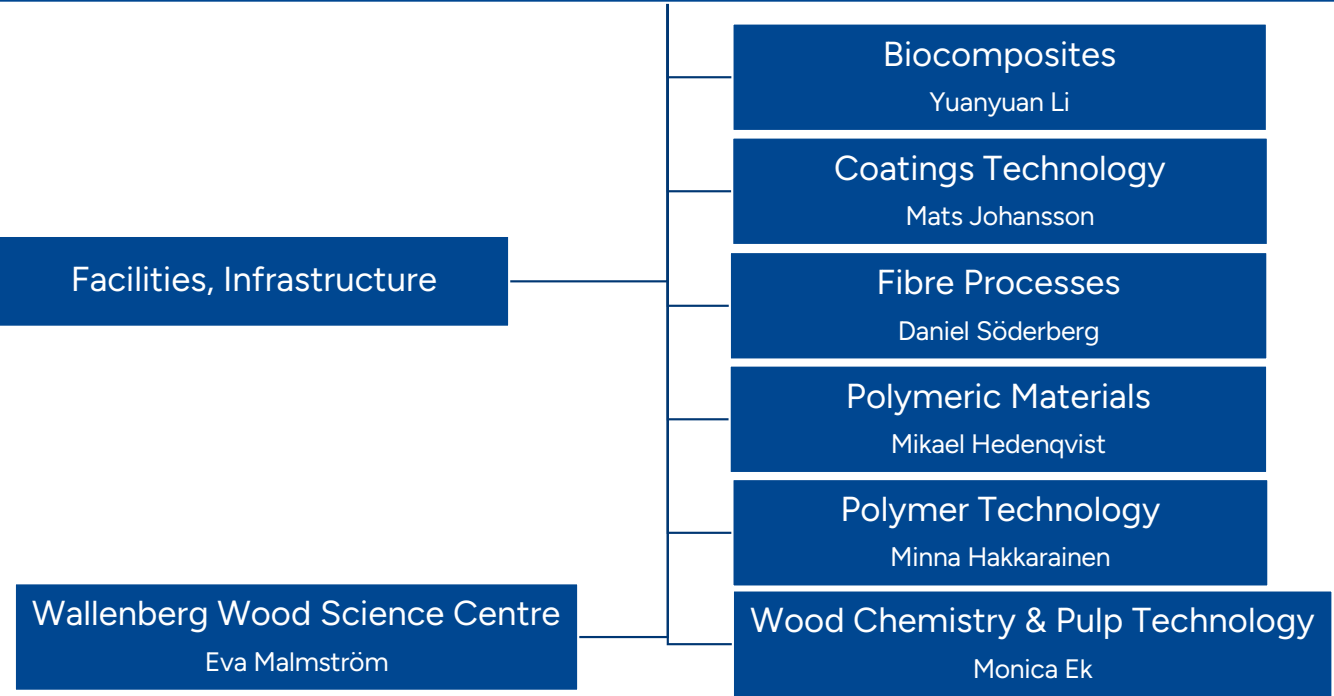




Department of Fibre & Polymer Technology (FPT)

Head of Dept: Daniel Söderberg, Vice Head of Dept: Richard Olsson





Statistics FPT

- 14 professors,
- 4 associate / assistant professors
- 4 Affiliated or adjunct professors
- ~30 post-docs, researchers, and guest researchers
- ~80 PhD-students

- Turnover ~150 MSEK

All permanent faculty are active in both research and undergraduate teaching.



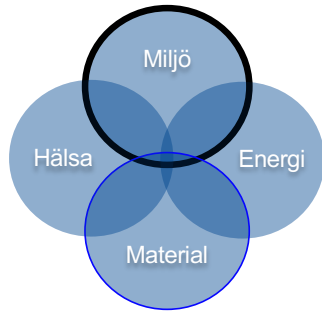
Environment - examples

Renewable sources

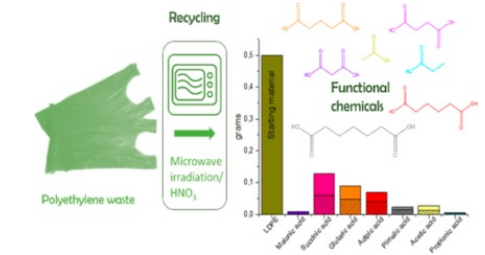
Recycling

Water purification

Green Chemistry / Processes



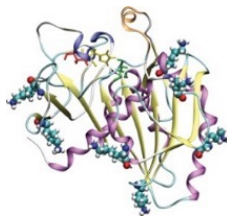
Green adhesives



Novel recycling routes



Wheat gluten



Enzyme catalysis



Transparent wood



Cellulose

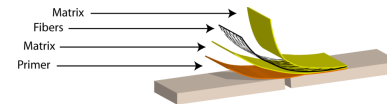


Functional aerogels



Health – examples

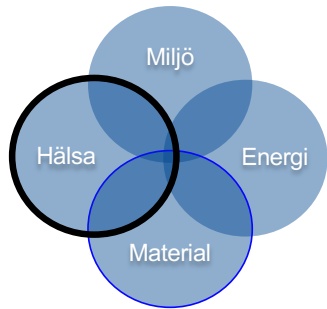
Medical devices



Surgical adhesives



Tissue scaffolds



Antimicrobial materials

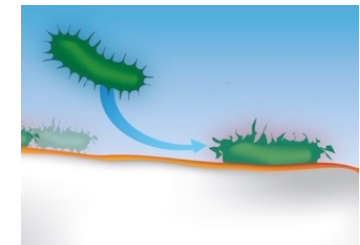


3D-printed scaffolds

Packaging



Multilayers for packaging

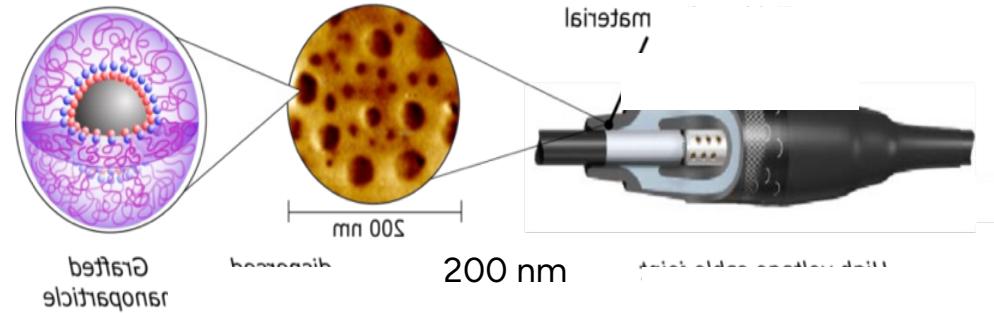
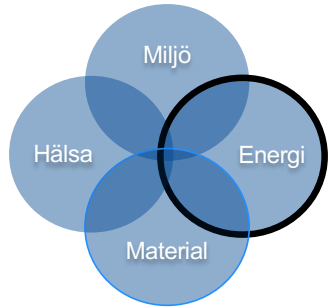


Antibacterial surfaces



Energy - examples

Energy distribution



High Voltage Insulations

Energy Storage

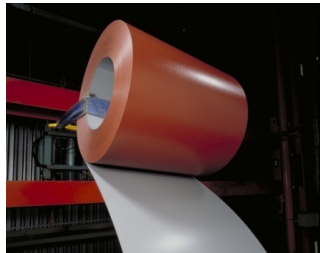
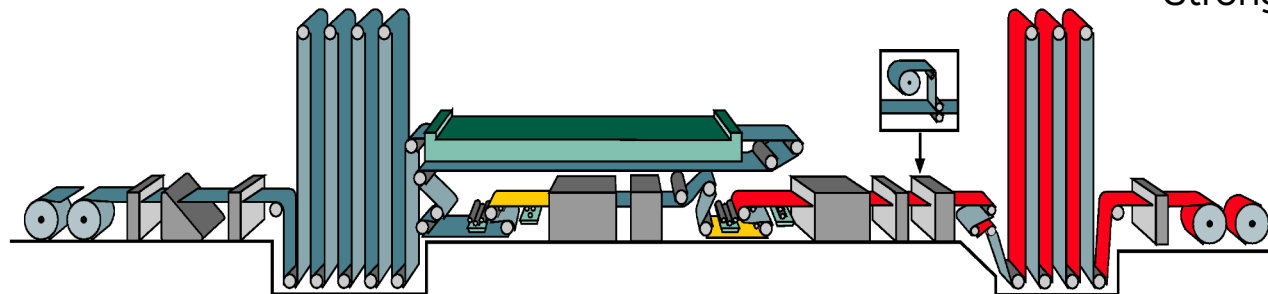


Structural batteries



Coil Coatings – Precoated sheet metal

Solvent-borne thermally cured paint
Short cure time at high temperature (37s, 300°C)



Novel concept

Fatty acid methyl esters as reactive diluents.
Strongly reduced use of fossil based solvents.
Biobased final coating.
Improved technical performance.



Roof of Sophiahemmet hospital

Production of coil coatings in Europe ~214 000 000kg paint/year, ~1350 000 000 m²/year, source: ECCA (2018)

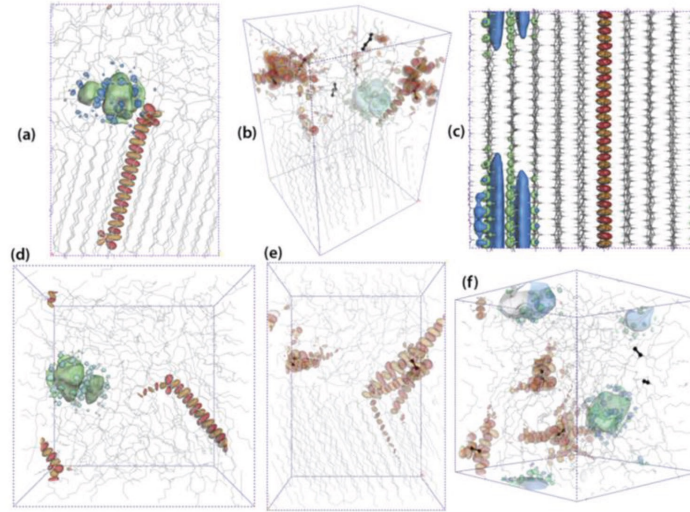
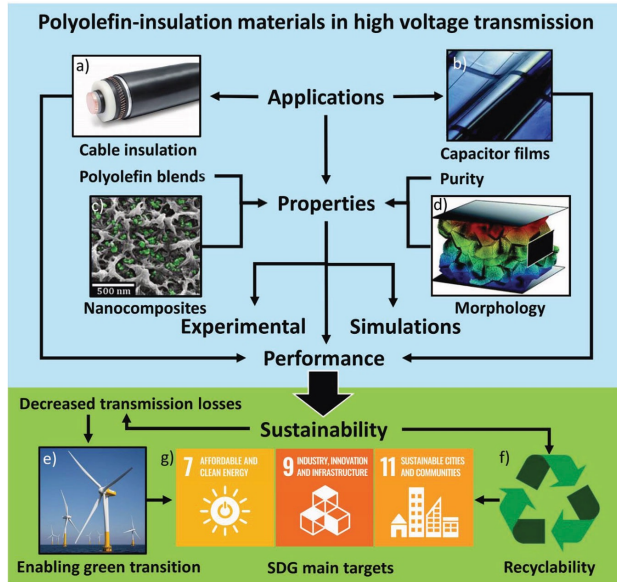
K. Ohlsson, T. Bergman, P.-E. Sundell, T. Deltin, I. Tran, M. Svensson, M. Johansson "Novel coil coating systems using fatty acid based reactive diluents"
Progress in Organic Coatings **73**, 291-293 (2012)



High Voltage DC Cables and Capacitors

Swedish Energy Agency WISE (Industrial PhD)

Industry: NKT and Hitachi Energy

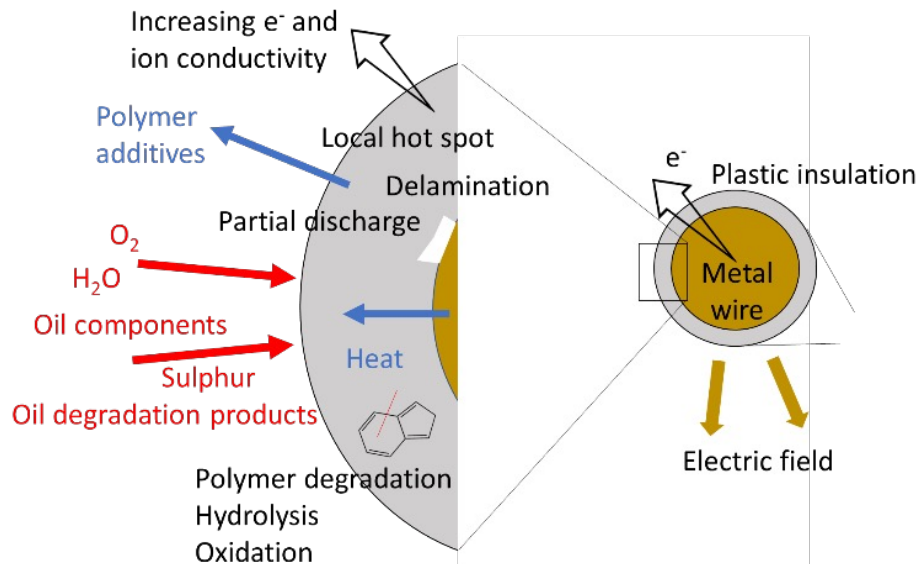


Bjurström et al. Adv. Mater. 2024, 2401464



InElect

Plastics in electric machines; copper wire insulation



Thermoplastic/enamel



PEEK/PPS/PI

