

Pressemitteilung ZG-0901c-E, Wenden, February 23, 2009

## HighTech from Wenden and Leverkusen meets in Tokyo



Nano Tech 2009, one of the major exposition events in applied Nanotechnology was held from February 18. - 20. in the convention center „Big Sight“ in Tokyo.

The company Bayer MaterialScience with its headquarter in Leverkusen/Germany has been represented with prominence with a booth on the German Pavilion in order to promote the Carbon Nanotubes made by Bayer (trade name: Baytubes®).

Upon invitation of Bayer, also Zoz Group with its headquarter in Wenden/Germany participated Nano Tech since in a co-operation project, Zoz is utilizing Baytubes® to manufacture high-performance semi-finished products (rods and complex bars) as well as fasteners (nuts and bolts).

For this, Carbon Nanotubes are dispersed in nanoscale in an aluminium-matrix by Mechanical Alloying. The resulting powder material is then consolidated to semi-finished products by hot extrusion. Then these rods are currently processed at Zoz to screws and spacer shafts for High-End Bicycle manufacturers (Votec in Hünsborn and Storck in Idstein, both Germany).



Zentallium®-fasteners from Zoz for High-End Bicycles from Hünsborn and Idstein

The new material is named Zentallium® and is characterized by mechanical properties similar to e.g. austenitic stainless steels (VA). However, the density remains in the range of the aluminium-base material and insofar Zentallium®-parts have less than half of the weight of the conventionally used materials.

In case of the new fasteners, this means that at same performance, more than half of the weight can be saved. Thus for a High-End Bicycle about 60 g of weight can be cut down. This sounds marginal, however, there are fastener-kits on the market, e. g. from titanium-base materials that are 5 times more expensive at less performance.

Of course fastener-kits and other small parts for High-End Bicycles will always represent a small volume market only and a return of investment in this business cannot be expected in short term range. However, after about 1 year of successful testing in this high-performance application, Zentallium®-parts shall be offered to automotive and in particular to the aero-space industry. E. g. in the business of cylinder bolts for aluminium combustion engines or fasteners and components for airplanes and spaceships, strategic market entries shall be achieved.



f.l.t.r.:

Dr. Klaus-Jürgen Exner, Federal Ministry of Economics and Technology, Government of Germany

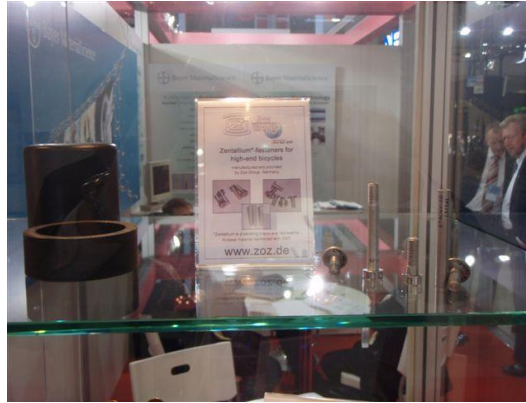
Prof. Dr. Henning Zoz, President, Zoz Group, Wenden, Germany

Martin Schmid, Managing Director Carbon Nanotubes, Bayer MaterialScience AG, Leverkusen, Germany

MdB Hartmut Schauerte, Parliamentary State Secretary, Federal Commissioner for SME

Dr. Michael Portoff, Managing Director, Bayer Holding Ltd., Tokyo, Japan

On last Thursday, Nano Tech and in particular of course the German Pavillon was also visited by the Parliamentary State Secretary, Federal Commissioner for SME and the domestic member of the Bundestag, Hartmut Schauerte (Kirchhundem). In the evening before, Prof. Zoz could already explain him the new super-material during an extensive discussion. Insofar, Zoz is happy to be allowed to ride on the strong shoulder of Bayer and Bayer and Zoz appreciate the active support of Mr. Schauerte very much.



From the co-operation with Zoz, Bayer MaterialScience of course is expecting the support of their own Carbon Nanotubes (Baytubes®) that with respect to technological and economical aspects as well as particularly environmental and safety concerns were found to be ideal for the utilization in the Zentallium®-material. Since this represents an exceptionally trend-setting development right in front of commercialization, the statement is allowed, that the fasteners from Zoz have been a major player for Bayer during Nano Tech in Tokyo. Even the volume-potential for a group like Bayer so far must be described as marginal, the trend-setting effect can favour and push many other product developments. Already next week, Bayer will participate and contribute to another conference which is the 2nd German Japanese Symposiums on Nanostructures in Kusatsu/Kyoto (Japan):



2nd German-Japanese Symposium on Nanostructures  
2nd International Symposium on Nanostructures

*March 1-3, 2009, Kusatsu, Japan*

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The first of these events that are organized by Prof. Zoz who is a member of the Overseas Education Program Committee at Ritsumeikan University in Kusatsu as well as Prof. Ameyama, the Vice Dean of the same university and under financial support of the Japanese Government was held last year in the Technology Center in Siegen, Germany with about 100 attendees. Now in Japan and braving the global economy crisis, 150-200 attendees are expected.

In consequence, and just returned from Japan, this Friday, the president of Zoz will again jump into the aircraft. Referee from Bayer will be Prof. Dr. Horst Adams, Vice President Future Technologies who stayed in Asia right away and in this moment is visiting China for the same topic. Also Dr. Michael Dworak who contributes substantial support for the consolidation of Zentallium® will be on site. We will be happy to report about OZ-09 in 8 days though.

Next year, the OZ-10 will then again be held in Germany namely in the townhouse of the city of Wenden where thanks to the major of Wenden, Peter Brüser, we can appreciate this opportunity. For this event, presentation-confirmations from top-class industrial representatives are already given.



3rd German-Japanese Symposium on Nanostructures  
3rd International Symposium on Nanostructures

*February 28 - March 02, 2010  
Wenden/Olpe, Germany*

**OZ-10, 3rd German-Japanese Symposium on Nanostructures**  
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