"DiStruc"

Directed Structure at the Meso-Scale

Experiments, Theory and Simulations on Colloidal Rods

Directed **Struc**ture at the Mesoscale (DiStruc) is a Marie Skłodowska-Curie Innovative Training Network, funded by Horizon 2020. DiStruc focuses on the study of colloidal liquid crystals and in particular on what happens when rod-like colloidal particles of a very diverse nature are used to form structures with a well-defined direction, i.e. directed structures. These dispersions have remarkable properties and are used in high-performance fibres and fast moving consumer goods, such as foods, home and personal care.

DiStruc is seeking candidates for **13 Early Stage Researcher (ESR) positions** in the field of *soft condensed matter*. Each ESR is expected to be enrolled on a **PhD training program**. In addition to their individual scientific projects, the ESRs will benefit from further continuing education, which includes secondments in academia and/or industry, a variety of training schools as well as active participation in workshops and conferences. For this purpose, DiStruc has formed a Network of leading experimentalists, theoreticians and computer simulators, spread across Europe over 5 academic and 3/4 industrial nodes. The network houses state-of-the-art expertise in experimental techniques, statistical mechanical theory, computer simulations, biochemistry and industrial systems. It will provide a collaborative and stimulating environment for the PhD students.

<u>Academia</u>

1. ESR1 position in the University of Oxford (UK) with Dirk Aarts (coordinator) and Roel Dullens: *Microfluidic directed structure of LC phases in confinement*
2. ESR4 position in Forschungszentrum Jülich (Germany) with Pavlik Lettinga: *Non-linear rheology of complex dispersions of rod-like particles*
3. ESR5 position in Forschungszentrum Jülich (Germany) with Marisol Ripoll: *Multiple Particle Collision Dynamics simulations on the complex flow non-ideal rod-like particles*
4. ESR6 position in Technische Universiteit Eindhoven (Netherlands) with Paul van der Schoot: *Directed structure and dynamics in mesophases*
5. ESR7 position in Technische Universiteit Eindhoven (Netherlands) with Paul van der Schoot: *Directed structure and dynamics in mesophases*
6. ESR8 position in CNRS (Bordeaux; France) with Eric Grelet: *Directing self-organization of composite dispersions: role of chirality in the ordered states*
7. ESR9 position in CNRS (Bordeaux; France) with Eric Grelet: *Dynamical study and rod self-diffusion close to liquid crystalline transitions*
8. ESR10 position in Foundation for Research and Technology (Crete; Greece) with George Petekidis: *Slow Dynamics, ageing and yielding of glasses and gels of rod-like particles*
9. ESR11 position in Foundation for Research and Technology (Crete; Greece) with Maria Vamvakaki: *Anisotropic particles: Synthesis, structure, directed dynamics, ageing phenomena, and applications in consumer goods*

Industry

1. ESR12 position in Teijin Aramid (Netherlands) with Bert Gebben and Erik Westerhof: *Molecular insight in the spinning process of LC fibres: focus on computer simulations*
2. ESR13 position in Unilever (Netherlands) with Krassimir Velikov: *Mechanical properties of novel systems used in consumer goods*
3. ESR14 position in Canoe/Adera (France) with Célia Mercader and Simon Jestin: *Wet spinning of nanocomposite fibers*
4. ESR15 position in Nestlé (Switzerland) with Deniz Gunez: *Percolation of rods in the presence of inclusions*

Excellent candidates with commitment are sought for this ambitious, exciting, high level, inter- and multidisciplinary project. Applicants should be in possession of, or expect to attain, a Master's in a relevant discipline (Chemistry, Physics, Materials science, Chemical engineering).

All positions are full time and fixed term for 3 years. DiStruc offers competitive salaries in accordance with the MSCA-ITN regulations. Actual salary will depend on employer deductions, personal circumstances and the exchange rate to be notified by the EC. We expect all ESRs to have started by October 2015, but we strongly encourage candidates to express their interest as soon as possible by contacting directly one of the researchers listed above.

For more information about the network, including details on how to apply, eligibility criteria and mobility requirements please visit http://distruc.eu.

DiStruc is an Equal Opportunities Employer.