



**2 year POSTOC grant at  
the Institut des NanoSciences de Paris  
(CNRS – Sorbonne Université, Paris, France)**

Research project title:  
***Dynamics of Ion–Magnetized Surface interaction probed by  
X-ray and ion spectroscopy (DIMAS project)***

This project aims for basic research in Atomic Physics and Materials Science, bridging the gap to application for newly emerging two-dimensional magnets. On the one hand, we want to study the fundamental interaction between slow highly charged ions and magnetically ordered surfaces. On the other hand, we will apply knowledge acquired on ion–surface interaction by DIMAS to the investigation of magnetic properties of the very first atomic layers of bulk materials, thin films, and magnetic 2D materials. This new method should lead to an innovative way to quantify surface magnetism and possibly to the emergence of new materials.

The project is developed within a collaboration between the Clusters and Surfaces under Intense Excitation group of INSP and the Atomic and Plasma Physics group of TU Wien (Vienna, Austria)

**Applicant specific tasks:** Development multi-messenger detection based on a crystal Bragg spectrometer equipped with a new position- and time-sensitive Timepix3 detector and on an ion detector. Ultrahigh vacuum sample preparation (annealing, ion bombardment and Auger analyzer) and transfer. Participation and co-organization of experimental campaigns that will take place to our highly charged ion facility SIMPA.

**Applicant requirements:** PhD in experimental atomic physics or material science. Knowledges in one or several following topics is required: X-ray spectroscopy, ion beam production and preparation, ultra-high vacuum techniques, solid state physics, and surface science.

For more information, visit the project webpage:

<https://w3.insp.upmc.fr/en/research/ongoing-projects/anr-dimas/>

Applications will open in September 2022. To manifest your interest, please contact:

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2-year period starting between November 2022 and January 2023