

CZECH “NANO ROAD SHOW” HIGHLIGHTS TINY TECH, HUGE CAPABILITIES



On
Wednesday,
October
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expansive R&D capabilities of the Czech Republic came to Boston.

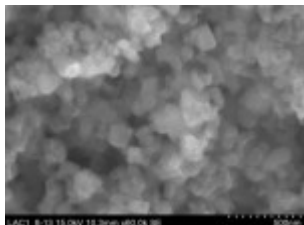
Sponsored by “[CzechInvest](#),” the Czech Republic’s investment and business development agency, and by the [Consulate General of the Czech Republic](#), the “road show” featured six companies and research institutions with expertise in nanotechnology—a branch of engineering focused on the design and manufacture of extremely small devices built at the molecular level of matter.



At an evening reception, Stanislav Benes, Head of the Economic Section of the Consulate General in New York, told me that the goals of the road show are to promote Czech companies, products and technologies; joint research, and student exchanges. "We also want to let nanotechnology centers in the US know that the Czech Republic can provide highly sophisticated, cost-effective research and development for US companies," he said. In addition to Boston, the road show offered presentations in Albany and New York City.

Featured companies included:

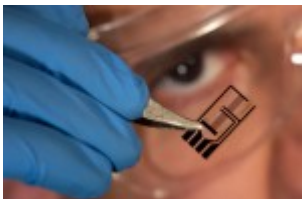
- [Nano Iron](#), founded in 2008, which produces tiny iron particles used to treat ground water contaminated by chlorinated hydrocarbons from industrial waste. "Our nano particles are "very reactive" and may clear an area of pollutants in months-to-years—unlike other 'in-situ' reagents that can take 10-to-20 years to reduce contaminants," said Jan Slunsky, the Nano Iron CEO. "And because Nano Iron particles are composed of a naturally occurring mineral, they do not add toxicity when



injected into a substrate." Other remediating processes may involve the costly transport of polluted water to distant filtration plants, he added. Nano Iron currently partners with environmental consultants and remediation companies in the Czech Republic, France, Denmark, Belgium, and the Netherlands. Nano Iron recently launched a pilot project in South Carolina.

- Advanced Materials -JTJ, which introduced its own industrial process of manufacturing of photocatalytic multifunctional paints for air purification. A number of patents protect the technology in the Czech Republic,

Canada, China, South Africa, USA and many others are pending. Simultaneously, the company has developed a patented large-scale technology to produce TiO_2 nanoparticles with high efficiency. Working with several universities and international companies on variety of R&D and commercial projects, Advanced Materials – JTJ has delivered many revolutionary technologies in the field of material science, photocatalysis and energy accumulation and participates in two EC grant consortia on photocatalytic water decontamination.



- [SYNPO](#), a commercially-oriented, privately held R&D center which arose in 1992 from a government-owned research center. Today, SYNPO offers new technologies and products such as coatings adhesives, composites and binders based on applied polymer science. It focuses on contract research and development, manufacturing, process development, and nanostructured polymers and polymers from renewable raw materials. It also provides specialized analytic services, helps client companies scale up production, and trains students. Board Chairman Martin Navratil said SYNPO's clients range from small Czech and European companies to some of the world's largest multinational chemical companies, including DuPont, in the US.

Featured educational and research and development institutions included:

- The [Central European University of Technology \(CEITEC\)](#) – a multidisciplinary science center focused on life sciences and advanced materials and technologies. CEITEC offers state-of-the-art infrastructure for research in



64 groups and 7 programs.

- The [Technical University of Liberec Department of Nonwovens](#), which has a strong position in nanotechnology research thanks to its patented process of industrial-scale production of nanofibers (including nanofiber scaffolds for use in tissue engineering, and composite nanofibers).
- The [Technical University of Liberec – Institute for Nanomaterials](#), Advanced Technologies and Innovation (CxI), which provides long-term support of industrial research activities and utilization of new technologies and technological production methods. Its foci include competitive engineering, robotics and mechatronics, and applications of nanofiber materials.

After the meeting, Abi Barrow, director of the Boston-based [Massachusetts Technology Transfer Center](#), said: “Nanotechnology is changing the world. It will change the way everything operates, because of the new materials people are now developing. The Czech’s have exhibited some ‘very interesting’ technology and research skills in the nanotech arena. And New England, with its own great nanotech base, has real interest in finding cost-effective ways to contract out research development and testing.”



The “Nano Road Show” is one of several presentations organized by CzechInvest and the Consulate General to promote Czech prowess in a variety of fields”, said Jiri Fusek,

CzechInvest's Sector Specialist in Nanotechnology and Materials. The Czech Republic is particularly strong in the automotive, aerospace, information and communication technologies and life science arenas, he said.

Before the event, I hadn't realized that in the 1930's Czechoslovakia was ranked among 10 most developed countries in the world, or that Czech scientists were instrumental in developing contact lenses and anti-HIV drugs.

Or that today, "the Czech Republic offers the best conditions in Central and Eastern Europe for international partnership, with US firms major investors in Czech companies," in the words of Jan Fried, director of East Coast operations for [CzechInvest](#). What is more, to facilitate the entry of innovative Czech companies into the US market, CzechInvest has sponsored "CzechAccelerator" for the past three years. One such program, was based in Silicon Valley; the other at the Cambridge Innovation Center, in Kendall Square.

. "As an official government organization, CzechInvest will continue to promote international investment, serve our clients, and to help Czech companies develop their businesses in the US and globally," Fried said.

—Anita M.Harris

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