



Postdoctoral Position in Thin Film Coatings and Surface Analysis for Magnetic Nuclear Fusion Devices

The University of Basel invites applications for a two-year postdoctoral research position fully funded in thin film coatings and surface analysis, with applications to optical diagnostic components for future nuclear fusion reactors such as ITER. The postdoctoral researcher will develop, characterise, and optimise **thin film coatings** for **first mirrors** used in nuclear fusion diagnostics. These critical components suffer from material deposition and degradation under reactor conditions.

The research will include:

- Deposition and characterisation of coatings
- Investigation of film properties under plasma exposure
- Surface analysis after plasma cleaning treatments
- Study of the interaction between thin films and magnetised plasmas

The project combines experimental work on thin film deposition techniques with advanced surface characterisation (e.g., XPS, SEM, AFM) and plasma interaction studies.

Your profile

We seek a highly motivated individual with a strong background in thin film science and surface analysis, who enjoys working in a small interdisciplinary team of scientists with different backgrounds. A PhD in materials science, physics, nanoscale science, or a related field is required.

Relevant experience includes:

- Thin film deposition
- Surface analysis techniques
- Plasma–surface interaction studies (desirable but not mandatory)

Excellent communication skills, the ability to work in a team, and a strong publication record are expected. The selected candidate will work closely with PhD candidates.

The position is currently available and has a planned duration of 2 years. The selected candidate will be employed at the University of Basel.

If you are interested, please submit your CV, a complete list of publications, a cover letter detailing research experience and motivation, reference letters and two academic referees' names and contact information. Please send your application by email to:

- Dr Paul Hiret, paul.hiret@unibas.ch

For further information, please contact

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Prof. Dr. Ernst Meyer, Tel. +41 (61) 267 37 24, ernst.meyer@unibas.ch, head of the Nanolino Group