
The Laboratory for Emerging Nanometrology LENA is a new interdisciplinary research center of TU-Braunschweig, which is driven in close collaboration with Physikalisch-Technische Bundesanstalt PTB, the national metrology institute of Germany. The research activities focus on the development and application of nanometrology, the establishment of nano- and quantum-metrological standards, the development of analytic methods and the design of novel sensors and diagnostic tools.

The federal state of Lower Saxony supports the research alliance Braunschweig-Hannover to strengthen the collaborations between both universities within the research route QUANOMET (quantum- and nanometrology) for five years. For the project, qualified junior research group leaders (Post-docs) and PhD candidates are currently recruited to work on the research topics "NanoLight" and "NanoParticle".

The Institute of Condensed Matter Physics (IPKM) of the Technische Universität Braunschweig (TU Braunschweig) offers a position as

Junior Research Group Leader (TV-L 14)

Optical Metrology

Keyword: LENA-NL4-1

in the group „Optical Spectroscopy and Metrology“ (Prof. Dr. Peter Lemmens) as well as in the Laboratory for Emerging Nanometrology LENA.

Closing date for applications: 30th November 2016 (or until the position is filled)

Job descriptions: (1) Conducting and coordination of research work within the new research group „Optical Metrology“ together with Prof. Dr. T. Schneider and a PhD-student at the Institute of High Frequency Technique. The aim of the project is the development and evaluation of highly sensitive optical spectroscopies and sensors with highest spectroscopic specificity, sensitivity and spatial resolution; (2) Use of strong light-matter interaction to improve optical spectroscopies, e.g. by using electronic surface states, stimulated Brillouin scattering, and plasmonic states; (3) Development of optical or plasmonic scanning probes for spatially resolved spectroscopies; (4) Development of nanophotonic devices or systems, e.g. for environmental analytics; (5) Collaborations with departments of the PTB involved in chemical analytics and optical metrology; (6) Publication of results in international scientific journals and presentations at conferences; (6) Assistance with general tasks and teaching activities of the institute; (7) Development and writing of research proposals in the scope of optical metrology.

Job qualifications: The applicant should fulfill several of the following requirements: (1) High academic records, in particular excellent Master and PhD degrees and works in the field of physics or related fields; (2) In-depth knowledge of optical spectroscopy/Ramanscattering, scanning probe techniques, nano-optics, especially diffraction and light scattering on nanoscales; (3) Strong interest in multidisciplinary research; (4) Very high proficiency in both English and German as well as excellent scientific writing skills for research proposals and journal publications; (5) Committed, self-motivated, self-driven, and proactive team player with good communication and interpersonal skills; (6) Experience in an international environment, preferably abroad.

Our offers: Remuneration will be in line with the current German collective pay agreement TV-L E14 with up to 100% (Post-Doc) of employment limited for three years (extension possible).



LENA Laboratory
for Emerging
Nanometrology



The project QUANOMET and the environment of the research center LENA offer exciting possibilities for interdisciplinary cooperation and scientific prospects with possibilities to participate in further collaborative research projects. Additionally, we enable access to high-end nanoanalytic instrumentations for high-resolution imaging, spatially- and temporally resolved spectroscopy, epitaxy, surface manipulation and analytics.

TU Braunschweig is an equal opportunity employer committed to excellence through diversity. We explicitly encourage women to apply and preference will be given to disabled applicants with equivalent qualifications.

How to apply and contact: Please send a complete written application (in English or German) as a **single PDF file** consisting of a cover letter (statement of purpose), full CV, academic certificates and transcripts (Bachelor, Master, and PhD), two recommendation letters, and other supporting certificates until **30th November 2016** via e-mail stating the keyword **LENA-NL-4-1** on the e-mail title to:

Prof. Dr. Peter Lemmens / Axel Paschke

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