

**Graduate Course
Speciation and Bioavailability
17-21 June 2024, Antwerpen, Belgium**

Monday 17 June

- 09:00 – 09:30 Welcome reception/coffee
09:30 – 10:45 Opening, introduction + general outline of the field (Raewyn Town)
11:00 – 12:00 Chemodynamics and bioavailability of aqueous species (Raewyn Town)
13:30 – 15:00+ Ion binding by natural ligands: (Jaume Puy)
15:15 – 16:45 proton and metal binding and heterogeneity (Jaume Puy)

Tuesday 18 June

- 09:00 – 10:30 Chemical speciation calculations – I (Jaume Puy)
10:45 – 12:15 Biouptake of metals (Ronny Blust)
13:30 – 15:00 Measuring and modelling bioavailability (Ronny Blust)
15:15 – 16:45 Case study 1: Bioavailability of metal species to fish (Ronny Blust)

Wednesday 19 June

- 09:00 – 10:30 Chemical speciation analysis: selected techniques (Paulo Pinheiro)
10:45 – 12:15 Fate of organic compounds (Jan Hendriks)
13:30 – 15:00 Accumulation of organic compounds (Jan Hendriks)
15.15 - 16.45 Case study 2/modelling: Multimedia fate modelling of organic compounds (Jan Hendriks)

Thursday 20 June

- 09:00 – 10:30 Reactivity of aqueous nanoparticles (Paulo Pinheiro)
10:45 – 12:15 Chemical speciation calculations - II (Paulo Pinheiro)
13:30 – 15:00 Electrostatics of colloids and (bio)surfaces: theory and practice (Jerome Duval)
15:15 – 16:45 Whole cell biosensors for the detection of metals: description and challenges (Jerome Duval)
17:30 - Borrel and course dinner at van der Valk hotel

Friday 21 June

- 09:00 – 10:30 Plenary discussion of various cases of speciation
10:45 – 12:15 and bioavailability
13:30 – 15:00 and interactive discussion.
15:00 – 15:30 Concluding comments.