Fiche de présentation
Atelier Thématique ECOLE DOCTORALE 3MPL

Nom de la Formation Thématique : Surface and Interface Science

Code : 3MPL128

Université dont relève la formation : Université Angers ☐ Université Maine ☒ Université Nantes ☐

UFR ou Ecole organisatrice : UFR Sciences

Localisation des enseignements : UFR Sciences - Le Mans

Capacité d'accueil (min-max) : 6-14

Responsable : Nom : KHATER Prénom : Antoine Courriel : antoine.khater@univ-lemans.fr

Nombre de crédits ECTS : 3

Volume horaire pour l'étudiant : 12h (2 jours)

Visioconférence possible : Oui ☐ Non ☒

Compétences pré-requises : Master in sciences (physics, chemistry, biology, physical chemistry, engineering, …)

Compétences à acquérir par l'étudiant dans cette formation
- Advanced knowledge of the concepts and elements specific to this domain, and their applications.
- Advanced knowledge of the contribution of this scientific domain to the techniques of nanotechnology.

Modalités de validation de ces compétences
Assiduité

Résumé de la formation
Characterisation and structure of ideal surfaces; surface morphology and defects; excitations (electronic, vibration, magnetic) at surfaces and interfaces, and their manipulation in nanotechnology; adsorption of atoms and molecules at surfaces, ad-molecular superstructures; ultrathin layers and nanostructures at surfaces, and their potential use in nanotechnology; material multilayers and interfaces.

Informations complémentaires
This training provides during two days an introduction to surface and interface science, and intends to give the participating members the basic knowhow on why surfaces and interfaces play a key role in determining the properties of nanostructures and associated devices. In a world which has become largely nano-technological, the knowhow to be acquired in this training constitutes an asset for understanding nanotechnology, its scientific culture and economic importance.