



Ecole Polytechnique Fédérale de Lausanne, Institute of Materials, Powder Technology Laboratory (Switzerland)


 ÉCOLE POLYTECHNIQUE
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About the Powder Technology Laboratory

The Powder Technology Laboratory (LTP) is part of the Institute of Materials at Ecole Polytechnique Fédérale de Lausanne, Switzerland (EPFL). The laboratory is concerned with the research, development and processing of inorganic particles ranging from the nanoscale of less than 10 nm to the microscale. The processing of powders and particles comprises various stages of materials fabrication starting with the particle synthesis to the point of forming and densification to reach the final product.

In the framework of the NanoDiaRA project, LTP is dealing with the development and functionalisation of nanoparticles for the detection of biomarkers and particles useful as contrast agent (molecular imaging). Beside this activity, the laboratory is also active in fields like particles for drug and gene delivery, self assembling of nanoparticles to achieve unique surface structures with controlled porosity and (bio)-functionality and finally the creation of three dimensional building blocks for further processing, including sintered products.

LTP has as its goals the understanding of these various steps at a fundamental level with a view to improving the processing routes for materials of technological importance and to contribute in the development of new and intelligent materials. The high quality of particles in regard to narrow size distribution, form factors, functions etc. is guaranteed by the high level of characterisation methods for particles in the nano- and micro-range. Additionally, the development of unique reactors which allow reproducible synthesis and coatings is also part of the R&D activity.

NanoDiaRA collaborators



Prof. Heinrich Hofmann

Head of Laboratory

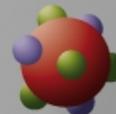


Vianney Bernau, PhD student

Magnetic properties of SPION, interaction of magnetic and colloidal forces, separation

Contact

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 Entwicklungen Bad Neuenahr-Ahrweiler GmbH, Wilhelmstr. 56, 53474 Bad Neuenahr-Ahrweiler (Germany)
 Scientific Coordination: Mat Search Consulting Hofmann, Ch. Jean Pavillard 14, 1009 Pully (Switzerland)

**Marie-Gabrielle Beuzelin, Technician**

Responsible of cell culture lab (cell assay, tox tests), SPION Synthesis and characterization, protein profiling

Usawadee Sakulkuh, PhD student

Coating of particles, investigation of protein adsorption

Rakhesh Chandra Prajapati, Informatics Engineer

Lab-automation for separation and functionalisation equipment

Lionel Maurizi, Postdoc

Particle coating with silica, Reactor development

Contact

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