

ANGEL 2010 - Conference on Laser Ablation & Nanoparticle Generation

Veranstaltung - ANGEL 2010 - Conference on Laser Ablation & Nanoparticle Generation ∩

Titel	ANGEL 2010 - Conference on Laser Ablation & Nanoparticle Generation
Wann	Di, 29. Juni 2010 - Do, 1. Juli 2010

Beschreibung

ANGEL 2010 - Conference on Laser Ablation & Nanoparticle Generation in Liquids

Today, nanoparticles are widely implemented as functional elements in plastics, lacquers and ceramic products. Novel applications are targeted on nanomedicine, sensing, electronics, optics and biophotonics.

Nowadays, however, only a limited variety of materials that may be integrated into advanced functional materials are available: Nanoparticles synthesized by conventional gas phase processes are agglomerated to micro powders that are hardly redispersible into functional matrices, and chemical methods often lead to impurities of the nanoparticle colloids caused by additives and precursor reaction products.

In the last decade, laser ablation in liquids has proven to be a unique and efficient technique to generate, fragmentate, re-shape and conjugate nanoparticles. This exciting method bears strong advantages:

- **Laser-generated (metal) nanoparticles are charged and thus have an extremely high stability**
- **Nanoparticle colloids are not inhalable and thus lead to an improved occupational safety**
- **Chemical precursors are not required and thus the colloids are 100 percent pure**
- **This method can be applied universally with an almost unlimited variety of materials and solvents**

Aspects of the fundamental physics of laser ablation in liquids as well as novel applications, such as the fabrication of core-shell particles, nano-alloys or laser ablation of nanoparticles in biological surroundings will be addressed in this conference. Moreover, the processes of laser nanoparticle interaction within liquid environments provide a large spectrum of applications, especially in biophotonics.

The latest findings on appropriate focusing conditions, cross-effects with particle-laser interaction, flow conditions, kinetics etc. will be discussed on an international level with enough time for discussions and an informal exchange of ideas.

Topics

- **Modeling and fundamentals of laser ablation and particle fragmentation in liquids**
- **Nano-alloys, core-shell particles**
- **Nano-hybrids, conjugation with organic molecules and biomolecules**
- **Laser-generated nanocomposites**
- **Laser nanoparticle heating / phototherapy**
- **Pulsed laser optoporation with nanoparticles**
- **Nanoparticle productivity / scale-up**
- **Semiconductor and dielectric nanoparticles**

For more Information click here:

<http://www.myeos.org/angel2010>

Abstract Deadline is 28.02.2010

Lokalität - Engelberg

Standort	Engelberg
Ortsname	Engelberg
Land	CH