



# Case Study

## highpreactor BR-300 in use at NEMEN UPC

### User

The group of Nanoengineering of Materials Applied to Energy (NEMEN) of the Universitat Politècnica de Catalunya (UPC) focuses in the preparation, characterization and evaluation of catalysts to operate in a heterogeneous phase in reactions of industrial interest in the field of energy. The industrial application is oriented to the custom-made preparation of catalytic devices and to the engineering of the reaction. The group works with catalytic and photocatalytic production of hydrogen and synthetic fuels, in the elimination of atmospheric pollutants (CO, VOC and soot) and in the recovery of CO<sub>2</sub>.

### Product

The Berghof high-pressure reactor **highpreactor BR-300** is used.

### Application

The highpreactor BR-300 high-pressure reactor is used for alkaline hydrothermal synthesis of TiO<sub>2</sub> nanotubes, nanobelts and nanowires. For these applications, the high-pressure reactor is exposed to temperatures in the range of 130 to 200° C for 20 to 42 hours.

### Customer Testimonial

„The high-pressure reactor has worked excellent under all the experiment conditions tested. Both the easy handling and the high robustness of the reactor are remarkable, as well as the wide range of applications.“

Prof. Dr. Jordi Llorca (NEMEN, Universitat Politècnica de Catalunya)



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