

Vacancy Notice with the reference number 90/2018

The Otto-von-Guericke-Universität Magdeburg seeks to fill the following vacancy

Research Assistant (for pursuing a doctorate)

Faculty of Process and Systems Engineering, Institute of Process Engineering

Salary Scale: 13 TV-L	Date commencing: Soonest possible	Fixed term until 3 years	Contract status: 100 %
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Background:

At the Chair of Thermal Process Engineering (www.ovgu.de/ivt/tvt), the successful candidate will be responsible for the research work foreseen in the DFG project “Layer buildup and structure from drying deposited droplets” (“Aufbau und Struktur von Schichten aus aufgesetzten trocknenden Tropfen”). Goal of this project is to experimentally replicate in a droplet-by-droplet manner how layers are successively built from drying droplets that contain solid material. Contour and porosity will be measured incrementally during layer buildup by means of white light interferometry. We will go to the smallest droplet size that can be produced and gently deposited by micropipette technology. The investigation will embrace different fluids (salt solutions, nanosuspensions, microsuspensions) for drying conditions up to technical. In this way new insights are expected about the evolution of the structure of porous layers produced by simultaneous spraying and drying, and indirectly also about end-use properties that depend on coating structure. Mechanisms with an influence on structure formation and their interactions will be analyzed, aiming at regime maps and correlations. Experiments designed for same drying conditions will enable a comparison of the ex-situ layer formation measurements with coating in spray fluidized beds.

Requirements for the position:

- Diploma/Master Degree in Chemical Engineering or similar;
- Ability and motivation to independent and focused, cutting-edge research that will involve experiments in a micro-optical rig to be built and selected simulations (CFD, CFD-DEM)
- Fluency and ability to present/publish in English, German knowledge would be of advantage

For further information, please contact Prof. Tsotsas (evangelos.tsotsas@ovgu.de).

Applications from disabled persons will be given priority in the case of equal suitability, ability and professional expertise. The Otto von Guericke University aims to increase the proportion of women researchers within the university and specifically encourages women to apply.

Please send your complete application (cover letter, curriculum vitae, references) quoting reference number 90/2018 by April 27th, 2018 (date of receipt of application) to the address below:

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