

January 2021

# Newsflash

# **Topics**

SimplyNano 2 in Eastern Switzerland

Microplastics in oceans

14th Nano-Dialogue

Covid-19 vaccines based on nanotech

Nanoparticles reduce pesticide use

Tiny hybrid material robots

### **Dear Sir or Madam**

Welcome to our newsflash for the month of September:

- 600 SimplyNano 2 experimental kits for Eastern Switzerland
- Are microplastics a danger in oceans?
- Reflection on the 14th Nano-Dialogue on "Life Cycle and Regulation of Advanced (Nano-)Materials"
- How nanotechnology helps Covid-19 vaccines based on mRNA work
- Reducing pesticide use with nanoparticles
- Tiny robots made of metal and plastic (with video)

Enjoy the read and kind regards,

The Innovation Society, St.Gallen

# 600 SimplyNano 2 - experimental kit for schools in Eastern Switzerland







The three cantons of St.Gallen, Appenzell Ausserrhoden and Appenzell Innerrhoden are using 600 SimplyNano 2 experimental kits in all secondary schools as a new learning medium. This makes the three cantons in eastern Switzerland pioneers in promoting technology in schools, second only to the canton of Aargau. The learning medium is to be used in schools throughout Switzerland by the end of 2023.

### **Read article**

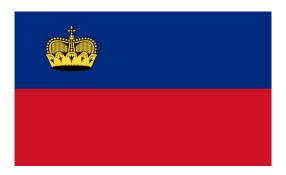
### Microplastics in our oceans



Microplastics are increasingly concerning to society because they are suspected of causing harm to humans and the environment. A recent paper determined the risk of microplastics in oceans based on real environmental concentrations.

### **Read article**

# 14th International Nano-Dialogue on "Life Cycle and Regulation of Advanced (Nano-)Materials"



On November 12th and 13th 2020, the 14th International Nano-Dialogue took place not as planned in Vaduz, but virtually — because of an approximately 100 nanometer-sized virus. The main topic of discussion were novel materials, also known as "advanced materials". A total of sixteen presentations were given and lively discussions were held at the event to broaden the understanding of advanced materials and highlight implications for the various stakeholders. The "Nano Roadmap 2025", a framework document of the nano-dialogue was also discussed and updated.

### Read article

# How nanotechnology helps Covid-19 vaccines based on mRNA work



The first Covid 19 vaccines are based on messenger-RNA technology. While these are now already being administered, let's remember the vehicles that get them to where they need to be in the body - lipid nanoparticles.

### Read article

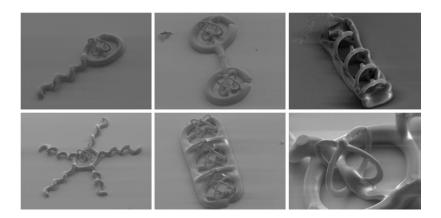
### Reducing pesticide use with nanoparticles



Researchers at the Adolphe Merkle Institute and the Department of Biology at the University of Fribourg have discovered how certain silica nanoparticles could act as a traceless, degradable, and highly efficient treatment against some plant pathogens.

### Read article

## Tiny robots made of metal and plastic



Researchers at ETH Zurich have developed a method that allows them to create micrometer-sized machines in which several materials are interwoven in complex ways. Such microrobots are expected to revolutionize medicine one day.

### **Read article**

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