Newsflash of the Innovation Society, St.Gallen Edition April 2017

the innovation

April 2017

Newsflash

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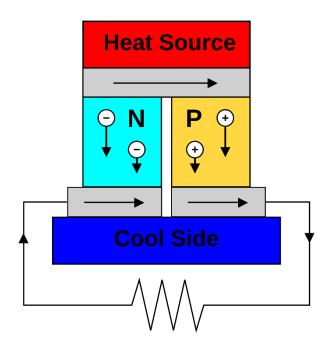
society	NAWSTISSA
Issue	Dear Sir or Madam
	Welcome to our April newsflash of the Innovation Society, St.
11th International	Gallen with the following News:
Nano-Authorities-	
Dialogue	11th International Nano-Authorities-Dialogue
<u>Turn heat into</u> energy	<ul> <li>Turn heat into energy</li> <li>Cell generator: Harvesting energy from cells for micro biomedical applications</li> </ul>
Cell generator:	<ul> <li>Transforming greenhouse gas CO2 into carbon nanotubes</li> </ul>
Harvesting	Nanoparticles remain unpredictable
Energy from cells	<ul> <li>SimplyNano 2 courses (in German)</li> </ul>
<u>Transforming</u> greenhouse gas <u>CO2 into carbon</u>	Enjoy the reading and kind regards,
<u>nanotubes</u>	The Innovation Society, St. Gallen
<u>Nanoparticles</u> <u>remain</u> <u>unpredictable</u>	
<u>SimplyNano 2</u> courses	



### 11th International Nano-Authorities-Dialogue

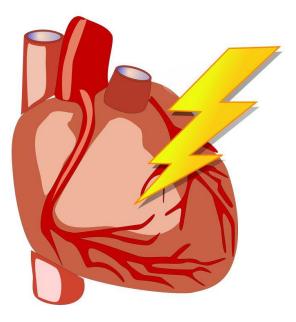
The 11th International Nano-Authorities-Dialogue (NAD) took place on the 29th March 2017, at the invitation of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (Lebensministerium), in Vienna. About 50 representatives from authorities, research institutions, NGO's and companies from Austria, Germany, Switzerland, Luxembourg, and Liechtenstein discussed the topic "Governance and Regulation of Nanomaterials".

### **Turn Heat into Energy**



Thermoelectric generators can create electricity from heat, thereby regaining energy. Nevertheless, they consist of rare and/or toxic materials. The scientists from the Center for Nanointergration (CENIDE) at the University of Duisburg-Essen (UDE) have already established their own technique.

# Cell generator: Harvesting energy from cells for micro biomedical applications

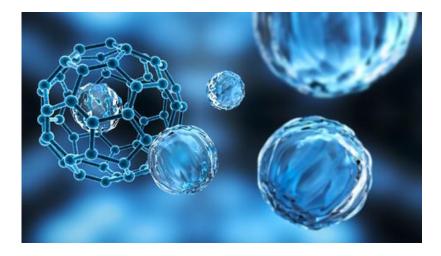


Recently, great progress has been made in the development of bio-hybrid devices with enhanced biological, mechanical and electrical designs. Devices with cultured heart cells were developed, which produced electrical outputs. In addition, muscular tissue-based actuators were generated.

# Transforming greenhouse gas CO2 into carbon nanotubes



The cement industry is one of the largest sources worldwide of carbon emissions, accounting for around five per cent of global emissions. Two thirds of these CO2 emissions are released during the chemical process of burning limestone for cement production and can only be cut by extracting the CO2 from the emissions in one form or another. Now, in two new studies, researchers show that cement plants can have their carbon dioxide exhaust eliminated while co-producing carbon nanotubes.



The way that nanoparticles behave in the environment is extremely complex. There is currently a lack of systematic experimental data to help understand them comprehensively, as ETH environmental scientists have shown in a large overview study. A more standardised approach would help to advance the research field.



### 11.11.2017 SimplyNano 2 course at PH St. Gallen

29.11.2017 SimplyNano 2 course in Muttenz Basel

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