

Stellenausschreibung

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Fristende 15. Februar 2018 – Verlängerung -



FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA

The Chair of Physical Chemistry II – Material- and Biophotonic of the Faculty of Chemistry and Earth Sciences invites applications for a

Doctoral Researcher Position (m/f; Ref.-No. 367/2017)

at the Institute of Physical Chemistry, Friedrich Schiller University Jena

Coherent Raman spectroscopic characterization of inflammatory bowel disease

The goal of this project is to develop and apply non-linear Raman spectroscopic approaches to search for novel biomolecular markers and noninvasive optical imaging tools for early stage recognition and discrimination of inflammatory bowels disease, i.e., Crohn's disease and colitis *in-vitro* and *in-vivo*. Particularly, the investigation of large tissue sections by multimodal nonlinear microscopy combining coherent anti-Stokes Raman scattering (CARS), two photon excited fluorescence (TPEF) and second harmonic generation (SHG), in combination with other advanced nonlinear imaging modalities, i.e., stimulated Raman scattering (SRS) and fluorescence lifetime imaging (FLIM) in combination with data processing will be the focus of the project. The highly interdisciplinary research project is realized in close cooperation within a multi- and interdisciplinary consortium with researchers from Chemistry and Medicine and offers unique prerequisites for transferring the findings from basic research into applications.

Requirements:

- A Master's degree (or equivalent) in physical chemistry, physics, optics/photonics or a related discipline; candidates expected to earn their degree before Jan 2018 are welcome to apply
- Solid knowledge of linear and non-linear laser (micro)spectroscopy and their application in life-sciences or biomedicine
- Excellent technical skills in laser spectroscopy to study biological specimens
- Readiness to collaborate with short timescale work in the field and accompany implementation
- Enthusiasm to play an active role in the interdisciplinary research team
- Highly motivated and creative personalities
- Excellent written and oral communications skills in English

We offer:

- A doctoral researcher position (TV-L E13 - salary agreement for public service employees, 65%)
- Opportunity for research on an innovative and worldwide unique research topic
- A communicative atmosphere within a scientific network providing top-level research facilities and training program
- The place of work is Jena, Germany, a young and lively university town with dynamic business activities, successful scientific centers of innovation, and a vibrant cultural scene around a university with a rich tradition

Severely disabled applicants with equal qualification and aptitude are given preferential consideration.

Applications should be written in English. The application deadline is February 15th, 2018.

For more information on the position, feel free to contact Prof. Dr. J. Popp (juergen.popp@uni-jena.de) or apl. Prof. Dr. Michael Schmitt (m.schmitt@uni-jena.de).

Applications are submitted via e-mail to: juergen.popp@uni-jena.de and m.schmitt@uni-jena.de