

# Nanotechnology and Advanced Materials in the Czech Republic



# **Investment Success Stories**



### Toray Textiles Central Europe a.s.

"We have been operating in the Czech Republic since 1997. For the expansion of local production with this new technology, we based our decision on, among other things, the good work ethic and professionalism of the local workers. Favourable conditions, including the helpful approach of Czech authorities, also played a role in the decision."

### **Akihiro Nikkaku**

President of Toray Industries



#### Thermo Fisher Scientific

"FEI Company chose the Czech Republic primarily due to the country's stable business environment and competent yet affordable workforce. FEI based its business in Brno due to the fact that it is a dynamic and modern city of science and research with a strong industrial tradition and a very accessible location, while also being a significant university centre."

#### Jiří Očadlík

General Manager, FEI Czech Republic s.r.o.

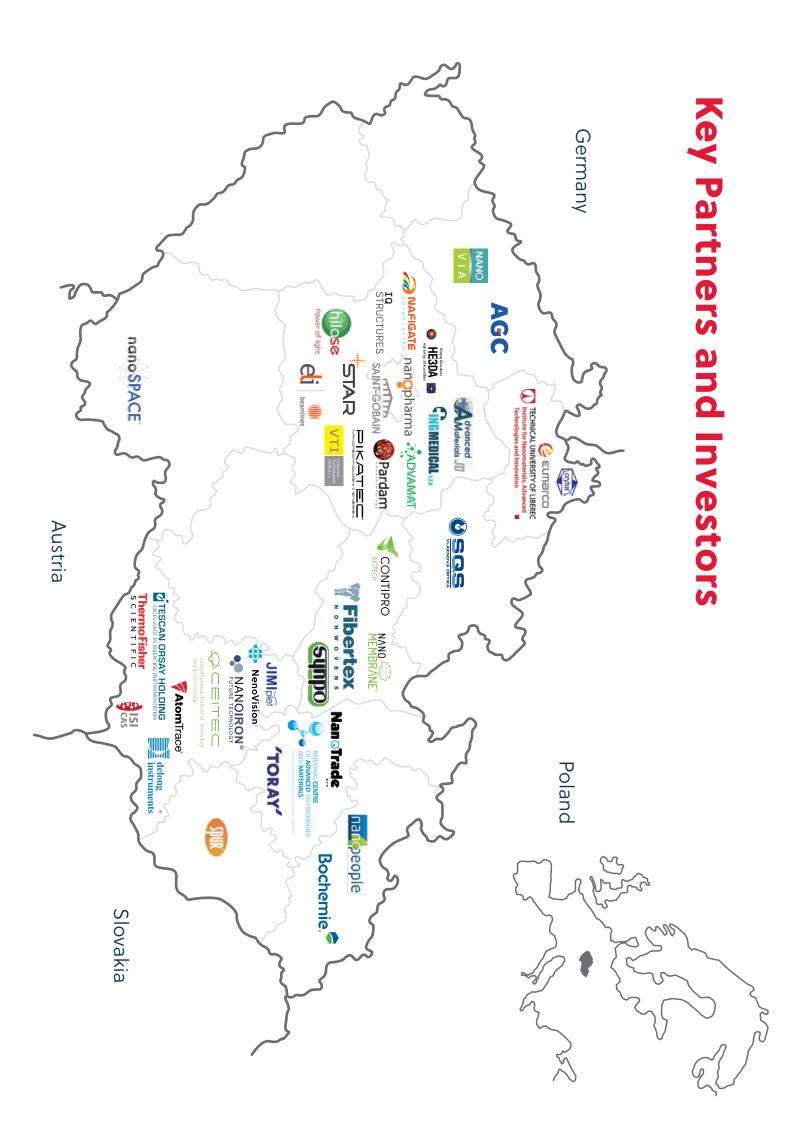


#### Fibertex Nonwovens, a.s.

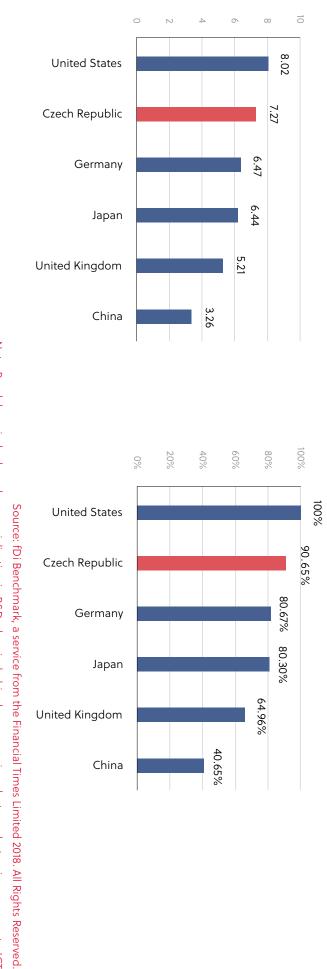
"Apart from identifying the right acquisition target, the company Vigona, to expand our portfolio of activities into new segments, we chose the Czech Republic for several reasons. The most important were the country's highly skilled workforce, good location in terms of logistics and stable political system."

### Bjarne Knudsen

CEO, Fibertex Nonwovens, a.s.







Note: Breakdown index based on specialisation in R&D, chemicals, biopharma, semiconductors, electronic components, ICT

1949

# Optics & Microscopy

1949 The first electron microscope was a centre of electron microscopy today. city of the Czech Republic, became Armin Delong. Brno, the second largest introduced into production by Professor

of electron microscopes worldwide. produces more than 30% Scientific, TESCAN, and Delong Instruments, the Czech Republic Thanks to operations of Thermo Fisher

## 2003

Nanofibers

developed at Technical University of Liberec and commercialized by

Patented technology for industrial--scale nanofiber equipment

<b>Elma</b> creat and the r	2003												
<b>Elmarco</b> – a major breakthrough to create a whole nanofiber supply chain and discover new opportunities for the most demanding applications.	ω	All cost values shown in EUR – Euro per annum. Source: fDi Benchmark, a service from the Financial Times Limited 2018. All Rights Reserved.	Switzerland	USA	Germany	Japan	South Korea	CX	China	Czech Republic	Location	Labour costs	
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			169,510	138,259	116,178	109,020	120,218	105,372	101,806	84,848	Head of R&D		
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2017		+ +		200		20	40	60	80	100 80		Stude	
<ul> <li>Energy &amp; Environment</li> <li>2017 New technologies based on nanoscale to treat water (Nano Iron) and air</li> <li>(Advanced Materials – JTJ)</li> <li>or to improve energy savings find their</li> </ul> <ul> <li>way to the market. Newly introduced type of batteries (HE3DA) is about to cause a revolution in the energy savings find their</li> </ul>		Students Graduates		2009/2010		17,109			Î	80,245		nts an	
		s tes		2010/2011	(	17,249						d Graduat	
				2011/2012		21,022	2				98,736	Students and Graduates of Technical Universities	
	+	S		2012/2013		20,077					93,313	ical Unive	
		Source: Ministry of Education, Youth and Sport, 2017		2013/2014	20,573				•	<b>94</b> ,579			
				2015/2016		2 1,029	1				91.393		
	2017	th and Sport, 2017		2016/2017		21,12	01 000			¢26,16			

# Reseach & Development



Central European Institute of Technology BRNO | CZECH REPUBLIC

#### CEITEC

Multidisciplinary centre facilitating synergetic studies on all available levels of complexity in life sciences and advanced materials and nanotechnology with scientists conducting research in 52 groups and seven programmes. New CEITEC Nano laboratories offer state--of-the-art infrastructure for all commercial and academic partners.

TECHNICAL UNIVERSITY OF LIBEREC Institute for Nanomaterials, Advanced Technologies and Innovation

## Institute for Nanomaterials, Advanced Technologies and Innovation

Institute of Technical University of Liberec to support competitive engineering, well-known due to their international patent for the industrial production of nanofibers. Industrial research activities in machinery and vehicles, mechatronics, robotics, management and utilisation of artificial intelligence, nanomaterial creation, and electrostatic spinning.



# **Regional Centre of Advanced Technologies and Materials**

Scientific and research centre connected to Palacký University in Olomouc with main objective to produce superlative research and to transfer high--tech products and advanced technologies into medical, industrial and environmental practice. Involved in prestigious international cooperation as Pierre Auger Observatory and CERN-ATLAS.



#### STAR

Science and technology cluster close to Prague helping to develop innovative businesses and start-up ecosystem. Gathered around the most modern facilities of **BIOCEV** (Centre of Excellence in biomedicine and biotechnology), **ELI Beamlines** (part of the Extreme Light Infrastructure project to create the latest laser equipment), and **HiLASE** (key European facility for laser development).

THESE BODIES PROMOTE THE SECTOR AND DEVELOP NEW TECHNOLOGIES TO INTERNATIONALIZE THE CZECH NANOTECHNOLOGY.









Students:

1,908

**Czech Technical University in Prague** 

Graduates: 542



1849

Students: 643 **Charles University in Prague** 

Graduates: 125



Students: 623 VSB – Technical University in Ostrava

Graduates: 166



UNIVERSITY OF CHEMISTRY AND TECHNOLOGY PRAGUE

**IN PRAGUE** 

UNIVERSITY TECHNICAL

CZECH





Graduates: 116 Students: **Technical University, Liberec** 544

Note: Academic year 2016/2017. The study programmes were selected by CzechInvest.

Source: Ministry of Education, Youth and Sport, 2017

Students: 363 Palacký University, Olomouc

Graduates: 63





Students: University of Pardubice 607

Graduates: 122



# **Contact us**

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