



press release ZG-2104, Wenden, 14.07.2021



## Zoz first time in Albania

Nanostructured materials & technology from Wenden e.g. for a booming construction industry.  
Academy of Sciences, Tirana University and State-President Meta visited.

Today 17:00 p.m. Webinar NanoAlb (14.07.2021 online), Zoz-Workshop in Tirana on 02.08.2021  
Trends in Nanotechnology Int. Conference (TNT2021), October 04-08, 2021

## Wenden/Olpe/Tirana/Vlora/Dürres

In the last week, from July 4th to 10th, 2021 4x Zoz traveled to Albania. Not just looking for a carefree holiday for the children, but also on the way to new markets and perspectives between Tirana and Vlora.

### Success despite Corona | from banana to nuclear fusion

Zoz has overcome the Corona politics well so far, no short-time work, no layoffs, instead new hires and, for the first time, to the turn of the year between the days no company shutdown. For the last six months, the largest process plant at ZTC (Zoz Technology Center, Olpe), where the new product “natural rubber from dandelion roots” has been created for years for and then of a large tire manufacturer, was running in 3-shift operation 24/6 producing high-performance material ODS/NFA for an American turbine manufacturer. A similar order, in this case for nuclear fusion, is expected from the United Kingdom in the next couple of weeks. Normal operation is currently back. The mechanical engineering dept. at Wenden is busy with orders for the US military in 2021. Most recent patent applications together with the Fraunhofer Institute IME relate, among other, to natural rubber made from banana peel. For this purpose, a user, e.g. seal manufacturer is wanted.

### Honors | Hydrogen and Battery

For similar “asynchronous success” during the banking crisis, the Zoz-CEO was awarded as the Manager of the Year in South Westphalia in 2011. Locally, the Sauerland Innovation Award for Zoz solid-state hydrogen storage (Hydrolium<sup>®</sup>, H2Tank2Go<sup>®</sup>) followed and later the Hydrogen & Energy Science Award 2019 in Korea. In 2019/2020 we started to equip an Asian car manufacturer with hydrogen technology from Wenden, stop with Corona. On the other hand, a major order for (automobile) battery cathode materials (LMP/LFP, ZoLiBat<sup>®</sup>) was broken. However, an associated laboratory unit at least could have been delivered early this year.



with Federal Minister of Economics Rösler at a Zoz hydrogen scooter in front of a Zoz-ZEV, August 29, 2013

### The best that is in the box.

Acc. to Zoz, the "the best that is in the box" is something else, moreover exactly where one has been far too unsuccessful since years. In 2016 still sent by Peter Hintze, at that time State Secretary at Federal Economics Minister Rösler, to the President of the German Institute for Structural Engineering, initially disillusionment had to be learned. Even economically and ecologically convincing innovations, even at a given political will, can be subordinated to existing structures, monopolies and cartels. The way was expected to be long.



Since then, Zoz has been traveling all over the world to bring technology for "green high-performance concrete" based on super-activated aggregates as a sustainable and cost-neutral innovation that everyone needs into the mass market.

Particularly in the age of CO2 religion, where highly developed diesel engines are sacrificed towards economically and ecologically considerably less favorable battery drives, one should realize that one starts where something can be achieved. If the cement production would be converted accordingly, in any case more CO2 emissions could be saved than ever could be saved in road traffic. Instead, billions in economic losses are accepted in mobility, an entire industry is migrating out of the country, possibly because the experts might have never been interested in building materials.

In this context, too, Zoz for the first time was in Syria around Easter and again in Donbass. Now for the first time in Albania, massively accelerated by a lucky coincidence:

### FuturZement|FuturBeton



Set-up of the bridge Rosenthal, Olpe County, Germany, November 14, 2012, Prof. Trettin 3rd f. 1.

Since November 2012, the bridge Rosenthal, made of Zoz-FuturBeton, has been in place at Olpe County. As another demonstrator weighing tons, the balustrade of Villa Zoz-ZCS was installed at Siegen in 2013.

2001 to 2007, Prof. Dr. Arjan Korpa, today at Tirana University, did his doctorate at the University of Siegen and was there as a PostDoc with Prof. Reinhard Trettin.

2009 to 2012, Zoz GmbH carried out the BMBF research project 03X0068A where Prof. Trettin was one of the most important partners and idea generators, the project short name:

### **FuturZement|FuturBeton.**

2009, Dr. Korpa, at that time Head of Research/Development at Environmental Building Materials (EBM) based in Beirut and Tirana, together with EBM-CEO Mark Bouri visited ZTC at Olpe in order to learn more particularly about super-activation of slag, thus about FuturZement|FuturBeton.

2020, last week, Zoz and Korpa met again and had their first meeting already at Tirana Airport. On next day meeting a large building contractor at Vlora and on Tuesday again in the capital at the Academy of Sciences. Here first discussions with the president Prof. Skënder Gjinushi and with the Chairman of NanoAlb, Prof. Arben Merkoci.



with Prof. Korpa (on left), President Gjinushi and Prof. Merkoci (on right) at the Academy, 06.07.2021

NanoAlb has just been formed this year as the Nanotechnology Department within the Academy. As a result, Zoz will attend the “Trends in Nanotechnology Int. Conference” (TNT2021, October 04-08, 2021) providing a contribution about nanostructured materials.

On July 14th, 2021 from 17:00-18:00 p.m., today, Zoz is invited as the speaker to a webinar of the Academy. The entire range of Zoz technology with regard to nanostructured materials will be discussed, anyone can log in at the LINK:

[meet.google.com/uby-vfcf-xjd](https://meet.google.com/uby-vfcf-xjd)

Then, in just two weeks, Nanoalb will invite to a FuturZement-Workshop at the academy. Zoz then travels again to Albania to order to inform attendees, in particular from construction and steel industry, as well as representatives from education, science and politics, about background, technology and possibilities of the super building material. The aim then is to find the right partners for a joint venture to bring FuturZement into the market in Albania in large scale. In best-case scenario, politics should take a special role as the communal client with signal effect. Should Albania achieve a significantly better CO2 balance in the civil engineering sector than any European country, this might represent a political advantage. In economic terms, the modern building material could become an export hit within another decade.

As a finishing touch of the first trip to Albania, Zoz was given the honor of being invited by the Albanian President Ilir Rexhep Meta for visit and meeting at his residence in Dürres. The meeting lasted an hour longer than planned, Zoz left the domicile deeply impressed.



### **FuturZement|FuturBeton**

BMBF research project 03X0068A # 2009-2012

"Nano-scale activation of blast furnace slag and Portland cement by means of an innovative grinding process for the production of high-performance and ultra-high-performance concrete with improved properties."

FuturBeton today at up to 140MPa, is 3-4 times stronger than conventional concrete, impresses with its extremely high (adjustable) early strength and durability of presumably several hundred years. Conventional concrete structures usually fail after 50 years, compare e.g. to the A45 Autobahn bridges. The enormous durability, mainly results from a substantial refinement of material porosity, moisture can practically not penetrate. The strength in UHPC range is due to the upfront super-activation, in this case of granulated blast furnace slag (GGBS), which is admixed to conventional cement (OPC) in a certain ratio. This was and is done at ZTC at Olpe in nanostructure processing plants that Zoz develops and produces in Wenden.



...with the ProgressReport FuturBeton, Federal Minister Wanka (BMBF), 16.05.2013

Utilizing blast furnace slag, additionally an approx. 20% reduction in CO<sub>2</sub> emissions (less calcination of clinker) is resulting. Since cement on partial view represents the largest CO<sub>2</sub> emitter of mankind, the effects are enormous. If you want to save CO<sub>2</sub>, you should start right here, and not at the already super-clean diesel engine.

Since FuturZement in concrete causes additional costs of <€10/ton of concrete (DE-2012, 43.000 tons p.a.), since due to higher strength, less material is required, since due to higher early strength one can build faster and due to high durability one can build less often, the supposed CO<sub>2</sub>-problem could be solved almost free of charge. Even more, one can build more cost-effective and sustainable. One just has to want that.