

**June 2015** 

## Newsflash

#### Issues

Annotation by the Innovation Society

Exploring Unknown
Terrain

Nanoparticles for oral drug delivery

Effects of nanomaterials on epigenome

Industry-wide
assessment of CNT
exposure

Behaviour of CNTs at the blood-brainbarrier

### Dear reader,

Welcome to the June newsflash of the Innovation Society. We wish you an inspiring reading and we are looking forward to receiving your feedback!

Kind regards

The Innovation Society

## **Annotations by the Innovation Society**

### Regulation of nanomaterials

Sweden could be the next European country to introduce a nano-register. Its national chemical agency KEMI was tasked with the designing of a register.

The Scientific Committee on Consumer Safety (SCCS) of the EU has published an opinion on the use of nano-silica in cosmetics. The SCCS' main conclusion: Data at hand is insufficient to draw any conclusions.

#### Chances and risks of nanomaterials

Researchers of the University of Wisconsin-Madison managed to fabricate key electrical components on nanocellulose paper, potentially enabling new ways to produce electronics relying on much less toxic chemicals.

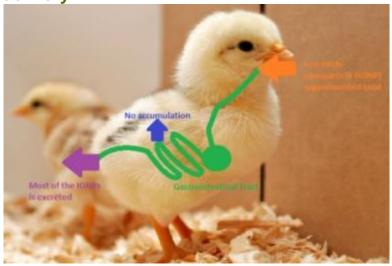
A study on the effects of environmentally relevant concentrations of engineered nanomaterials on the gut flora has received a lot of media attention. Researchers found minimal yet significant impacts on the gut microbial community. The study, however, has some shortcomings and leaves unanswered questions.

## **Exploring Unknown Terrain - Insights into the Nano-Risk-Monitoring**



«Dealing with engineered nanomaterials in a systematic way helps insurers in risk analysis», says the subheading of an article on the monitoring of nano-risks, published in the journal "Versicherungswirtschaft" (insurance industry, May/2015, Volume 70). The article highlights the role a new risk monitoring tool, developed by The Innovation Society in collaboration with Gen Re, may play in this context. The methodology can also be harnessed by direct insurers, enterprises and regulators. Read more

Iron oxide nanoparticles for oral drug delivery



Iron oxide nanoparticles are finding a rapidly increasing number of biomedical applications. Yet, a wide variety of safety concerns still need to be addressed in order to reach clinical practice. A recently published study investigated the effects of chronic oral exposure to iron oxide nanoparticles in growing chicken. The findings revealed that oral administration of iron oxide nanoparticles is a safe route for drug delivery at low nanoparticle doses. **Read more** 

# **Exposure to engineered nanomaterials found to affect epigenome**



A research group of the Harvard School of Public Health has

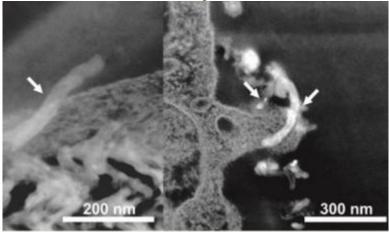
investigated the influence of engineered nanomaterials (ENM) on cellular epigenome. The group found that in vitro, exposure to ENM may affect the epigenome at environmentally relevant concentrations. Follow-up investigations on these findings are much needed, the authors conclude. Read more

## NIOSH publishes exposure assessment of industry-wide CNT exposure



The National Institute for Occupational Safety and Health (NIOSH) has conducted an industry-wide exposure assessment among US CNT and CNF manufacturers and users. In most of the cases, the recommended exposure limit was not exceeded. NIOSH recommends a monitoring of worker exposure to the inhalable as well as the respirable fraction. Read more

Ability of CNTs to cross the blood-brain-barrier observed directly



A research published in the journal "Biomaterials" studied the interaction of carbon nanotubes and the blood-brain barrier. The study, carried out by researchers of the King's College London and the Institut Català de Nanociència i Nanotecnologia, was the first to directly observe the ability of functionalized CNTs to cross the Blood-Brain-Barrier, the authors state. Read more

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