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Template for presentation of new research equipment



Anton Paar MCR 302 rheometer

Analysis of flow and deformation behaviour of materials



Enables performance of rheology tests on a variety of materials in rotational and oscillatory mode using different measuring systems: cone-plate, plate-plate and concentric cylinders. Measuring system allows simulation of coating processes, polymer/gel cross-linking, etc.

Owner institution: University of Maribor - FERI

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Büchi B-395 Pro encapsulator

Formation of beads and core-shell microcapsules



Device disintegrates extrudable solutions into equally-sized droplets, followed by chemical or physical solidification. Beads are produced with single nozzle system (150 μm to 2000 μm), while concentric nozzles fabricate core-shell morphology (400 μm to 1800 μm in diameter).

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Christ Beta 2-8 LSCplus freeze dryer

Preparation of porous materials



Freezeing solidifies samples and shapes their morphology; freeze drying removes frozen water through sublimation, preventing pore collapse and resulting in porous structures. Ice condenser can reach down to -90°C , while T-programmable shelves and temperature sensors enable a multi-phase design of the drying process and its control.

Owner institution: University of Maribor - FERI

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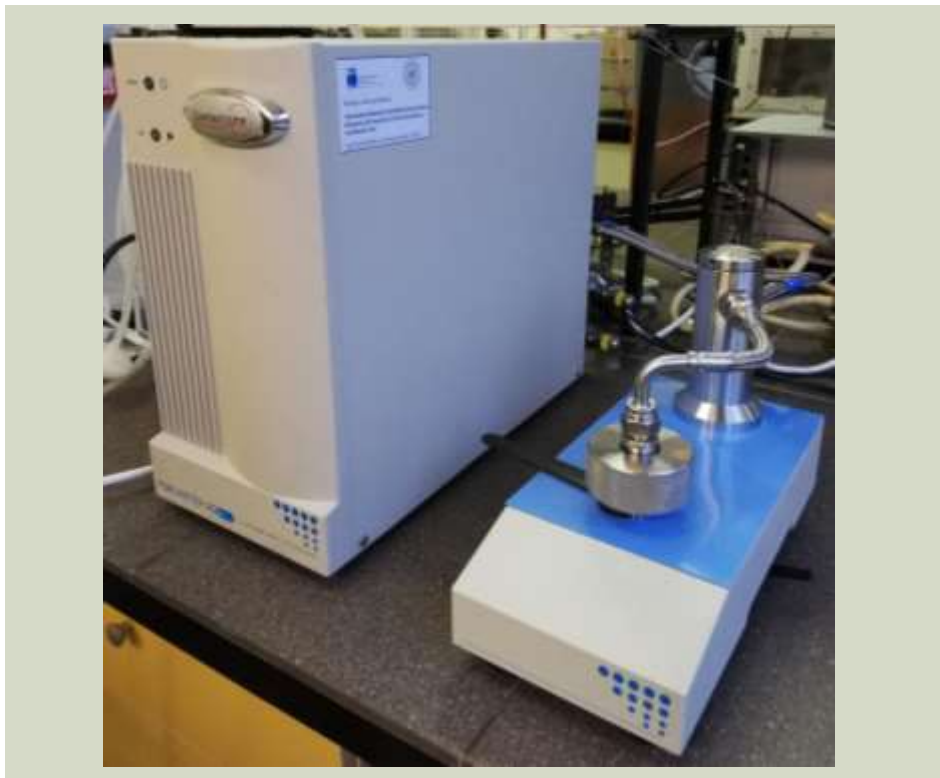
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Quantachrome Anton Paar 3G-ZH capillary flow porometer

Analysis of through pores in flat samples



Based on liquid expulsion technique it quantifies pore size distribution, permeability, mean pore size of through pores. Amount of flow through the sample is measured in dependence of the pressure applied. Pressure range: from ambient to 35 bar. Pore size distribution range: from 0.013 μm to $>500 \mu\text{m}$.

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Optical Interrogator, Micron Optics Si155-ST-01-1460-1620

4 channel - Optical sensing spectrum interrogator



The si155 is an industrial grade fan-less optical sensing interrogator. Featuring both static and dynamic full spectrum analysis, the si155 provides long-term, reliable and accurate measurements of hundreds of sensors on 4 parallel, 160 nm wide channels.

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Newport Femtosecond laser workstation

Femtosecond laser micromachining and FBG inscription workstation



Femtosecond laser system/workstation allow for:

- precision micromachining (micro-milling and micro-drilling) of various materials (glasses, ceramics, metals, plastics, etc.),
- inscription of Bragg gratings into optical fibers and bulk glass slides, and
- controlled photo-polymerization and structure creation in the micrometer scale range.

Owner institution: UM-FERI

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Topica TeraScan 1550

Frequency-domain terahertz platform for CW-THz spectroscopy



With high terahertz power and dynamic range TeraScan 15550 enables contact free industrial quality control, non-destructive testing with combination of imaging and spectroscopic methods, material research, gas detection and fundamental physics research.

Owner institution: University of Maribor

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