



With more than 6,300 employees in research, teaching and administration and its unique profile, TU Dortmund University shapes prospects for the future: The cooperation between engineering and natural sciences as well as social and cultural studies pro-motes both technological innovations and progress in knowledge and methodology. And it is not only the more than 32,500 students who benefit from that.

PhD Position in Experimental Condensed Matter Physics (m/w/d)

The Department of Physics at TU Dortmund University invites applications for a research and teaching assistant position as PhD student in experimental condensed matter physics with a focus on terahertz dynamics of quantum materials. The initial employment for three years can start at the earliest possible date. According to the public tariff regulations, the salary is based on the tarif group E13 TV-L. An extension of another year after the initial employment is possible. In the first year, the extent is 50%, in the second and third years 75%. Depending on your level of experience, direct employment at 75% is also possible.

Profile:

The advertised experimental PhD project is to investigate and understand non-equilibrium and equilibrium properties of quantum materials (e.g. quantum magnetic systems, superconductors, topological materials) driven by strong-field terahertz or optical pulses, in tunable external conditions such as low temperatures and high magnetic fields. This PhD project will be realized by setting up time-resolved terahertz or optical spectroscopy and applying the spectroscopic methods for the studies of dynamics in quantum materials. The experiments will be carried out mainly in house and also complementarily at the large scale user facilities. For recent research activities of the research group, one can refer to <https://ag-wang.physik.tu-dortmund.de/>

Requirements:

- a very good master or equivalent academic degree of physics, chemistry, optics, or engineer.
- an excellent bachelor degree can be conditionally admitted followed by successful completion of studies preparatory to the doctorate, in accord with the doctoral regulations of the department.
- practical scientific experience in optics or low temperature experiments is preferable but not mandatory.
- very good oral and written English skills are required.
- the German language is helpful but not mandatory.

Responsibilities:

The tasks of the PhD student include setting up the time-resolved ultrafast spectroscopy and low-temperature apparatus, performing the experiments, analysing and presenting the data, and disseminating the results (e.g. by conference presentations and peer-reviewed journal publications), and participation in tutoring Bachelor and Master students. In addition, the duties include teaching, which depends on the extent of employment (In the first year, the teaching duties is 2 SWS, in the second and third years, the teaching duties is 3 SWS).

We explicitly note that applications of all sexes are welcome. Applications from women are favored complying with legal regulation.

We also underline that applications of severely disabled persons are welcome.

Applications enclosing curriculum vitae, latest grades and degrees, a motivation letter (up to 2 pages), and contact details of two references quoting the reference number w32/26 by 27.08.2026 should be sent to:

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For further information, please do not hesitate to contact:
Prof. Dr. Zhe Wang (Email: zhe.wang@tu-dortmund.de)