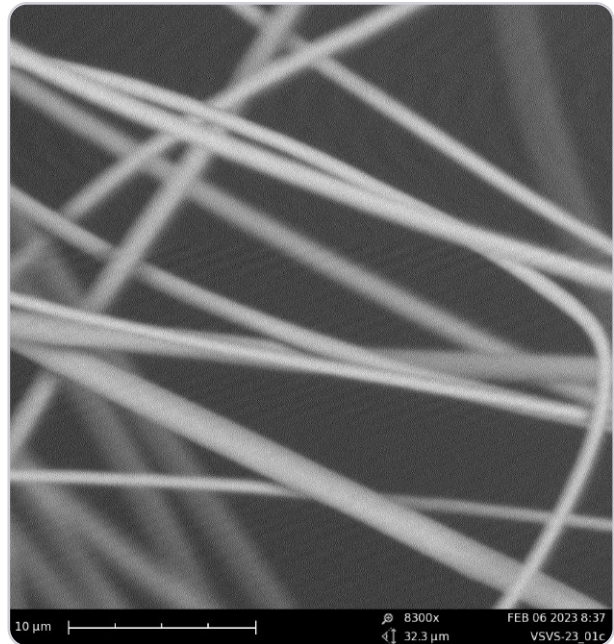


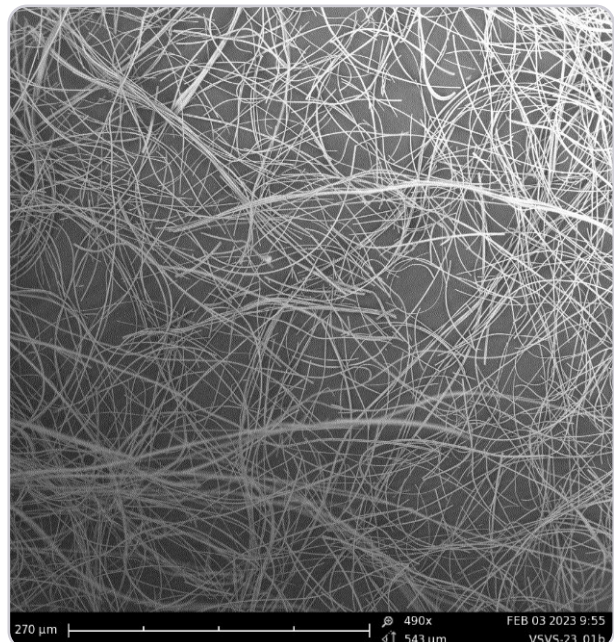
NnF CERAM® - SiO₂ (Water glass)

Silicon dioxide nanofibers are a ceramic material produced by PARDAM NANO4FIBERS s.r.o. in the Czech Republic. These products are based on a ceramic silicon dioxide matrix enriched with a small amount of porous particles of the same material. The amorphous SiO₂ nanofibrous material is a special functional material with unique properties, represented by fine fibrous structure. The properties and characteristics achieved by combining the nanofibrous morphology with the conventional features of silicon dioxide material make SiO₂ nanofibers suitable for applications across various commercial sectors. The material can be produced in large volumes with simple and fast upscaling of production. SiO₂ nanofibers can also be used as a carrier for various catalytic nanoparticles (e.g., Pt, Pd, Ag, Fe), which are incorporated into the porous structure of the nanofibers in a single manufacturing step, without the need for subsequent coating.



APPLICATIONS

- Composite reinforcement
- Filtration
- Separation
- Li-ion battery separators
- Sensors
- Adsorbent of water and other polar substances



PHYSICAL PROPERTIES

Nanofibrous structure	Stable porous material
Crystalline phase	Amorphous SiO ₂
Form and structure	3D structure
Typical fiber diameter	300 nm - 1 500 nm (± 100 nm)
Fiber length	2 to hundreds of μ m Fiber length can be modified by grinding to a dimension of 2 - 12 μ m (80%). If you need any material modification, please do not hesitate to contact us.
Specific surface area	120 - 180 m ² /g
Melting point	1 665 °C
Thermal conductivity	Low thermal conductivity
Electrical conductivity	An excellent electrical insulator
Optical properties	Refractive index 1,45

MATERIAL DOPING

Silicon dioxide nanofibers can be doped with various additives to optimize its specific properties.

IMPORTANT NOTICE

All statements, technical information and recommendations in this document are based on tests carried out by the team of PARDAM NANO4FIBERS s.r.o.

