



# Nanowires with Nature's own technology

– particularly useful in sustainable solutions for human beings and the planet.

The whole of Nature is constructed from tiny, tiny particles, fused together at a scale we cannot perceive with the naked eye. New technology makes it possible to study particles that are only a billionth of a metre, one nanometre, in size. This has opened up a new world of possibilities at the atomic level. Now, we can understand in depth Nature's fundamental architecture, which gives life, changes and transforms the planet we have inherited and the human condition.

With nanotechnology, we can use Nature's own ingenious system to improve conditions for humanity and for our planet. We can refine and develop the properties of various materials in a desirable direction for a better world.

Following the conditions of atoms and of Nature itself, the Lund researchers have developed methods for producing a particular form of nanoparticles in the form of tiny wires, which have proven to be very serviceable in applications including new medical diagnostics and treatment, energy technology, lighting, water purification and new communication technology.

In the "Nanowire workshop" at Lund University, the researchers construct nanowires based on the natural mechanisms of atoms to organise themselves according to certain conditions. The process can be compared to organic cultivation. As a seed grows and the tiny seed is lifted by the shoot and forms a thread, the nanowires grow in a similar way under the "seed" of a chemical element.

As it is not possible to control this process in detail, an experimental and advanced approach is required in the "Nanowire workshop" in order to obtain nanowires that function optimally in various applications.

When the nanoengineers believe they have "cultivated" a strong nanowire candidate for medical diagnostics, for example, the medical researchers take over and test whether the nanowire functions as intended. If it proves to be functional, a refining of its properties and a thorough analysis of the nanowire's other properties follows, in order to eliminate potential risks in production and use.

The new laboratory Nanolab Science Village will become a crucial asset in the opportunities for researchers in the "Nanowire workshop" to transform nanowires in the service of humanity and the planet.

Imagine this being possible thanks to you!

## CONTACT

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