

# Program

	Plenary speakers, in Lecture hall Runan (joint session)
	AkzoNobel Prize session, in Lecture hall RunAn
	Parallel session 1 in Lecture hall RunAn
	Parallel session 2, in Lecture hall Palmstedtsalen

## Tuesday Nov 8 - Thursday Nov 10

"Material i våra liv"

Exhibition in Volvofoajén, lower level

## Tuesday Nov 8

### PLENARY SESSION 1

11.00 - 13.15 Registration

13.15 -13.25 *Welcome address*

**Aleksandar Matic**, Chalmers & **Hanna Härelind**, Swedish Chemical Society

13.25 - 13.55 *Bioprinting Living Tissues: Promise and Challenges*

**Marcy Zenobi Wong**, ETH Zürich, Switzerland

14.00 - 14.30 *Graphene - The magic material and some potential large scale applications*

**Johan Liu**, Chalmers University of Technology, Sweden

14.30 - 15.00 Coffee break

### Invited lectures

#### 3D Printing

15.00 - 15.20 *Additive manufactured metal implants: preclinical experience and clinical potential*

**Anders Palmquist**, University of Gothenburg, Sweden

15.20 - 15.40 *Design for AM: The key to the adoption of additive manufacturing*

**Olof Diegel**, Lund University, Sweden

15.40 - 16.00 *Additive manufacturing of gamma titanium aluminide turbine blades by Electron Beam Melting (EBM®)*

**Mattias Fager**, Arcam, Sweden

16.00 - 16.20 *Wood biopolymers bringing another dimension to 3D printing:  
4D printing of functional materials*

**Paul Gatenholm**, Chalmers University of Technology, Sweden

### POSTER SESSION 1 / SWEDISH CHEMICAL SOCIETY MEETING

16.20 - 18.30 *Poster session in Volvofoajén*

- 16.20 - 17.00 Annual proceedings of the Division of surface chemistry and materials chemistry within the Swedish Chemical Society
- 18.30 - End of day 1, dinner on your own  
Speaker's dinner (by invitation only)

## Wednesday Nov 9

### PLENARY SESSION 2

- 08.45 - 09.15 *New characterisation approaches applied to batteries and supercapacitors*  
**Clare Grey**, University of Cambridge, United Kingdom
- 09.20 - 09.50 *Wood nanotechnology for transparent wood*  
**Lars Berglund**, KTH Royal Institute of Technology, Sweden
- 09.55 - 10.25 *Materials and methods for the conservation of Cultural Heritage*  
**Piero Baglioni**, University of Florence, Italy

10.25 - 10.45 Coffee break

### PARALLEL SESSIONS (invited lectures)

#### *Cutting Edge Materials Analysis*

- 10.45 - 11.05 *Breaking the diffraction limit: optical characterization of materials at super resolutions*  
**Mike Gordon**, University of California at Santa Barbara, US
- 11.05 - 11.25 *Grazing incidence neutron scattering for interfacial thin films and*  
**Hanna Wacklin**, European Spallation Source ERIC/Lund University, Sweden
- 11.25 - 11.45 *Local structure studies of halide perovskites*  
**Ram Seshadri**, University of California at Santa Barbara, US
- 11.45 - 12.05 *Nanostructure mapping in macroscopic samples using small-angle X-ray scattering tensor tomography*  
**Marianne Liebi**, Paul Scherrer Institute, Switzerland

#### *Wood Nanotechnology*

- 10.45 - 11.05 *Nanocelluloses*  
**Derek Gray**, McGill University, Canada
- 11.05 - 11.25 *From wood to nano-building blocks – is there a memory effect?*  
**Merima Hasani**, Chalmers University of Technology, Sweden
- 11.25 - 11.45 *Micro fibrillated cellulose; production and applications*  
**Lars Axrup**, Stora Enso, Sweden
- 11.45 - 12.05 *Assembly of nanocellulose-based hybrids and foams*  
**Lennart Bergström**, Stockholm University, Sweden

12.05 - 13.15 Lunch break

## Materials in Art and Architecture

13.15 - 13.35 *The smell of new materials and why it's important*

**Matija Strlic**, University College London, United Kingdom

13.35 - 13.55 *Materials in folk art from Hälsingland – a colourful study*

**Ingalill Nyström**, University of Gothenburg, Sweden

13.55 - 14.15 *Nanocellulose-based formulations for restoration of canvas paintings*

**Oleksandr Nechyporchuk**, Chalmers University of Technology, Sweden

14.15 - 14.35 *On design of materials in architecture*

**Morten Lund**, Chalmers University of Technology, Sweden

14.35 - 15.00 Coffee break

15.00 - 15.20 AkzoNobel Prize Announcement

15.20 - 15.50 *Pharmaceutical film coatings based on ethyl cellulose-linking structure, properties, processing and performance*

**Mariagrazia Marucci**, AstraZeneca/Lund University - **AkzoNobel Prize winner**

15.50 - 16.20 *Controlling water evaporation through self-assembly*

**Emma Sparr**, Lund University - **Akzo Nobel Invited Speaker**

## POSTER SESSION 2

16.20 - 18.20 *Poster session in Volvofoajén*

18.20 - Conference dinner

## Wood Nanotechnology; Composites

13.15 - 13.35 *Nanocellulose for high performance biocomposites*

**Gunnar Westman**, Chalmers University of Technology, Sweden

13.35 - 13.55 *Functional membranes from nanocellulose*

**Aji Mathew**, Stockholm University, Sweden

13.55 - 14.15 *Chitin based bionanocomposites: the composition matters*

**Alexander Bismarck**, University of Vienna, Austria

14.15 - 14.35 *Water-based dissolution of wood cellulose and design of novel cellulose-based nanocomposite materials*

**Magnus Norgren**, Mid Sweden University, Sweden

## Thursday Nov 10

### PARALLEL SESSIONS (invited lectures)

#### *Rising Stars in Materials Industry*

09.00 - 09.20 *Nanoporous silica particles: serving the pharmaceutical industry*

**Adam Feiler**, Nanologica, Sweden

09.20 - 09.40 *3D Bioprinting of Human Soft Tissues: A New Frontier in Patient-specific Tissue Engineering*

**Héctor Martínez**, Cellink, Sweden

09.40 - 10.00 *Making implants integrate*

**Per Kjellin**, Promimic, Sweden

10.00 - 10.20 *New wood based materials - from academia to market*

**Åsa Ek**, Cellutech, Sweden

#### *Graphene*

09.00 - 09.20 *Graphene oxides: old materials for new applications*

**Alexandr Talyzin**, Umeå University, Sweden

09.20 - 09.40 *Spatial orientation controls antibacterial properties of graphene coating: horizontal is harmless and vertically aligned is bactericidal*

**Ivan Mijakovic**, Chalmers University of Technology, Sweden

09.40 - 10.00 *Water-based inkjet printable and biocompatible 2D-crystal Inks: from Ink formulations to Devices*

**Cinzia Casiraghi**, The University of Manchester, United Kingdom

10.00 - 10.20 *Graphene oxide - diverse structure and degradation*

**Severin Schindler**, Chalmers University of Technology, Sweden

10.20 - 10.45 Coffee break

### PLENARY SESSION 3

10.45 - 11.15 *Smart textiles - from chemistry to sports technology*

**Nils-Krister Persson**, University of Borås, Sweden

11.15 - 11.45 *Nanoexploring with electron microscopy: making visible the invisible*

**Sarah Haigh**, University of Manchester, United Kingdom

11.45 - 12.00 *Concluding remarks*

12.00 - End of conference