

Purchase of equipment: Serial autoclave for developing next-generation biofuel

At the Nielsen lab at DTU Chemistry, we research environmentally and financially sustainable biofuel. In other words, we develop chemical processes that convert biomass such as bioethanol, furans, levulinates and carbon dioxide into advanced biofuel with a high thermal value and low pollution level. The chemical processes require specialist equipment, a so-called autoclave, which lets us operate at high temperatures (100-200 °C) and high pressure (5-100 times the normal atmospheric pressure).

The donation from COWIfonden allows us to purchase a serial autoclave of the highest quality in 2020. Among other things, the equipment is vital for the further realisation of a project where the Nielsen team will develop the first method in the world for producing sustainable 2-butanol, which will be useful as, e.g., advanced synthetic biofuel in the future. The long-term goal is to reach a stage where the production of green 2-butanol is financially profitable.

This project is absolutely ground-breaking in biomass-to-energy technology, which is key to fulfilling SDG 7, which aims to limit dependency on fossil fuels and develop sustainable, reliable and financially affordable alternatives.