

“Chemistry of sustainable recycling”, KZ8019, 7.5hp

The course consist of

Lectures and four different experimental lab project work. Presentations are seminars where the results from the labs are presented and discussed.

For each lab also a short written report will be required.

Literature

The recommended literature is composed of articles and ebooks available at the Stockholm University Library. A detailed list will be supplied.

In addition a locally produced material for guidance to the lab projects will be available

Teachers in the course

Dag Noreus (MMK)

Lars Eriksson (MMK) Responsible for the course: lars.eriksson@mmk.su.se

Lars Josefsson (Sustainable Chemistry AB)

Kjell Jansson (MMK)

Wilma Bäckström (Miljömärkning Sverige AB)

Zhehao Huang (MMK)

Room for lectures is C516N except 28:th mars (F3) and 4:th april(F6) which will be on zoom, but the room C516N is booked if you want to project on large screen.

Room for the lab experiments, 4 projects will be done at M332 at KÖL, mainly used for preparations and wet lab activities.

Different localites at MMK for instrument related analysis, such as electron microscopy and X-ray diffraction.

The language will be English if necessary. Most of the software used will be freeware available for download to your own laptop computer.

Schedule: “Chemistry for sustainable recycling”, KZ8019, 7.5hp. [22/3-2022 ... 29/3-2022]

F = Föreläsning/lektion/lecture/lesson; L=Lab/exercise, P=Presentation, R=Räkneövning/calculation exercise.

Date	10-12	13.15-17 (possibly later start at 14)
21-mars	End of previous course	
22	F1 Sustainable thermodynamics (Lars Eriksson)	L1 (Metal recycling, electronic waste)
23	F2 Metal recycling (Zhehao Huang)	L1 (Metal recycling, electronic waste)
24	Preparation for presentation, free location	P1 (C516N: 13-15)
25		
28	F3 Batteries, environment (Wilma Bäckström) (zoom)	L2 (Battery recycling) (start @14)
29	F4 SEM (Kjell Jansson)	L2 (Battery recycling)
30	F5 Batteries, recycling (Dag Noreus)	L2 (Battery recycling)
31	Preparation for presentation, free location	P2 (C516N: 13-15)
1-april		
4	F6 Lars Josefsson (Sustainable plastic materials) (zoom)	L3 (Plastic recycling) (start @14)
5	F7	L3 (Plastic recycling)
6	F8 Study visit, Käppala (IRL or online)	L3 (Plastic recycling)
7	Preparation for presentation, free location	P3 (C516N: 13-15)
8		
11	F9	L4 (Phosphate recovery and recycling)
12	F10	L4 (Phosphate recovery and recycling)
13	F11	L4 (Phosphate recovery and recycling)
14	Maundy Thursday	
15	Good Friday	
Easter eve / Easter Sunday		
18	Easter Monday	
19		
20		
21		
22		
25	F12	P4 (C516N: 13-15)
26	F13	
27	F14 (repetition)	
28		
29	Exam IRL (C516{S+N}: 9-15)	
2-may	New course begins	