

## micromod Partikeltechnologie GmbH

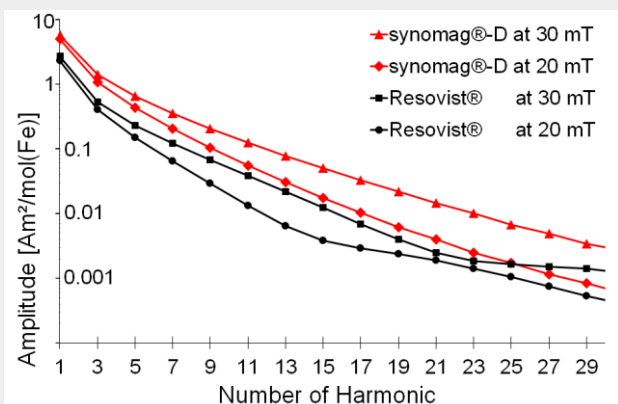
More than **20 years** of experience in the production of chemically surface-functionalized and/or magnetizable micro- and nanoparticles

*A recent research highlight*

### synomag® - our new Nanoflower-shaped Magnetic Nanoparticles with Excellent Properties

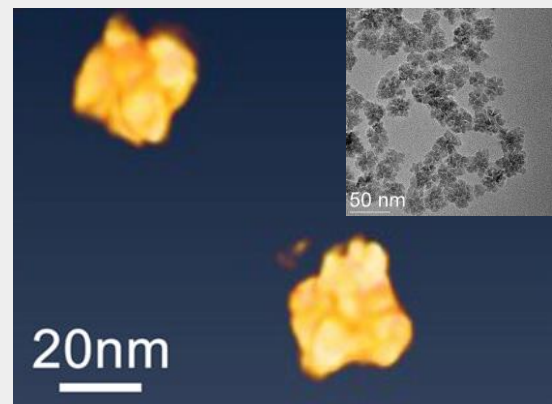
- ➔ as tracer for Magnetic Particle Imaging (MPI)
- ➔ as contrast agent for Magnetic Resonance Imaging (MRI)
- ➔ for hyperthermia applications
- ➔ as tool for biosensor and lab-on-chip applications

#### Magnetic Particle Spectra:



Magnetic Particle Spectra (MPS) of 50 nm synomag®-D particles at 20 and 30 mT, amplitude of odd harmonics scaled to the amount of iron compared to Resovist® (C. Grüttner *et al.* *Proceedings of IWMPPI 2018*)

#### TEM images of synomag®-D:



TEM tomography image of synomag®-D with a closer look at two particles viewed parallel to the electron beam direction (L.J. Zeng, Chalmers University of Technology, Göteborg)

- The amplitude A<sub>3</sub> of the 3rd harmonic in the MPS spectrum of synomag®-D is more than twice as high as that of Resovist®.
- synomag®-D have a very high intrinsic loss power (ILP) of about 7 nHm<sup>2</sup>/kgFe (P. Bender *et al.* *J. Phys. Chem. C*, 2017, DOI: 10.1021/acs.jpcc.7b11255)