



Zoz GmbH

Simoloyer®

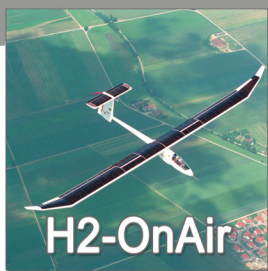
recent applications & products



Zentallium®

lighter than aluminium
and as strong as steel
[Al-CNT composite]

cooperative development Zoz & Bayer



H2-OnAir

Electric Aircraft
with Hydrogen Range Extender

project-no. EG 906,
EUROGIA/EUREKA



FuturBeton

the world's first public bridge
made of High Performance
Cement/Concrete

project-no. 03X0068A, BMBF

grain-size control
by nanostructure

nanostructure
in Zoz-Tanks

nanostructured
cement/concrete

[Hydrolium®, H2Tank2Go®
and PEMFC's (Zentallium®)]



What is available

Zentallium® consolidated by Hot Extrusion, semi-finished products, fasteners and transmission shafts;

What is new:
Pressing and Sintering of Zentallium®
project-no. EP120573, BMW

Development of Zentallium® powder material for conventional Pressing & Sintering consolidation process for high strength and hardness.

PUNALKO
project-no. 03FH054PX2, BMBF

Powder Metallurgical Fabrication of nanostructured Al-based high-performance materials for structural elements under high thermal stress.

HIP and Hot-Extrusion of Zentallium®
project-no. EP121019, BMW

Development of Zentallium® at high strength and high elongation by modified grain-size control agents for HIP & Hot-Extrusion consolidation.

What is new

advanced and environmentally friendly aircraft propulsion by a combination of solar cells, battery and hydrogen fuel cell;

solid state hydrogen storage as well as the physical combination with pressurized hydrogen for aviation;

fuel cell system provides electrical power for all flight phases (not only for cruise);

cost-effective, lightweight fuel cell system;

standardized connectors for all kinds of hydrogen tanks; same tanks for aviation and ground transportation;

quick replacement of tanks rather than refueling on board (new infrastructure strategy at revolutionary logistics and operative way of refueling);

platform for later High Altitude Pseudo Satellites (HAPS) at combined Battery-Solar-FC-technology for very long term flight missions;

What is new & available

HEM-surface activation/grain-refinement at substantial bimodal particle size reduction (high strength, high density/durability);

in combination with replacement of clinker by blast-furnace slag (for resources/CO2-emission saving);

higher strength means less material and consequently less material cost - this means less weight and insofar one can build lighter and e. g. also higher;

more dense packing results into a substantially improved durability - and with this, at statics related concrete structures again material can be saved resulting in a more durable product and one could once more build lighter and higher;

the CO2-saving is enormous and next to and because of the care for our environment, such saving can be converted into cent and euro already today;

www.zoz.de

Simoloyer®, Zentallium®, Hydrolium®, H2Tank2Go®, Isigo®H2.0, P2G2F® and ZoLiBat® are registered trademarks of Zoz Group.