CONSORZIO INTERUNIVERSITARIO PER LO SVILUPPO DEI SISTEMI A GRANDE INTERFASE

CSGI
c/o Dipartimento di Chimica "Ugo Schiff"
Università degli Studi di Firenze

Direttore Prof. Emiliano Fratini

CALL ID: CSGI-SA-2/2025

The *Center for Colloid and Surface Science* (*CSGI*) has an open position for a young researcher with expertise in the **continuous and discontinuous processing of green organic chemicals and smart composite materials by mechanochemical methods**.

The successful candidate will have the opportunity to join the international, multidisciplinary team working at the cutting edge of scientific research in **mechanochemistry** within the project entitled **Innovative Mechanochemical Processes to synthesize ACTIVE pharmaceutical ingredients (IMPACTIVE)** supported by the Horizon Europe programme through the EU HORIZON-HLTH-2021-IND-07 call.

Time period:
June 16st, 2025 – June 15st, 2026

Location:
CSGI, Salerno research unit – **Department of Industrial Engineering** of the University of Salerno, via Giovanni Paolo II, 132; 84084 Fisciano (SA) (Italy)

Job Requirements:
CSGI is looking for a highly motivated young researcher with a Master degree in **Chemical Engineering** and years of experience in the **continuous and discontinuous processing of green organic chemicals and smart composite materials using solid-state mechanochemistry** with special emphasis on the development of greener and safer continuous processing methods on a semi-pilot industrial scale. More specifically, the candidate must meet the following **mandatory** requirements:

- Master degree in **Chemical Engineering;**
- At last **three years** of experience in the use of continuous and discontinuous **mechanochemical methods** to process green organic chemicals and composite materials on the laboratory scale;
- **Direct experience** of **ball milling** as well as **single-screw** and **twin-screw extrusion** of soft and hard polymeric matrices, smart composite materials, green chemicals, multi-component powder mixtures in the presence and in the absence of plasticizers;
- **Direct experience** of **kinetic studies** taking advantage of different **analytical methods** and the development of related **mathematical modelling** through the **numerical solution** of equations;
- **Proven expertise** in the **absorption of complex chemicals** in green matrices and **functionalization of smart composite materials**;
- **Proven expertise** in common **separation** and **analytical methods** to detect, identify, characterize and quantify chemical compounds;
- **Proven expertise** in common **solid-state** analytical methods;

- **Track record** of publications in **international peer-reviewed scientific journals** in the field of mechanochemistry (**at least 20 publications in the last 5 years**);
- **Oral communications** in national and international **conferences/schools** focused on the continuous and discontinuous processing of green chemicals and smart composite materials by mechanochemical methods.

The recruited candidate will have to:

- **Organize and perform** planned research work, **manage** laboratory activities, **design and set-up** new experimental methodologies;
- **Analyse** experimental data, **write** suitable reports, **participate** in the **IMPACTIVE consortium meetings** online and in person;
- **Develop** sustainable mechanochemical routes to value-added active pharmaceutical ingredients and **investigate** the rates of the involved reactions.

Gross salary: up to € 20.400,00

For more information, please contact Prof. Giuliana Gorrasi (ggorrasi@unisa.it)

All applicants must send:

- This signed application letter;
- Academic CV (including a list of publications, a list of courses and a list of talks given), description of research interests and research agenda;
- Degree certificates;
- List of all titles, documents and publications that can be relevant for the selection;
- Contact details of -at least- two potential references
- Copy of a personal I.D. (printed on both sides);

All applications must be sent by email to recruitment@csgi.unifi.it **no later than May 15th, 2025 – 17:00 CET**.
Please report the CALL ID (CSGI-SA-2/2025) in the subject of the email.

A colloquium with the evaluating committee might be requested. The colloquium can take place either face-to-face or via telematic meeting.

The result of the selection will be posted on the CSGI official website http://www.csgi.unifi.it

Personal data will be collected and handled according to the GDPR- General Data Protection Regulation (EU) 2016/679.

Sesto F.no, 14th April 2025