The **Institute of Physics II at the Faculty of Mathematics and Natural Sciences at the University of Cologne** invites applications for

# Postdoc
# Research Associate (m/f)

with a weekly working time of 39,83 hours (100% position). The initial contract is limited for 3 years. The salary is based on the German E13 TV-L scale if terms and conditions under collective bargaining law are fulfilled. This scientific qualification position is located in the group of Prof. Ando.

**Tasks:**

The successful candidate will work relatively independently on the fabrication and evaluation of quantum bits (qubits) based on Majorana fermions, which emerge in hybrid systems consisting of a three-dimensional topological insulator and a conventional superconductor. The candidate must have extensive experiences in nano-fabrication using electron-beam lithography as well as in the ultra-low-noise measurements of superconducting nano-devices in the 10-mK-temperature range using dilution refrigerators. In particular, since such measurements require appropriate noise filtering, the candidate must have due knowledge to be able to install and modify the noise filters depending on the experimental conditions. In addition, since the candidate is expected to work relatively independently, he/she should have decent understanding of topological superconductivity, Majorana fermions, mesoscopic physics, and qubits, so that he/she can interpret the data and write scientific papers.

**Preocupations:**

- University degree (Master or equivalent) and PhD with the focus on solid state physics with very good grades
- Experience in the areas of the above mentioned tasks.

The University of Cologne is an equal opportunity, affirmative action and diversity supporting employer. Handicapped persons will be given preference to other equally qualified applicants. Applications from women are particularly welcome and will be preferred in case of equal qualification and capacity.

Please send applications including the usual documents **until 31.10.2016** to:

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University of Cologne