



Starting
Grant



Horizon Europe
Guarantee

Postdoctoral Research Associate in Experimental Materials Engineering (Mechanical testing of metals, hydrogen embrittlement)

Supervisor: Prof [Emilio Martínez-Pañeda](#)

Oxford's [Mechanics of Materials Lab](#) is seeking a postdoctoral researcher to support the ERC Starting Grant project *ResistHfracture*. The project aims to explore innovative high-risk/high-return ideas to develop the first generation of hydrogen-resistant alloys. The postdoc will work under the supervision of Prof. Emilio Martinez-Paneda, conducting a myriad of laboratory experiments to gain new insight into hydrogen-material interactions. These range from advanced material characterization to mechanical (fracture, fatigue) experiments. Access to state-of-the-art facilities will be provided. Project findings could have a notable impact on the deployment of a green hydrogen infrastructure, as needed to achieve net-zero carbon ambitions. The student will be integrated into Oxford's Mechanics of Materials Lab and will have the opportunity to interact on a daily basis with other PhD students and postdoctoral researchers working on similar topics. The postdoc will be appointed as a staff member of Grade 7 (£39,424 - £47,779 per annum). This fixed-term post, initially offered for one year but with the possibility of extension.

Candidate Requirements

You must have obtained or be close to obtaining a PhD in engineering, materials science, physics, chemistry, or other closely related disciplines. Also, you should have experience in at least one of the following:

- Mechanical testing
- Environmentally assisted fracture testing
- Temperature-programmed hydrogen desorption
- Materials characterisation
- Hydrogen permeation
- Coupled deformation-diffusion modelling

Application Procedure

Candidates must submit an official application using the official HR link, which can be found [here](#). You will be required to upload a covering letter/supporting statement, including a brief statement of research interests (describing how past experience and future plans fit with the advertised position), CV and the details of two referees as part of your online application.

For additional details on the position, see the following link:

<https://eng.ox.ac.uk/jobs/job-detail?vacancyID=187458>

Informal enquiries should be addressed to emilio.martinez-paneda@eng.ox.ac.uk

Application deadline: September 10, 2026

Start date: Autumn 2026 – Spring 2027