learning	Karolina Broman, Umeå University, SE
15.00	Coffee and posters	
15.30	Green Chemistry Education – A teaching unit on organic synthesis with focus on green chemistry	Svein Tveit, University of Oslo, NO
16.00	Panel discussion The same questions as above	Hendra Y Agustian, Karolina Broman, Svein Tveit Moderator: Jenny Olander
16.30	Round-up	
17.00	Walk-and-talk in groups	
17.30	Conference dinner	

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DAY 2 – Tuesday, September 24th

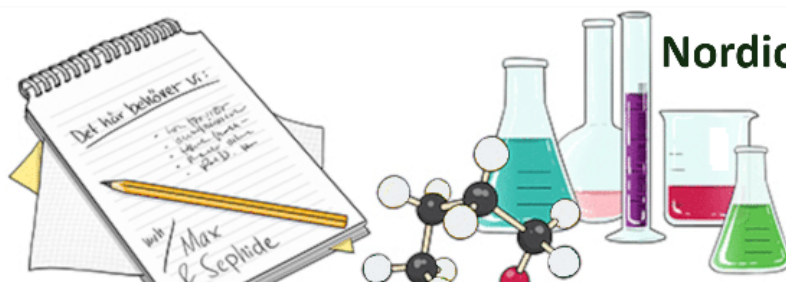
Location: Vetenskapens hus, Stockholm

	A	B	C	D
Room (Photos on next page)	Hook-Raman, 60 places	Kovalsky* 30 places	Franklin – wet lab 20 places	Meitner – wet lab 20 places
8.30-9.30	1. STEM education	2. GSC practicals	3. the VASA ship	4. Seawater
9.40-10.40	5. ChatGPT	2. GSC practicals	3. the VASA ship	4. Seawater
Coffee	Corridor			
11.00-12.00	7. YouTuber	6. Chemistry Call	8. Chemical Safety	9. Explosives
Lunch	Alba Nova – different building			
13.30-14.30	5. ChatGPT	10. Simulations	11. The Cold Pack	9. Explosives
14.40-15.00	Concluding session in Hook-Raman			

* There are two additional rooms with 30 places that we can use, Turing and Hopper

Short descriptions of the workshops

1. *STEM education for the future*, round table discussion moderated by Jan Lundell, University of Jyväskylä, FI.
2. *Green and Sustainable Chemistry (GSC) Practical Activities – similarities and differences in the Nordic countries' education with input from a current international IUPAC survey*, Jonas Niemann, University of Copenhagen, DK and Jenny Olander, Stockholm University, SE.
3. *Analytical Chemistry and the VASA ship*, Marie Danielsson, Vetenskapens hus, SE.
4. *Determination of chloride in seawater with a greener indicator*, Svein Tveit, Oslo University, NO.
5. *How can ChatGPT and similar generic AI tools be used in chemistry education? What can we learn from each other? National and international perspectives*, Karolina Broman, Umeå University, SE.
6. *Chemistry Call - a fun card game on what the world around us consists of*, Karl Sterner Isaksson, Gothenburg, SE.
7. *Learning and Teaching Chemistry on YouTube - insights from a Chemistry YouTuber*, Jonas Niemann, University of Copenhagen, DK.
8. *Chemical Safety in Science Education – Educational Resources, chesse.org*, Svein Tveit, Oslo University, NO and Jenny Olander, Stockholm University, SE.
9. *Explosives in School Chemistry – we try out and discuss the use of a few examples*, Cecilia Stenberg, Stockholm University, SE.
10. *Simulations for chemistry education*, Fredrik L. Holmelin, University of Gothenburg, SE.
11. *The Cold Pack – try out a practical task about thermochemistry for formative assessment*, Jenny Olander, Stockholm University, SE.



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