



The Department of Chemistry, section Physical Biochemistry, Prof. Dr. Norbert A. Dencher, of the Technische Universität Darmstadt is inviting applications for a part-time

Doctoral Position

Structure and dynamics of bio-membranes

The research covers the application of neutron scattering techniques for the study of membrane structure and dynamics in relevance to energy conversion and diseases, e.g. Alzheimer's dementia.

The research topics may include:

- Neutron diffraction of biological membranes for structural determination of biomedical relevant peptides and pharmaceutical compounds
- Time-resolved neutron spectroscopy of protein dynamics in the picosecond time domain triggered by laser-excitation.
- Development of sample preparation techniques, such as native gel-electrophoresis, HPLC, stopped-flow sample environment.

Qualification of the applicant:

Highly motivated researcher with Diploma/Master in Chemistry or Physics and a strong background in Biochemistry and/of Biophysics.

Willingness to work in an international team; interest in applying large-scale research instruments like neutron spectrometers.

We offer:

Close supervision in an interdisciplinary team and stimulating ambience. The successful candidate will be employed at the Technische Universität Darmstadt and can acquire a Doctoral degree of the Department of Chemistry. The permanent place of work is the Helmholtz-Zentrum Berlin für Materialien und Energie, Institute Soft Matter and Functional Materials. Apart the research work for graduation, the candidate has to fulfil part-time duties to supervise and/or perform experiments for external guest neutron users.

The position ist initially limited to Dec. 31 2012 and an extension is planned. The salary level will be according to the Hessen union rate.

The Technische Universität Darmstadt intends to increase the number of female faculty members and encourages female candidates to apply. In case of equal qualifications severely disabled applicants will be given preference.

Part-time employment is generally possible.

The position is currently open. For further information please contact:

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Please refer to:

Seelert H, Dani DN, Dante S, Hauß T, Krause F, Schafer E, Frenzel M, Poetsch A, Rexroth S, Schwassmann HJ, Suhai T, Vonck J, Dencher NA: From protons to OXPHOS supercomplexes and Alzheimer's disease: structure-dynamics-function relationships of energy-transducing membranes. *Biochim Biophys Acta* 2009, 1787(6):657-671 and J. Pieper, A. Buchsteiner, N.A. Dencher, R.E. Lechner and T. Hauß, Light-induced modulation of protein dynamics during

the photocycle of bacteriorhodopsin. *Photochemistry and Photobiology*, 85, 590-597(2009)
<http://www.chemie.tu-darmstadt.de/dencher/> http://www.helmholtz-berlin.de/forschung/funkma/soft-matter/index_de.html

Please direct your application to: Dekanat des Fachbereichs Chemie, Petersenstr. 20, 64287 Darmstadt

Code. Nr. 437

Application deadline: 15-Jan-2011