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Job details

Job posted by Université de Liège (ULg)
(03/06/2016 15.43)

Postdoctoral position

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For a chemist, physicist or engineer with extensive experience in AFM.

A postdoctoral position is available at the University of Liege, Belgium, in the group of Prof. A.-S. Duwez. <http://www.nanochem.ulg.ac.be>

Appointment is nominally for one year with the possibility for renewal (up to 3 years), subject to mutual satisfaction.

The candidate must have obtained his/her PhD abroad and not have lived or worked in their main job in Belgium for more than 24 months in the past 3 years before the start of the fellowship.

The applicant must have obtained his/ her doctoral degree after 1 October 2010.

Description

For more than a decade, much of the exquisite and detailed information about how proteins, enzymes or biological machines operate has been gleaned from force measurements made on single molecules. In contrast, few single molecule force spectroscopy investigations have been successively realized on complex functional synthetic molecules and molecular machines. The rarity of such studies comes from the difficulty of developing proper tools and preparing appropriate molecules that can be interfaced with single molecule force spectroscopy techniques, especially when one wants to probe sub-molecular motions.

Here we propose to study macrorotaxanes (i.e. [2] rotaxanes - molecular machine prototypes made of a molecular ring threaded onto a molecular axle - where the thread is a polymer chain) at the single molecule level by AFM-based single molecule force spectroscopy. This technique will be used to

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Other job details

EURAXESS ID

34093291

Type of Contract

Temporary

Status

Full-time

Working Hours (hours per week or free text)

38

Company/Institute

Université de Liège (ULg)

Country

BELGIUM

Community Language

French

City

Liège

Postal Code

4000

Street

Place du 20-Août, 7 bat A1

EU Research Framework Programme

Is the job funded through the EU Research Framework Programme?

No

Company/Institute

Université de Liège (ULg)

Euraxess ULg
Academic
Place du 20-Août, 7 bat A1

investigate different features of the macrorotaxanes such as binding strength of the macrocycle on its initial station and long-range motion of the macrocycle along polymer threads of different nature and composition. The interaction strength between the macrocycle and the polymer thread will thus be varied, which will influence the force response and macrocycle mobility. This study will provide new insights into the ability of macrorotaxanes to act as single molecule actuators or chemical sequencers.

4000 - Liège
BELGIUM
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<http://www.ulg.ac.be>

QR-Code

[Get the QR-Code](#)

Nr of positions available : 1

Research Fields

Physics - Biophysics

Chemistry - Physical chemistry

Career Stage

Experienced researcher or 4-10 yrs (Post-Doc)

Research Profiles

Recognised Researcher (R2)

Comment/web site for additional job details

Extensive experience in AFM or related techniques is requested.

See our previous study on such a system for a better idea of the research:

<http://www.nature.com/nnano/journal/v6/n9/full/nna>

See also <http://www.nanochem.ulg.ac.be>

