



Bundesanstalt für  
Materialforschung  
und -prüfung

## Job offer

The mission of the Federal Institute for Materials Research and Testing (BAM) is to deploy technology in a safe and environmentally friendly way. Our research, testing, approval and regulation activities are intended to promote safety in engineering and chemistry. As a higher federal authority and departmental research institution of the Federal Ministry of Economics and Energy (BMWi), with 1700 employees, we have national and international responsibilities, cooperate with universities and non-university research institutions and support young academics.

BAM's Division 5.2 "Experimental and Model Based Mechanical Behaviour of Materials" invites applications for a position as

### Post-Doctoral Researcher

Remuneration is effected according to salary scale 13 TVöD.  
Fixed-term contract until 31.08.2018

#### Job description:

The vacant position is part of an interdisciplinary research group investigating the performance of high temperature resistant ferritic-martensitic steels under cyclic operational conditions of flexible steam power plants in the framework of the German "energy turnaround". The aim of the work is a mechanism based modeling of the deformation behavior of these alloys under creep/fatigue and thermomechanical fatigue. In particular, the degradation of the microstructure under high temperature cyclic loading and its influence on the strength reduction of these alloys will be addressed.

#### Your profile:

You hold a degree in Materials Science/Engineering, Mechanical/Physical Engineering, Mechanics or Physics and you have completed your PhD studies on a corresponding topic with excellent results. A strong background in continuum mechanics, mechanics of solid materials and numerical methods in mechanics forms the basis of your work. Your expertise in programming enables you to implement your new modeling approaches in computer codes in order to simulate the behavior of the material under mechanical loading. Owing to your comprehensive knowledge of high temperature deformation mechanisms and of the microstructure of metals you can identify and formulate the ingredients required for mechanism based deformation models. In this context, complementary experiences in crystal plasticity would be appreciated. Your strong command of the English language (spoken and written) helps you to interact with the international research community and to publish your work.

For further information on BAM's division 5.2 and its activities please visit



<https://www.bam.de/Navigation/EN/About-us/Organisation/Organisation-Chart/President/Department-5/Division-52/division52.html>

In case of questions please contact Dr. Fedelich (phone +49 30 8104 3104) or Dr. Olbricht (phone +49 30 8104 3137).

BAM is an equal opportunities employer. Applications of women are particularly encouraged.

Registered severely disabled applicants will be given preferential consideration; they only need to meet minimum physical requirements.

Interested? Then we look forward to your application.

Applications via e-mail are preferred. Please, submit your application in English, quoting our reference number 14/17 – 5.2, at latest by 05-02-2017 to **bewerbung@bam.de**. All pertinent documents, including the motivation letter and CV, shall be submitted as one attached PDF file of max. 20 MB. Please provide certificates for all academic grades with the relevant marks displayed. Professional experiences and current occupation shall be verified by certificates of employment and testimonials, respectively.

We point out that the transmitted application documents are exclusively stored and handled for the purpose of the selection process. After completion of the selection procedure the documents will be deleted respecting relevant data protection acts.