

The University of Koblenz is the youngest university in Germany – while also preserving a long-standing academic tradition. A multitude of transdisciplinary research projects spanning several institutions concentrated on a compact campus favourably affects our university routine. As the interdisciplinary university in the north of Rhineland-Palatinate with more than 9,400 students, we live the knowledge – transformation – innovation triad in our four profile areas “Education”, “Computer Science”, “Culture and its Mediation” as well as “Material and Environment”. We provide and conduct state-of-the-art teacher-training studies for all school types and maintain the transfer of our research results to civic society and regional businesses in a resilient and sustainable way. Join an aspiring university community and aid in advancing our further growth!



**We are seeking to appoint, as as soon as possible,  
at the Institute for Integrated Natural Sciences, Department of  
Physics, Materials Physics Research Group,  
a research associate (m/f/d)**

The full-time position (currently 39 hours/week) is initially limited to three years. It is based in the Material Physics research group within Faculty 3 – Mathematics/Natural Sciences. Employment is subject to the provisions of the German Academic Fixed-Term Contract Act (WissZeitVG). Scientific further qualification is strongly supported.

#### **Your Responsibilities:**

- Participation in research projects of the Material Physics group, with a focus on experimental polymer physics at the interface between biology and medicine.
- In particular, the use of fluorescence correlation spectroscopy (FCS):
  - to investigate the release kinetics of nanoparticulate drug carriers, focusing on natural substances for cancer therapy and their transport and release in the digestive tract and bloodstream.
  - to study the formation of biofilms on polymer surfaces, with emphasis on medical and biotechnological applications (e.g. implants, bioreactors), the degradation of biopolymers, and interactions between biofilms and nanoplastics.
- Conducting dynamic measurements using light scattering, as well as structural and spectroscopic analyses using atomic force microscopy (AFM), scanning electron microscopy (SEM), UV-VIS spectroscopy, and high-performance liquid chromatography (HPLC), as well as the application of dynamic mechanical methods (e.g. to assess biofilm stability).
- Laboratory responsibility, including maintenance of the experimental equipment in the Material Physics group; in particular, maintenance and further development of an in-house built fluorescence correlation spectrometer.
- Participation in securing third-party funding.
- Regular compilation and presentation of research results in reports and project meetings.
- Active participation in scientific exchange with colleagues and at conferences.

Contribution to teaching (experimental physics) in various physics degree programmes, with a teaching load of 8 contact hours per week.

Participation in examinations and supervision of theses.

#### **Your Qualifications:**

- A successfully completed university degree (excluding Bachelor's degree) in Physics or a related field from a university or equivalent institution.
- A completed PhD (Doctorate) in Physics or a related discipline.
- Very good theoretical and preferably practical knowledge in the field of optics and/or spectroscopy (preferably fluorescence spectroscopy, confocal microscopy, dynamic light scattering).
- Knowledge in at least one of the following areas: polymer science, biophysics, medical physics, or chemistry.
- Ability to work independently, strong communication and collaboration skills, teamwork abilities, and willingness to engage with new research topics.
- Technical aptitude and enthusiasm for experimental work.
- Good command of English (spoken and written) and strong organisational skills.
- Knowledge of LabVIEW, MATLAB, and/or Python is an advantage.
- Knowledge of the German language is an advantage.

#### **What we offer:**

- Integration into a research-active, well-networked environment with good research infrastructure.
- A stimulating and varied range of responsibilities within a collegial team that values open communication
- Remuneration according to pay group 13 TV-L.
- Usual social benefits in the general public sector according to TV-L (annual special payment, pension scheme (VBL)).
- Compatibility of family and work, flexible working hours
- Varied sports program with health-promoting offers.

- Extensive opportunities for further education and training.

The University of Koblenz welcomes applications from all age groups, regardless of gender identity, disability, ethnic or cultural background, religion, ideology or sexual orientation. We aim to increase the proportion of women and are therefore particularly interested in applications from women. In the event of under-representation, women with equivalent aptitude and qualifications will be given preferential consideration. Severely handicapped persons will be given preferential consideration if their professional and personal qualifications are otherwise equal.

For further information, please contact Prof. Dr. Silke Rathgeber (e-mail: [rathgeber@uni-koblenz.de](mailto:rathgeber@uni-koblenz.de), phone: 0261 287 2345).

Please, send your informative documents **by 04.01.2026**, quoting the **reference number 134/2025**, **exclusively by e-mail in one PDF file** to:

**[bewerbung@uni-koblenz.de](mailto:bewerbung@uni-koblenz.de)**.

Please, refrain from sending in application photos. We do not send confirmations of receipt. At the end of the procedure, the application documents will be destroyed in compliance with data protection regulations.

**[www.uni-koblenz.de/karriere](http://www.uni-koblenz.de/karriere)**