

We are looking for an active, highly qualified

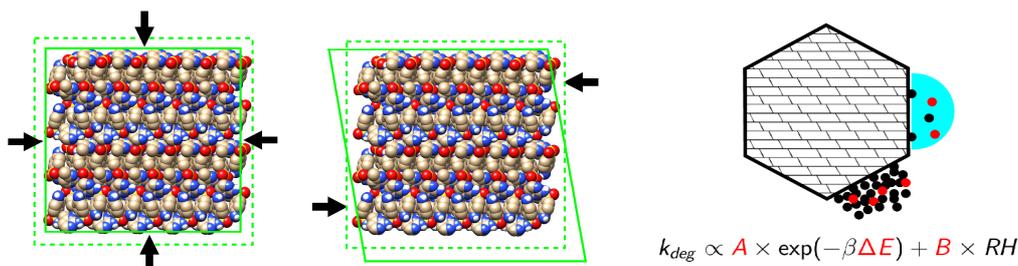
## PHD STUDENT (m/f)

### *Pharmaceutical Stability Science*

*Ref.Nr. SK 53*

with the ability to work independently and as a member of an international research team.

The PhD topic is in the context of an exciting project in the field of pharmaceutical stability. The student will conduct cutting edge research developing models/methods for understanding and prediction of the chemical stability of solid dosage forms. Experimental stress methods (e.g., reactive oxygen species in excipient impurities) as well as advanced simulation approaches will be applied to understand solid state degradation chemistry of drugs and formulations. The relationship between the drug's chemical stability and i) physico-chemical properties of crystalline drug material (solid-state disorder, mobility), ii) properties of excipients, and iii) the energy input from processing steps (milling, compaction) will be investigated. Based on these results semi-empirical kinetic models will be developed and validated.



#### REQUIREMENTS:

- Master degree in physical organic chemistry, pharmaceutical science, analytical chemistry, biophysics, or a comparable and related field.
- Motivation & interest in performing top-level and target-oriented research at the interface of basic science and industrial applications.
- Good grasp of the fundamentals of thermodynamics and reaction kinetics, solid state material science, and physical characterization techniques, preferably of organic solid materials.
- Scientific programming experience (Python, C, C++, or comparable languages) is a plus.
- Experience in mathematical modeling using MS excel, Origin or MATLAB is a plus.
- Knowledge of molecular modeling/simulation tools is a plus.
- Ability to work independently and as a member of an international research team.
- Good English proficiency, spoken and written.

#### WE OFFER:

- a multidisciplinary and dynamic research environment
- Options for career development at the academic and industrial level.
- a competitive salary (min. € 2.500,- gross/month).

We are looking forward to receiving your application by indicating the Ref. Nr., including a cover letter, your CV and publications and if available, details of references we can contact.

#### Research Center Pharmaceutical Engineering GmbH

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