

## HBO Internship - Research & Development

**Start: In consultation - 40 hours a week**

**Zevenaar, the Netherlands**

### The mission of DuFor:

Creating a sustainable world in which fewer fossil resources are needed.

Therefore, we are constantly improving our product portfolio by creating polyesters that are designed for recycling.

### The focus areas for this internship are:

- ✓ Closed loop recycling of 3D printing materials
- ✓ Fully recyclable trays and films for disposable packaging
- ✓ Conductive materials
- ✓ Polyesters with improved and enhanced wear and friction properties

### During this internship you will:

- ✓ Set up and perform experiments on twin screw extruder
- ✓ Set up and perform experiments on SSP (Solid State Polycondensation) unit
- ✓ Analyze and report findings, observations and recommendations for future experiments
- ✓ Set up methodology for rheological analysis and DMA (dynamic mechanical analysis)
- ✓ Set up methodology and test various compounds for 3D printing and analyzing



### Techniques and methods:

- ✓ Melt flow rate (viscosity)
- ✓ DSC (Differential Scanning Calorimetry)
- ✓ TGA (ThermoGravimetric Analysis)
- ✓ 3D printing
- ✓ DMA (Dynamical Mechanical Analysis)
- ✓ Twin Screw Extrusion, compounding
- ✓ Solid State Polycondensation

### Your profile:

- ✓ HBO Chemistry- Major in organic/ polymer chemistry and/or (circulair) plastics
- ✓ Creative
- ✓ Persistent
- ✓ Incisive
- ✓ Analytical

You will be working in a small research minded team with lots of freedom for experimenting. The final project can be defined and limited together.

**Interested? Send us your motivation letter and CV.**

**Paul Janssen**

**Product & Process Developer**

[pauljanssen@dufor.nl](mailto:pauljanssen@dufor.nl)