MSCA-PF 2023 CALL: Mass spectrometry for the characterization of tyre wear particles - MS4T

Job description

We hereby invite top-class researchers of any nationality, interested in developing a collaborative application for an EU-funded Marie Sklodowska Curie Action Postdoctoral Fellowship (MSCA-PF-2023) project, to conduct research at VITO and its partners for a period of 1-2 years starting in 2024.

The competitive fellowship opportunities are 100% funded and include living and mobility allowances.

MSCA-PF 2023 information

The successful candidate will primarily work on the Marie Curie EU funded project, and she/he will be integrated in the VITO Research Group GOAL (Sustainable chemistry), by taking part in regular meetings and discussion groups. The researcher will be introduced in the team's regional and international networks.

Supervisors

Successful candidates will be supervised by Prof. Dr. Stefan Voorspoels, Dr. Milica Velimirovic and Dr. Kristof Tirez.
Prof. Dr. Stefan Voorspoels is team leader of the analytical team and project manager of several research projects in the field of chemical analysis and method development, human exposure, chemical and material characterization. He is also visiting professor "Analytical Chemistry" at the Faculty of Engineering and Architecture at Ghent University. He is specialized in organic analytical chemistry and chromatography.
Dr. Milica Velimirovic is environmental scientist working research agenda on an interdisciplinary approach to explain how the smallest fraction of plastic debris and other emerging environmental substances are behaving in the environment and how the choice of method/combination of methods depends on the research question being asked.
Dr. Kristof Tirez works as a researcher and project leader in the inorganic analytical department of Vito. His main experience and research interests are situated in the quantitative determination and speciation of elements in a variety of matrices. Besides, he acts as a science - policy bridge person and analytical expert for different Flemish agencies dealing with environmental regulatory monitoring.

Target start date

The EU informs the results on the MSCA-PF applications in February 2024. Successful candidates are expected to be available to start within the following two months and no later than summer 2024.

Fellowship description

Context and research challenge:

The characterisation of micro- and nanoscale particles is of great interest to a broad spectrum of industrial and environmental applications. The continuous technological improvements in analytical instruments have ignited new analytical ideas and pathways to assess and explore several key characteristics, such as concentration, composition, particle size, shape and other surface characteristics. The in-depth mass spectrometry and field flow fractionation knowledge present in the VITO laboratory, has been successfully used to explore new characterization approaches for different nanoscale metallic particles.
The goal of this project is to further extend the so-far developed nano characterisation platform and open new frontiers in the characterisation of tyre nano- and micro scale particles released during the abrasion of tyres. The achievement of these goals requires a multidisciplinary and complementary approach including analytical chemistry, instrumental methods, and nanometrology.
Approach:
Method development will be performed on existing instrumentation available at GOAL. This includes mass spectrometry-based instrumentation, i.e. single particle ICP-MS and DART–MS on the one hand and field flow fractionation-UV/VIS-multi angle light scattering on the other hand.
With this call, we invite researchers to submit their resumé (including track-record) and a one-page project description, that will be the basis for selecting candidates with whom we will collaborate for developing a competitive MSCA-PF proposal.

Deadline application to VITO
Interested candidates should submit their resume (incl. track record) and a one-page note describing the project for which a Marie Curie grant will be applied, as soon as possible and no later than Friday 14 April 2023 17h Brussels time.
Check the main eligibillity criteria: Marie Sklodowska-Curie | VITO.

Further information can be obtained from Milica Velimirovic by
email: milica.velimirovic@vito.be

Deadline MSCA-PF 2023
Wednesday 13 September 2023 17h Brussels time.

Job requirements

We invite applicants to propose a more detailed and focused research approach within the scope of this MSCA-PF Fellowship as a part of their application. We are primarily looking for experienced researchers who wish to use this period as an opportunity to further develop their research and skills, and to develop longer-term research collaborations with VITO and other institutions conducting research in the field.

The candidates as in principle must be eligible for a Marie Curie Postdoctoral Fellowship – please refer to the conditions to be set-out in the Horizon Europe MSCA-PF-2023 Work Programme, including taking into account the new MSCA Green Charter principles.

The following assets will be advantageous:

- An excellent track record in research, necessary for being able to develop a competitive Marie Curie Fellowship application;
- Already published relevant research work in prestigious scientific journals;
- An open and cooperation-oriented nature, but with strong abilities for independent research work;
- highly proficient in spoken and written English.

Offer

Initially, we offer assistance in developing competitive Marie Curie Individual Fellowship proposals.

Then, to successful applicants to the Marie Curie programme, we offer:

- An exciting opportunity at VITO, the independent Flemish research organisation driven by the major global challenges. Our goal? To accelerate the transition to a sustainable world;
- Participation in a dynamic professional research & innovation community;
- Flexible working conditions;
- An inclusive and friendly work environment;
- On-boarding assistance and other services.