

## the state-of-the-art i n d e p e n d e n t laboratory of nanotechnology in Poland

We are pleased to invite you to the

### Demo Day

- a free, 4-hour presentation of our  
laboratory's capabilities. Our experienced  
specialists will present the equipment and  
research techniques used in Nanores Lab  
- all on samples provided by you.

## about porosity of materials

3D micro-printing is an innovative method of producing structures on a very small scale. It is used in many industries, and printed materials are characterised by various features - one of them is **porosity**. This feature is of great importance, as it determines parameters such as strength, insulating, thermal or sound-absorbing properties. Depending on the needs, different degrees of porosity are desired. For some solutions, we expect the material to contain a lot of porosity, while for others, the opposite is true.



## about laboratory



Modern  
equipment



Qualified staff of  
engineers and scientists



Individual  
approach



High quality of  
performed analyses



Quick implementation  
of research

# about laboratory

Nanores Lab is a modern and independent nanotechnology laboratory. Our high quality equipment is among the few of its kind in Europe. We have electron and ion microscopes: Dual Beam SEM/Xe-PFIB, SEM/Ga-FIB and atomic force microscope - AFM. Our qualified team of employees consists of specialists in various fields, such as: mathematics, physics, chemistry, electronics and material engineering. Each client is an individual case for us, we are happy to solve research problems together. Our mission is to raise the standards of cooperation between the world of science and business. We help scientists to carry out groundbreaking research.

## offer of porosity's analysis

Our laboratory offers you the analysis of the surface and volumetric structure of micropores using a Scanning Electron Microscope.

High-resolution SEM imaging enables the identification and quantification of pores. However, by using a focused FIB ion beam, we are able to make a cross-sections through the structure of the material and carry out analysis in its volume.

The images obtained during analysis are further processed, including contrast enhancement, filtering of large artefacts, smoothing of small structures from noise, and binarisation to obtain contours and pore areas.

The results obtained help provide useful information about the process and may indicate the direction of changes in technological parameters.

## other services

# The Demo Day

introduced by our company **is a free presentation** of the equipment, capabilities and skills of Nanores Lab. It is an excellent opportunity to examine a sample provided by you free of charge and to get acquainted with the structure of our laboratory. The operator **assigned to you will individually** approach the subject of the test and will make every effort to ensure that the analysis results meet your expectations. We are also open to any suggestions, therefore we enable you to participate in the tests.

## benefits of cooperation

- ▶ Modern examination techniques
- ▶ Specialist consultations
- ▶ Practical experience
- ▶ Comprehensive and fast services
- ▶ High standard of confidentiality

If your company wants to improve the quality of its products and specializes in 3D micro-printing – **let start with schedule the Demo Day!**

Analysis and modification of hard, conductive and non-conductive materials

Sample preparation for transmission electron microscopy (TEM lamella)

Elemental composition analysis of investigated objects

Optimisation and identification of material defects

Prototyping and modification of AFM beams and tips

Surface and volumetric analysis of materials

Research planning, research for publication

Plasma/ultrasound cleaning

Coating of thin carbon films

2D and 3D imaging

3D reconstruction

Are you interested in any of our services?  
We will be happy to talk to you about the Nanores Lab offer and answer your questions.

ask R&D Advisor:

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read more about  
analysis of the porosity