



Norwegian University of
Science and Technology



UNIVERSITY
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Polymer-based materials today and in the future

NKS Makro, March 2-3 2023

Hotel Norway Høsbjør

Registration

Please register by scanning QR code, or using the following URL: bit.ly/NKS-23

Registration deadline:
February 15. 2023

Registration fee:

The fee covers Hotel, food, entry.

Normal: 2000,- NOK/person.

Master students: 1500,- NOK/person

For questions concerning the conference please contact:

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Conference committee:

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Schedule March 2.

Time	Lecture	Speaker
12:00	Lunch at hotel restaurant	
13:00	Welcome, by Marit Sletmoen & Reidar Lund, representing NKS Macro Section for macromolecules and colloid chemistry	
Session 1: Biocomposites		
Chair: Carlos Orestes Martin Medina, Professor, Dept. of biotechnology, INN		
13:15	Biocomposites processing and its effect on properties	Kristiina Oksman, Professor Department of Engineering Sciences and Mathematics Luleå University of Technology, Sweden
13:40	Sustainable development through the valorization of agri-food lignocellulosic residues	Alejandro Rodríguez, Professor Chemical Engineering University of Cordoba, Spain
14:05	break	
14:20	Nanocellulose in tissue engineering – effects of surface chemistry	Kristin Syverud, head of research RISE-PFI & Professor II, NTNU
14:35	Biopolymers from crop residues – Poly(3-hydroxybutyrate) production from cellulosic hydrolysates of quinoa stalks using Halomonas boliviensis	Diego Miranda, PhD candidate, Umeå University
14:50	Diblock polysaccharides	Bjørn E. Christensen, Professor, NTNU
15:05	Computational approaches for biologically relevant molecular systems containing glycosaminoglycans	Sergey Samsonov, Professor, University of Gdansk
15:20	break	
Session 2: Polymers: from fundamentals to biomedical applications		
Chair: Vegar Ottesen, Secretariat Director, Innlandet Regional Research Fund		
16:00	RNA Formulation Drug Delivery at BioNTech RNA Pharmaceuticals	Heinrich Haas VP, RNA Formulation & Drug Delivery BioNTech, Germany
16:25	Cyclic polymers: challenges, properties and potential applications	Fabienne Barroso, Professor Polymers and Soft Matter, Materials Physics Center San Sebastian, Spain
16:50	High-purity PEG derivatives for vaccine technology	Yomkippur Perez, PhD candidate, Polypure AS & University of Stavanger
17:05	Soft matter antibiotics: gram-negative bacteria-selective nanoparticle assemblies	Thomas Vogelaar, PhD candidate, University of Oslo
17:20	Encapsulation of colistin methanesulfonate with PEG-PMAA	Szymon Mikolaj Szostak, PhD candidate, University of Oslo
17:35	Accelerating the development and manufacturing of mRNA vaccines	Steffi Lundvall, scientist, Thermo Fisher Scientific
19:00	Dinner	

Schedule March 3.

Time	Lecture	Speaker
08:00	Breakfast	
Session 3: Green polymer based materials		
Chair: Finn Knut Hansen, Professor Emeritus, dept. of Chemistry, University of Oslo		
09:00	Sustainability of bio-based materials	James Comerford, Senior research scientist, Materials and Nanotechnology, SINTEF, Norway
09:25	Chemo-enzymatic synthesis and functionalization of bio-based polymers	Alessandro Pellas, Professor University of Genova, Italy
09:50	PERFECOAT - High Performance Bio-based Functional Coatings for Wood and Decorative Applications	Francesca Di Bartolomeo, scientist SINTEF
10:05	Functionalized aromatic biomonomers for polyester synthesis	Nora Uggerud, PhD candidate, SINTEF & University of Oslo
10:20	Biodegradable plastics for marine applications	Christian W. Karl, scientist, SINTEF
10:35	break	
10:55	An academic jigsaw puzzle - research, innovation and knowledge transfer	Catherine T. Nordgård, Vice Dean of innovation Faculty of Natural Sciences NTNU, Norway
Session 4: Polymeric Biomaterials		
Chair: Elisabeth Kommisrud, Professor, Dept. of biotechnology, INN		
11:15	Modification of alginates and hydrogels for biomedical applications	Berit Strand, Professor Dept. of Biotechnology and Food Science NTNU, Norway
11:40	Enhanced stability of PLGA nanoparticles for novel 19 F MRI contrast agent by the monodisperse PEG derivatives attachment	Ezgi Basavci, PhD candidate, University of Stavanger
11:55	New generation of commercial poloxamers: high purity and defined molecular weight	Zuzanna Samol, PhD candidate, Polypure AS & University of Stavanger
12:10	Impact of charge on PAMAM-peptide mediated DNA condensation	Corina Dannert, PhD candidate, NTNU
Closing remarks		
12:30	Lunch	
	Departure	