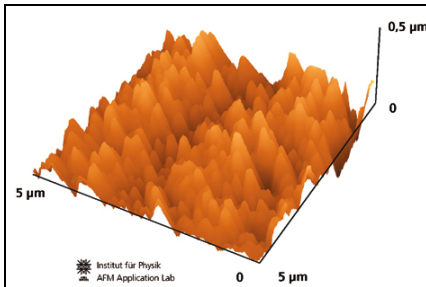


Smallest particles with a major effect:



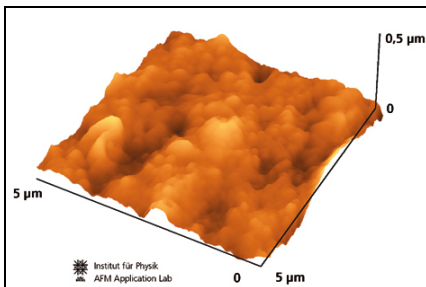
Nanotechnology facilitates the self-cleaning principle



Surface structure of the lotus leaf

Nanotechnology – the revolution

Leaves of certain plants, and the wings of insects always stay clean because dirt and water cannot adhere to their structured surfaces. A surface structure which mimics nature can be produced using nanotechnology, considered the key futuristic technology in most industries. Nanoparticles measure only a few millionths of a millimeter and therefore not visible to the human eye.



Surface structure of NanoSphere®

Surface – specifically modified

In order to transfer the non-stick and self-cleaning process from nature to textiles, the surface is altered through nanoparticles. On the basis of the “guest-host system” and in combination with what is known as “sol-gel engineering” Schoeller has developed a finishing technology which leads to the formation of a structured surface. The result is NanoSphere®.

Conforms to bluesign® – for the sake of the environment

With its patented NanoSphere® finishing technology, Schoeller has launched an innovation onto the market which is revolutionizing the textile industry and which meets the high requirements of the bluesign® standard. Clothing based on bluesign® guarantees the greatest-possible exclusion of substances which are harmful to humans or the environment as well as the most economical use of resources in manufacturing.



The result:

NanoSphere® keeps textiles clean

NanoSphere® provides optimum impregnation of textiles. The waterrepellency is excellent and the oil and grease repelling properties at a level never achieved before. Ketchup, honey, coffee, red wine and many other substances simply run off the nano-structured surface. And even if they fail to run off of their own accord, the stain can easily be rinsed off under running water.

NanoSphere® also benefits the environment. These textiles need less frequent washing and can be washed at lower temperatures. This offers a considerable saving in the consumption of energy, detergent and water.

The washing permanency is many times higher than is the case with conventional impregnation. NanoSphere® resists pressure and friction and has no influence on the comfort of wear, appearance, feel, breathability or elasticity.



NanoSphere® received various awards like the “ISPO Outdoor Award in 2003” and the “European Outdoor Award in 2004”.

