From seaweed biomass to high performance materials in a *Saccharina* biorefinery.

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The presentation will be about extractions from *Saccharina latissima* brown algae and utilization of extracted alginate to make materials. It will include:

- The role of pH and chelation strength during extractions and a characterization of the algal constituents.

- The utilization of the high strength chelator sodium citrate together with ion exchange resins to fractionate algae in multiple extractions with regeneration of the extraction solution: a process that resulted in a property based fractionation of alginate.

- A material study on the utilization of fractionated alginate to produce alginate gel filaments and stiff dry filaments. It will focus on crosslinking with calcium, aluminium and polyaluminum ions and the prediction of material properties based on alginate composition.