RECRUTEMENT CNRS- DR8

FICHE DE POSTE

Laboratoire et service	Institut Pprime – Dpt. PMM / Equipe SIMAC From September 1, 2020 to August 31, 2021; (renewable for one year)
CONTACT	Monsieur COUPEAU - Responsable Scientifique christophe.coupeau@univ-poitiers.fr (+33) 5.49.49.66.52
INTITULE DU POSTE	Chercheur/Post-Doctorant - CDD 12 mois, renouvelable 12 mois
LOCALISATION DU POSTE	Laboratoire d'accueil Institut Pprime – UPR 3345 CNRS
SECTION METIER	9 – Ingénierie des matériaux et des structures
DIPLOMES	PhD
TITRE DE L'OFFRE	Scanning tunneling microscopist postdoctoral position

MISSION

The postdoctoral assignment will consist in operating the high-temperature ultra-high vacuum chamber that has been recently connected to the Nanoplast equipement (see nanoplast.pprime.fr). This unique experimental device makes it possible to mechanically stress samples by uniaxial compression over a temperature ranging from room temperature to 1500K. The features generated at the free surface (in particular the slip traces) are then characterized by scanning tunneling microscopy or atomic force microscopy.
The research activities are aimed to have a better understanding of the elementary plastic mechanisms taking place in complex materials and will be first focused on: (1) Quasi-single-crystals (for instance AlCuFe) in collaboration with the Institut Jean Lamour of Nancy, France (2) High entropy alloys (HEA), in collaboration with the Institute of Materials (ZGH) of the University of Bochum, Germany (3) Cu(111) substrates coated with a few Au(111) monolayers known to exhibit surface reconstructions.

ACTIVITES

COMPETENCES REQUISES

- Scanning Tunneling Microscopy (STM),
- Preparation and characterization of crystal surfaces by Auger Spectroscopy (AES) and Low Energy Electron Diffraction (LEED),
- Management and control of ultra-high vacuum (≈10-11 mbar) low pressure environment,
- Skills in material and surface sciences, knowledge of elasticity/plasticity will also be appreciated.

CONTEXTE LABORATOIRE

Institut Pprime is a research laboratory in the fields of Physics and Engineering Sciences. The research activities cover a broad spectrum of complementary fields and skills ranging from the physics of materials to fluid and materials mechanics, mechanical engineering and energetics.
Institut Pprime brings together approximately 360 researchers and 180 PhD students.

CONTRAINTES ET RISQUES

The laboratory is classified as a ZRR (Restrictive Regime Zone). As a result, all recruitment is subject to the prior authorisation of the Security and Defence Officer.

Informations complémentaires

Deadline for application : June 1, 2020.

Send your CV at christophe.coupeau@univ-poitiers.fr, a motivation letter as well.

Interview will be performed in June 2020 (date to be defined).

Gross salary: minimum of 2607 € /m, depending on experience

CNRS contract for 1 year, renewable for 1 year

Fait à Chasseneuil, le 13/02/2020

NOM : COUPEAU
Prénom : CHRISTOPHE

Signature :