



Company Profile

NanoScape is a speciality chemicals company focussing on the design, development and production of porous, nanoscale particles. Founded in 2001, the company has developed a product portfolio which now encompasses four porous material types, with particle dimensions in the range of hundreds of nanometres and pores of typically less than one nanometre in width.

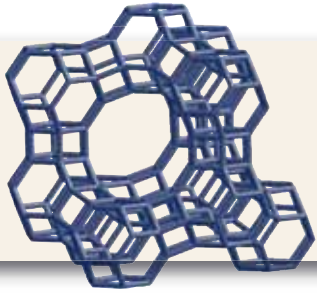
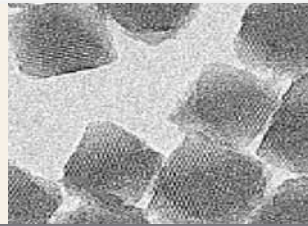
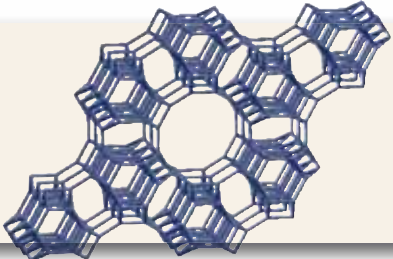
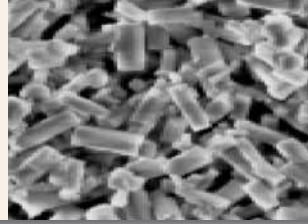
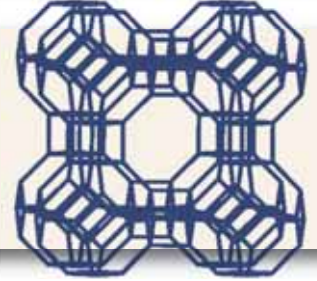
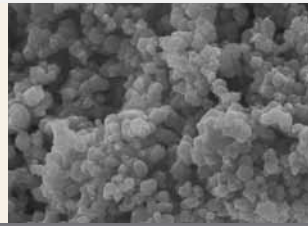

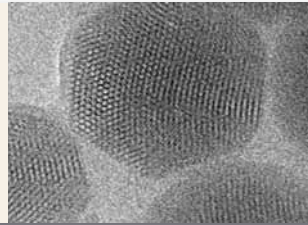
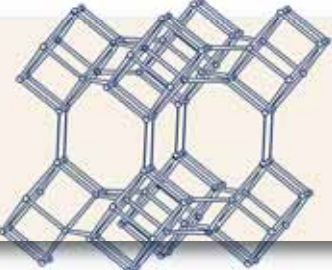
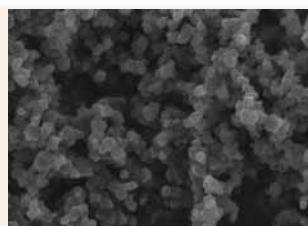
Based in Munich, Germany, NanoScape works closely with its customers to develop materials capable of meeting the requirements of a specific application. Using its core technology of materials synthesis, optimisation and processing know-how, NanoScape is able to leverage its own NanoZeolites platform to provide tailor-made applications solutions.

Product developments centred on NanoScape's materials platform include innovative solutions for key CleanTech applications, such as additives and coatings for water purification and gas-separation membranes; selective air filters and catalysts; and adsorbers for dehumidification systems, heat pumps and heat recovery systems.

NanoScape's porous, nanocrystalline particles are breathing new life into the field of functional materials, and through significantly improved properties are leading to performance enhancement in a host of established applications. Furthermore, the availability of NanoZeolites is opening up new applications, which were until now unserviceable with traditional microcrystalline particles.



NanoZeolites small particles...small pores...big impact

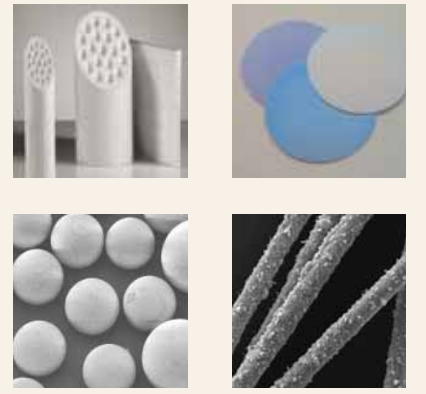
	NanoZeolite – FAU <ul style="list-style-type: none">■ Faujasite-type zeolite (X, Y)■ Pore size: ca. 0.7 – 0.8 nm■ Particle size: ca. 150 nm■ Cation: Na+	
	NanoZeolite – LTL <ul style="list-style-type: none">■ Type-L zeolite■ Pore size: ca. 0.7 nm■ Particle size: ca. 80 nm■ Cation: K+	
	NanoZeolite – LTA <ul style="list-style-type: none">■ Type-A zeolite■ Pore size: ca. 0.3 – 0.5 nm■ Particle size: ca. 100 nm or 300 nm■ Cation: Na+, Ca2+, K+	
	NanoZeolite – NMM <ul style="list-style-type: none">■ Mesoporous silicate■ Pore size: ca. 3 – 5 nm■ Particle size: ca. 200 nm or 800 nm■ Variable surface chemistry	
	NanoZeolite – SAPO <ul style="list-style-type: none">■ Silicoaluminophosphate■ Pore size: ca. 0.4 nm■ Particle size: ca. 1000 nm■ Variable surface acidity	

Product specifications

- Variable Si:Al ratios
- Different pore sizes: 0.3 – 5 nm
- Tunable surface chemistry
- Different cation loadings
- Mean particle sizes: 80 – 800 nm
- Narrow particle size distributions
- Non-aggregated powders
- Stable suspensions (water / alcohol)
- Coating formulations

APPLICATIONS

- Heat exchangers
- Heat pumps
- Water purification membranes (polymer)
- Gas separation membranes (ceramic)
- Catalysts
- Dye encapsulation (Host-Guest systems)
- Triggered-release systems
- Porous coatings / Thin films (< 10 µm)

SUBSTRATES



Speciality Materials

NanoScape's innovative NanoZeolite product portfolio currently consists of a range of microporous and mesoporous materials, based on four material types:

- Silicates
- Aluminosilicates
- Aluminophosphates
- Silicoaluminophosphates

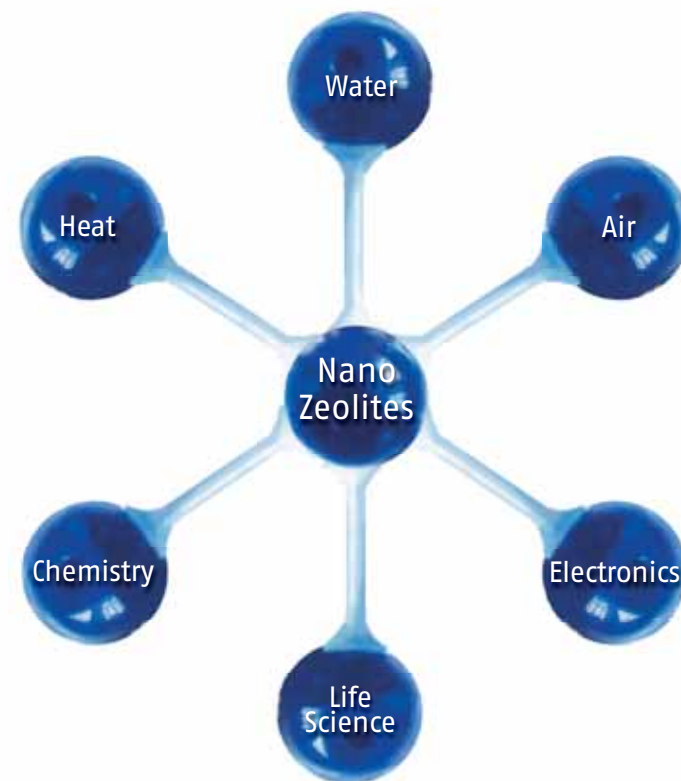
These structures cover a range of pore diameters from 0.3 nm to 10 nm. Particle sizes are typically around 100nm with narrow particle size distributions (although materials are available throughout the size range of 50 – 1000nm). In order to meet the needs of the industrial applications served, materials can be supplied in powder form (with either hydrophilic or organically modified surfaces) or as suspensions (both aqueous and in organic solvents). Porous coatings of these materials can be applied (via e.g. dip-, spin-, spray-coating, or doctor-blading) to glass, ceramic and aluminium substrates.

NanoScape couples its materials with an encapsulation technology in which functional molecules (such as dyes and catalysts) are incorporated ("encapsulated") into the pore structure of the NanoZeolite particles. This encapsulation process can stabilise and protect the functional molecules, whilst simultaneously broadening their application range. Furthermore, slow release and triggered-release mechanisms are being developed, which allow a controlled delivery of the functional molecule to the surrounding matrix. Encapsulation applications have so far been pursued involving fluorescent and photochromic dyes; hardening catalysts for polymers; and sensors.

Business to Business

The NanoZeolites materials platform is central to the development of a range of products within the fields of chemicals, life science and electronics. Whether as additive or coating, they catalyse product innovation, and are a driving force behind crucial environmental goals to obtain cleaner air, fresh water and thermal energy efficiency.

For business related enquiries contact us at: info@nanoscape.de



How to find us

Public Transport:

Take the U6 underground line from the city centre (Marienplatz) in direction Klinikum Grosshadern. Exit at Station "Grosshadern". Follow signs for Würmtalstraße. Take the bus 266 direction Planegg to the stop "izb, Martinsried". You are right in front of the izb building.

From Munich International Airport:

Take the S-Bahn (Lines S1 or S8) to the Marienplatz (ca. 40 min). Change onto underground line U6 (direction Klinikum Grosshadern). Exit at Station "Grosshadern". Follow signs for Würmtalstraße. Take the bus 266 direction Planegg to the stop "izb, Martinsried". You are right in front of the izb building.

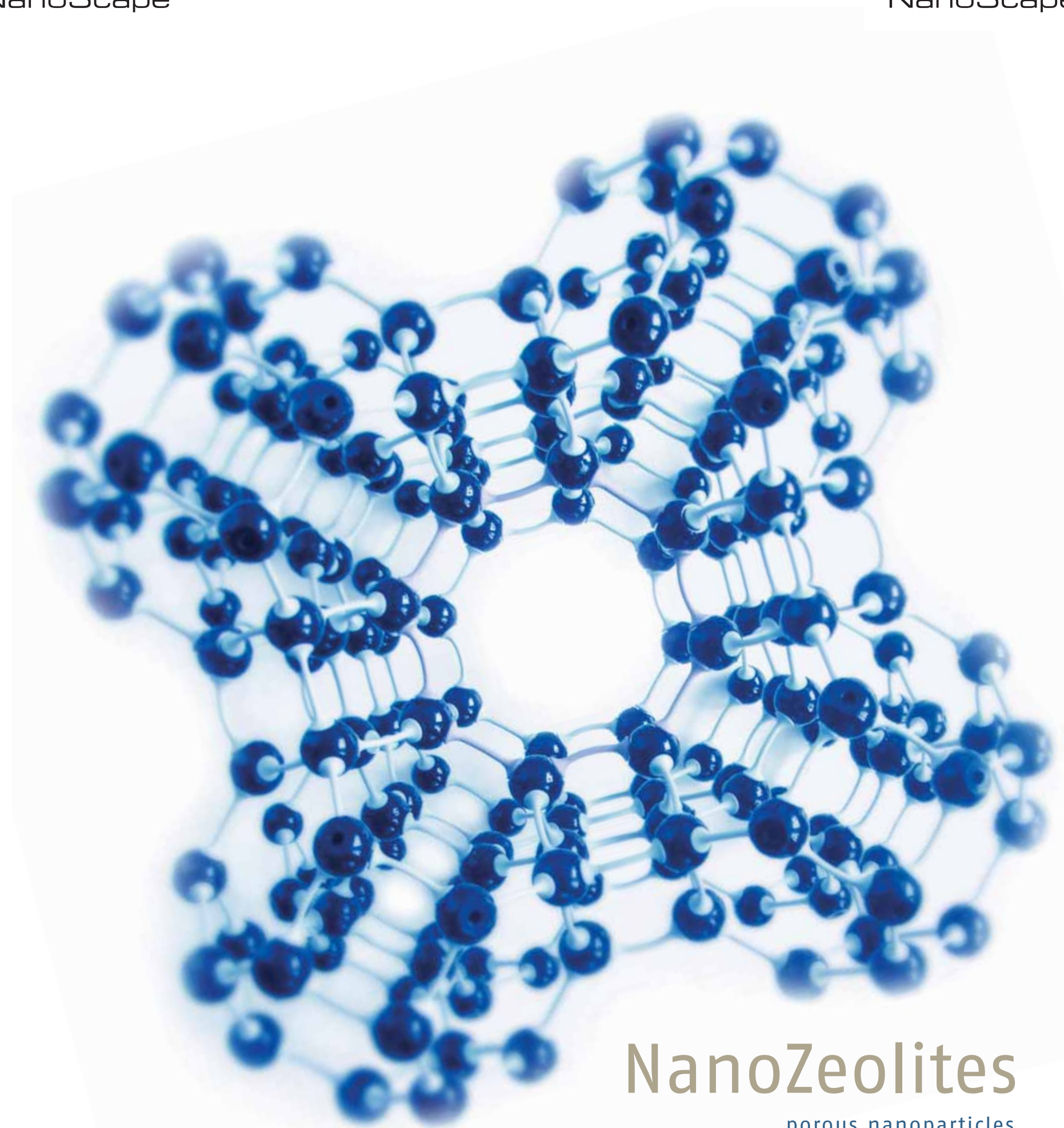
Motorway / Autobahn A96:

Take Exit Mü.-Blumenau and turn into Waldwiesenstraße direction Mü.-Großhadern. After 900m turn right into Würmtalstraße direction Planegg-Martinsried. After 1.6 km turn left into Am Klopferspitz. Follow the road until you reach the visitor's parking area on the left hand side, opposite the izb building.



NanoScape AG
Am Klopferspitz 19
D-82152 Planegg-Martinsried
Germany

Tel: +49 89 4613 3443 10
Fax: +49 89 4613 3443 30
info@nanoscape.de
www.nanoscape.de



NanoZeolites
porous nanoparticles