



Technische  
Universität  
Braunschweig

## Participation fee

The participation fee includes all course materials and refreshments during the day as well as one dinner:

	Regular Price*	Reduced A*	Reduced B*
Course	850 €	750 €	550 €

A: early registration

B: member of university

\*: members of GVT - 60 €

For registration as well as further and current information please visit our homepage:

[www.ipat.tu-bs.de/en/veranstaltungen](http://www.ipat.tu-bs.de/en/veranstaltungen)

## Participation Conditions

- Registration is possible until 30<sup>th</sup> September 2015
- Reduced prices for early registration (until 15<sup>th</sup> July 2015), employees of university and GVT members
- Minimum number of participants: 10 persons
- Cancellation (email or fax):
  - until 12<sup>th</sup> September: a service fee of 50 € has to be paid
  - later cancellation: 80 % of participation fee will be invoiced but the course documents will be provided

## Payment:

GVT-Forschungs-Gesellschaft- Verfahrenstechnik e.V.

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## Organization:

TU Braunschweig / Institut für Partikeltechnik

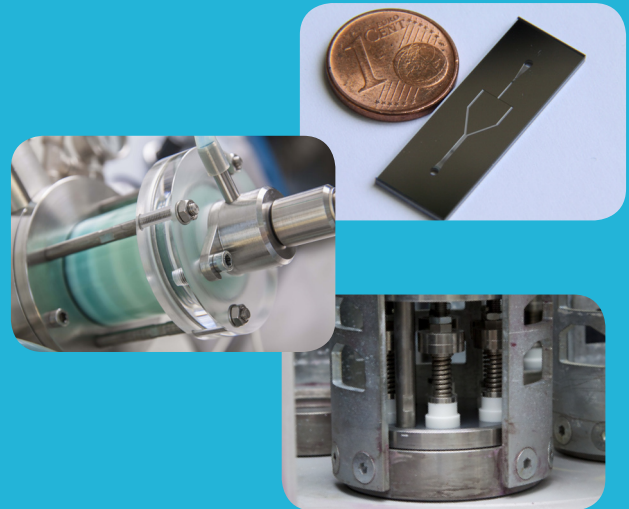
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# Nano Course on Particle design

## Milling, Dispersing and Formulation



21<sup>st</sup> and 22<sup>nd</sup> October 2015  
Braunschweig / Germany

In co-operation with:

GVT Forschungs-Gesellschaft Verfahrens-Technik e.V.

# Content

## Top-down techniques and product formulation

In the last years grinding and dispersing processes became more important in order to design particles. For example regarding pharmaceutical products the reduction of particle size is a strategy to enhance the bioavailability of poorly water-soluble drugs.

This course focuses on top-down techniques for particles via comminution, dispersing and emulsification processes. Further associated questions and challenges regarding the product formulation will be addressed. The targeted adjustment of product properties and different stabilization strategies by controlling particle-particle interactions will be presented.

Another focus is ultrafine milling in stirred media mills. Therefore, process parameters and strategies for lowering the product contamination by milling wear will be discussed.

### Course themes:

- Ultrafine wet milling of particles
- Design characteristics of mills for fine grinding processes
- Particle-particle interactions and stabilization
- Dispersing nanoparticles
- Microsystems for emulsification and dispersing processes
- Top-down applications for ceramic and pharmaceutical products

### With lectures by:

- Prof. Dr.-Ing. Arno Kwade
  - Prof. Dr. Georg Garnweitner
  - Dr.-Ing. Sandra Breitung-Faes
  - Dr.-Ing. Carsten Schilde
  - Dr. Jan Henrik Finke
- and others

## Further events

### Basic Course and Conference

#### Basic Course and Workshop:

#### Grinding and Dispersing with Stirred Media Mills

5<sup>th</sup> - 7<sup>th</sup> October 2015

Course and workshop give an overview about the physical phenomena of grinding and dispersing in stirred media mills and show how this knowledge can be used for the design and optimization of grinding and dispersing processes.

Language: German

Conference: SPhERe



#### Symposium on Pharmaceutical Engineering Research

19<sup>th</sup> - 20<sup>th</sup> October 2015

Hosted by the Center of Pharmaceutical Process Engineering (PVZ) of the Technische Universität Braunschweig the Conference will focus on the product design and processing of pharmaceutical products.

#### Further information:

##### Basic Course:

[www.ipat.tu-bs.de/veranstaltungen](http://www.ipat.tu-bs.de/veranstaltungen)

##### Conference:

[www.tu-braunschweig.de/forschung/zentren/pvz](http://www.tu-braunschweig.de/forschung/zentren/pvz)