

15 PhD Fellowships in Soft Matter

funded by EU research project CoCoGel: “Controlling Colloidal Gels for Novel Sustainable Materials”

<https://cocogel.iesl.forth.gr/>

CoCoGel is a Marie Skłodowska-Curie Industrial Doctoral Network (DN) (HORIZON-MSCA-2022-DN-01-01) aiming to provide integrated training for early career researchers, enabling them to achieve scientific excellence and set the foundations of their future careers.

CoCoGel is seeking 15 motivated PhD Candidates (DCs) in the field of Soft Condensed Matter. The Network involves leading experts in 6 academic and 6 industrial nodes. The network provides state-of-the-art expertise in experimental techniques, computer simulations, and industrial systems which will provide a collaborative and stimulating environment for the candidates. Applicants must hold a Master’s Degree in Physics/Chemistry/Chemical Engineering/Materials science or other relevant discipline. Each DC will be enrolled in the PhD program of one of the academic partners. A very competitive EU funding is offered for 36 months.

To qualify for the positions, you cannot have resided or carried out your main activity (work, studies, etc.) in the Host country for more than 12 months in the 36 months preceding the recruitment start date.

CoCoGel overarching goal

Transformative advances in product formulation are required to meet the demand for sustainability across a wide range of EU-priority industrial areas. **Colloidal gels – complex, out-of-equilibrium soft matter systems – are core components in many formulations, including building materials (e.g. cement), energy materials (e.g., batteries and fuel cells), consumer care and food products, and medicine.** Because of their complexity, current industrial practice in product formulation remains limited to trial and error. Recent advances in colloidal-gel physics strongly imply that the rational design of colloidal gel properties is within reach. This design is based on tuning gel microstructure via external stimuli, such as shear, ultrasound, and (magnetic/electric) fields, and the addition of non-Brownian inclusions.

The CoCoGel doctoral network will focus on these new routes to controlling colloidal gel microstructure, and will enable the translation from the current academic state of the art to industrial practice. We will **bring together academic and industrial partners** to realize the creation of new sustainable materials and production processes. The CoCoGel **industrial doctoral training network** will leverage and extend existing collaborations, to **train a new generation of researchers with both multi-disciplinary expertise in soft materials and practical experience engaging with industry.** These will drive further sustainable development over a wide range of European industries.

For details of each PhD project see: <https://cocogel.iesl.forth.gr/esr-projects>

Enquiries should be addressed to the CoCoGel Project Manager Dr. D. Ljumovic (cocogel@iesl.forth.gr) and to the relevant partner contact below:

- FORTH, Greece (coordinator, G. Petekidis, georgp@iesl.forth.gr)
- University of Granada, Spain (J. de Vicente, jvicente@ugr.es)
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