

Nanocarriers in flexible matrix for transdermal applications - TRAPP

Nanoparticles are already an integral part of biomedical diagnostics. Particularly for drug delivery, the use of nanoparticles is becoming increasingly important not only in cancer therapy but also in the treatment of other diseases due to their unique capabilities and relatively low side effects.

This project focuses on the characterization of stimuli-responsive iron oxide-containing nanocarriers for transdermal applications. Essential steps in this context are the characterization of the encapsulated particles with respect to physical properties as well as toxicity and cellular uptake mechanisms, the demonstration of stimuli-responsive release and the integration of the particles into a carrier material for transdermal applications.

For this purpose, the particles will be measured by magnetic force microscopy (MFM) and their behavior in high frequency magnetic fields as well as cell-like environments will be investigated.

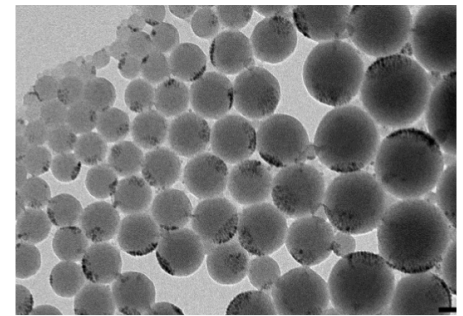


Figure 1: TEM measurement of encapsulated nanoparticles

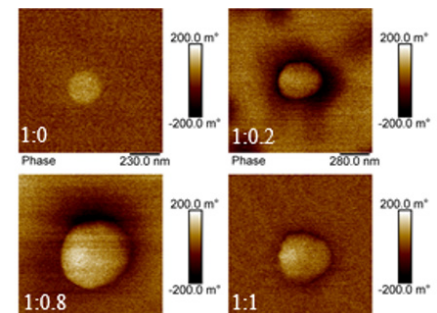


Figure 2: MFM measurement of different SPION-ratios inside the encapsulation material

Project duration:

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Project management:

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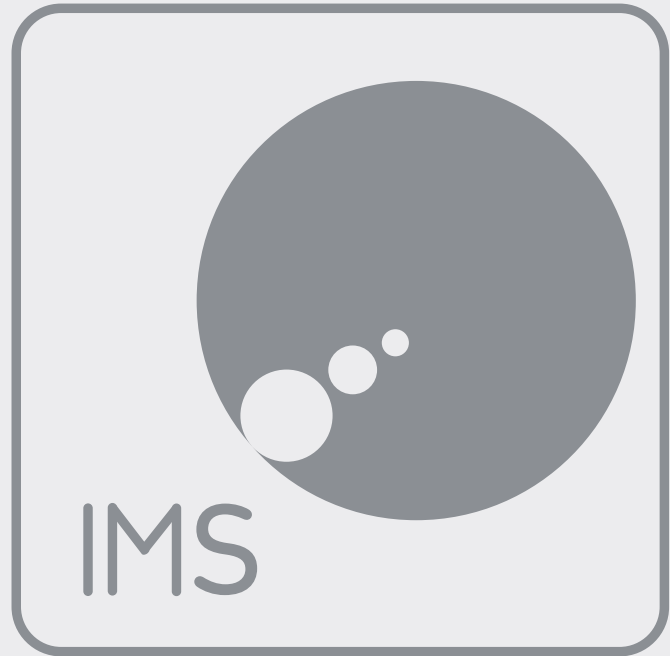
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