



Marie Skłodowska-Curie fellowship JOIN OUR TEAM

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, **S**mart **M**aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in the respective fields of the ESR position*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
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Bilkent University



TALLINN UNIVERSITY OF
TECHNOLOGY



Scuola Superiore
Sant'Anna
di Studi Universitari e di Perfezionamento



Empa

Materials Science and Technology



Marie Skłodowska-Curie fellowship in the field of self healing soft robots

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Brubotics of the Vrije Universiteit Brussel is a multidisciplinary research center in human robot interaction for health and manufacturing and counting over 120 researchers. The group has a long history in safe and energy efficient soft actuators for applications in exoskeletons, prostheses, cobots and social robots. They are coordinating the SMART project and are worldwide recognized for the development of self healing soft robots.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 1) will be assigned:

Development and control of autonomous self-healing soft fruit grippers

Project description

The field of self-healing soft robots was initiated a few years ago. A healing ability can be integrated in soft robots by manufacturing their soft membranes out of synthetic self-healing polymers (Diels-Alder networks developed at the VUB). As such they can recover completely from macroscopic damage, including scratches, cuts and ruptures. The project aims to investigate and integrate several developed technologies such as additive manufacturing of self healing materials and inclusion of sensory networks with self-healing capability in a demonstrator for fruit handling industry. Dedicated control strategies will be developed to do force control and develop a fully autonomous damage detection and repair process. This PhD will be performed in close collaboration with Octinion, one of our industrial partners, focusing on the development of strawberry picking robots with an integrated autonomous healing function.

The aim of the project is to obtain:

- a detailed understanding of the manufacturing processes of self healing materials (multi-material additive manufacturing)
- to develop novel designs of soft fruit grippers with embedded sensing
- to develop control methods for motion/force control and healing process structural health monitoring with autonomous self-healing scheduling
- integrate in a soft robotic demonstrator



VRIJE
UNIVERSITEIT
BRUSSEL



Marie Skłodowska-Curie fellowship in the field of self healing soft robots

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- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in control of soft robots*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of FEM, matlab, ROS,...*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week*

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As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 1) will be assigned:

Development of a self-healing multimaterial soft bionic handling assistant.

Project description

The field of self-healing soft robots was initiated a few years ago. A healing ability can be integrated in soft robots by manufacturing their soft membranes out of synthetic self-healing polymers (Diels-Alder networks developed at the VUB). As such they can recover completely from macroscopic damage, including scratches, cuts and ruptures. The PhD will be performed in close collaboration with Festo, a worldwide leader in automation technologies. FESTO developed a bionic handling assistant of that works like a flexible gripper arm and is based on an elephant's trunk in terms of structure and overall function. Research will be performed on how to develop this product out of sensorized self-healing materials, possibly composite materials with tuned anisotropic properties (e.g. combining soft and rigid structures using multi-material 3D printer), so the robot manipulator can autonomously heal large damages resulting from interacting with the unknown environment and microcracks formed over time which can lead to fatigue failure phenomena. Dedicated control concepts using the embedded sensor network will be developed for safe interaction by force control and autonomous control of the healing process (both preventive from microcracks from fatigue as fatale damage from cuts).

The aim of the project is to obtain:

- a detailed understanding of the manufacturing processes of self healing materials (multi-material additive manufacturing)
- to develop novel designs of soft fruit grippers with embedded sensing
- to develop control methods for motion/force control and healing process structural health monitoring with autonomous self-healing scheduling
- integrate in a soft robotic demonstrator





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Marie Skłodowska-Curie fellowship in the field of self-healing soft robot sensing

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The UCAM will be hosted at the Bio-Inspired Robotics Laboratory (BIRL), Department of Engineering, University of Cambridge, UK (<http://birlab.org>). The main research interests of the BIRL lie at the intersection of robotics and biology, with the main goal of contributing to a deeper understanding of embodied intelligence, adaptivity and autonomy of animals through the investigation of dynamic compliant robots, and to engineer novel robotic applications, which are more adaptive, resilient, and energy efficient.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 3) will be assigned:

Dexterous sensorized self-healing soft robot manipulation

Project description

Dexterity of human hand manipulation of unstructured and unknown objects is largely dependent on the mechanical flexibility and high-resolution tactile sensing. With conventional robot manipulators that are made of rigid materials and limited sensor resolution, it is not possible to compete with human capabilities. One of the challenges along this line also lies in the fact that sensors can be increasingly more faulty when the resolution is enhanced. The main goal of this project is to develop an electrically conductive thermoplastic elastomers that are able to detect deformation of the materials. The material can be implemented into a soft robotic hand that is capable of obtaining tactile sensation while self-healing the sensing network by applying temperature based regulation to reconstruct the sensor network after unanticipated breaks.

The aim of the project is to obtain:

- a detailed understanding of the manufacturing processes of self-healing and electrically conductive materials (multi-material additive manufacturing)
- to develop novel designs of soft robotic grippers with embedded sensing
- to develop control methods for motion/force control and healing process structural health monitoring with autonomous self-healing scheduling
- integrate in a soft robotic demonstrator





Marie Skłodowska-Curie fellowship in the field of self-healing soft robot sensing

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- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in control of soft robots*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of FEM, matlab, ROS, robot experimentation.*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

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As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 4) will be assigned:

Soft sensing of low-cost manipulation robots in domestic environment

Project description

Soft body robots are not only more economical and robust compared to the conventional rigid robots, but also capable of more flexibly changing their body shapes and sizes to exhibit a large variety of motor capabilities that were not possible otherwise. This project aims to develop an electrically conductive thermoplastic elastomer that measures deformation while matching mechanical impedance for low-cost manipulation robots, interacting with unstructured domestic environment. Furthermore, by taking advantage of thermoplastic nature of the sensing material, we investigate how sensor network can be recovered through thermal regulation autonomously. We will then analyse the obtained data from the soft sensing devices to identify the wearers behaviours through signal processing.

The aim of the project is to obtain:

- a detailed understanding of the manufacturing processes of electrically conductive materials (multi-material additive manufacturing)
- to develop novel designs of soft robotic grippers with embedded sensing
- to develop control methods for motion/force control and healing process structural health monitoring with autonomous self-healing scheduling
- integrate in a soft robotic demonstrator





Marie Skłodowska-Curie fellowship in the field of soft robot sensing

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- ✓ *Profound knowledge in control of soft robots*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of FEM, matlab, ROS, robot experimentation.*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week*

Salary

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The Scuola Superiore Sant'Anna (SSSA) is a public University with a special status admitting excellent students at graduate, doctoral and post-doctoral level in the sectors of engineering, medicine, agriculture, economics, law and political science. The mission of SSSA is to perform excellent research through a number of highly qualified research institutes. The BioRobotics Institute of SSSA conducts theoretical and experimental research in biorobotics, a discipline characterized by a high degree of interdisciplinarity. For this reason, it has a strong tendency toward integrating heterogeneous bodies of knowledge, of both scientific and humanistic nature, in order to study the theoretical and practical problems associated with the development of advanced robotic systems. The peculiarity of the BioRobotics Institute is the capability to perform excellent research according to the standards of the scientific communities of robotics and biomedical engineering (i.e. publications) and at the same time fostering the application and the exploitation of the research results, to the benefit of the local area and of European citizens at large.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 5) will be assigned:

Variable stiffness in self-healing soft robots

Project description

A robot based on soft materials has the advantage of being intrinsically safe and potentially highly dexterous, but its effectiveness in interacting with the environment depends on its variable stiffness capabilities. Soft robots can be effective only if softness can be tuned when and where necessary. Variable stiffness and self-healing capabilities can be combined to obtain very resilient structures that can change stiffness to resist high stresses, but also able to recover their original mechanical properties if the stress exceeds their resistance and permanently deform them. The ESR will investigate soft systems that show self-healing and variable stiffness capability. The study will be based on the identification of possible principles and mechanisms that can be exploited both in terms of suitable materials (to be synthesized or modified) and structures.

The aim of the project is to obtain new structures and systems able to show variable stiffness and self-healing capabilities.





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- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of engineering*
- ✓ *Good knowledge in mechanics and basic chemistry*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training*
- ✓ *Advanced knowledge of a CAD software (Solid Works or Creo), Matlab and MS Office*
- ✓ *Previous experience with FEM software will be considered a plus*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week*
- ✓ *Possibility to perform a PhD at Scuola Superiore Sant'Anna*

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As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 6) will be assigned:

Control and behavior of self-healing soft robots

Project description

In soft robots, self-healing can be used as a restoring mechanism for damaged robot body parts allowing (1) to completely restore previous mechanical properties without altering the shape or (2) to re-configure and adapt the morphology accommodating physical or task constraints. Such capabilities have been also observed in nature. The ESR will investigate how the control of soft robots (or soft limbs) can take the self-healing capability into account, how the robot can intentionally use its self-healing capabilities in its behaviour and what cognitive capabilities are needed for using self-healing for adapting the morphology.

The aim of the project is to come out with innovative control solutions pushing the boundaries of robots abilities. Such strategies will be inspired by the capabilities of the biological systems that can control morphological changes of the body during their lifetime, by repairing damaged body parts or re-configuring them.





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- ✓ *Good knowledge in mechanics and basic chemistry*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training*
- ✓ *Advanced knowledge of machine learning methods*
- ✓ *Previous experience with robot control will be considered a plus*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

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Center for Biorobotics of Tallinn University of Technology (TalTech, Estonia) is a team of 20 young, skilled and well-motivated researchers and engineers. We love novel, unusual and risky ideas and new applications for our technology. We mainly work on underwater robot and sensing technologies with the ambition of taking robots to places where they have never been before for bringing back new information using novel ways of sensing the world.

We value teamwork, but also leave plenty of room for creative independence, allowing researchers to work the way they prefer. Our team is very international and multidisciplinary but we share similar interests and values.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 1) will be assigned:

Damage sensing underwater soft actuators

Project description

The development of soft actuators is a rising trend in robotics because of their promise of more robust, resilient and energy efficient designs. However, light weight and flexible structures are more susceptible to damage than conventional rigid actuators. Underwater environments, hostile or inaccessible for humans, are perfect applications areas for dependable robotics – robustness, fault tolerance and resilience are necessary to work autonomously in places where mistakes and failures are very expensive. Therefore, it makes sense to incorporate self-healing materials into flexible underwater robot designs. Therefore we looking for a well-motivated member of our team to work on radically new ideas for self-sensing flexible underwater actuators. More specifically, the aims are

- understanding the underlying physics of interaction with the fluid, design principles of soft actuators and their control methods
- proposing new design principles for damage sensing of soft actuators considering their mechanical design, sensing capabilities and control principles
- developing physical prototypes and testing them in laboratory conditions as well as possibly in the field conditions on underwater robots
- proposing, testing and validating new approaches for modelling and control of the actuators
- publishing the results in scientific journals and conferences



TALLINN UNIVERSITY OF
TECHNOLOGY



Marie Skłodowska-Curie fellowship in the field of self healing soft robots

Formal requirements:

- ✓ *The position is open for Early Stage Researchers (ESR), it means researchers who don't have a doctoral degree yet and are in the first four years of their research careers. For the detailed definition see [MSCA ITN guidelines](#).*
- ✓ *Completed university degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020)*
- ✓ *Compliance with the mobility rules laid out in the [MSCA ITN guidelines](#): At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization.*

Other requirements for the candidate:

- ✓ *Degree in natural science or engineering, most preferably in mechanical engineering, applied physics, control engineering or computer engineering.*
- ✓ *Strong theoretical background and practical skills in robotics, control engineering and/or physics.*
- ✓ *Good teamworking skills, independent thinking and creative problem solving.*

We provide

- ✓ *A friendly, supportive, internationally well-connected research team and state-of-the-art experimental facilities.*
- ✓ *Innovation-oriented academic environment with excellent industry ties*
- ✓ *Additional educational program in both Taltech and in the SMART project network involving training schools, workshops and summer schools*
- ✓ *Internationally competitive salary as per [MSCA ITN guidelines](#).*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>



TALLINN UNIVERSITY OF
TECHNOLOGY



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

The Physical Chemistry and Polymer Science (FYSC) research group from the Vrije Universiteit Brussel has extensive expertise in understanding the relationships between the properties of materials and their chemical structure and how the processing thereof affects the former. This knowledge is gained from and applied in both strategic research in close collaboration with a wide variety of industries, and fundamental research to gain an in-depth understanding of how the properties of advanced material systems can be improved for a.o. coatings, energy materials, intelligent material systems for robotics, green(er) chemistries and non-traditional cements.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 8) will be assigned:

Dynamic covalent polymer network properties by design for additive manufacturing of self-healing materials

Project description

Polymer network design (by means of building block and network architecture, chemistry, functionality and concentration) for the optimization of the viscoelastic and thermomechanical properties (i.e.: gel transition, viscosity and flow behaviour, cross-link density and moduli) will be vital for successful additive manufacturing of soft devices with stimuli-responsive materials and for their resulting performance. Through experimentation, modelling and simulations the material properties will be linked to the material's microstructure, architecture and chemistry to allow facile and fast predictions of a material's performance without the need for synthesis, reducing time consuming, costly steps in the material's development. Synthesized building blocks, network materials and printed objects will be characterized using thermal analysis, calorimetry and mechanical testing.

The aim of the project is to obtain:

- Relations between the chemical network structure and mechanical and viscoelastic behaviour
- Effect of advanced processing and manufacturing techniques on the material properties
- Microstructure formation and downsizing designed property anisotropy
- Study of the triggered behaviour and adaptation of the material properties in response
- Apply the stimuli-responsive material in soft robotic demonstrators for proof of concept



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ *Be early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment.*
- ✓ *Willingness to move countries for ESR placement and temporary secondments.*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering.*
- ✓ *Profound knowledge in polymer chemistry.*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of MS Office mathematical and communication tools or equivalent.*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40 h per week*
- ✓ *Possibility to perform a PhD in Engineering at the Vrije Universiteit Brussel*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website

<http://www.smartitn.eu/recruitment/>





Marie Skłodowska-Curie fellowship in the field of polymer chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

The Physical Chemistry and Polymer Science (FYSC) research group from the Vrije Universiteit Brussel has extensive expertise in understanding the relationships between the properties of materials and their chemical structure and how the processing thereof affects the former. This knowledge is gained from and applied in both strategic research in close collaboration with a wide variety of industries, and fundamental research to gain an in-depth understanding of how the properties of advanced material systems can be improved for a.o. coatings, energy materials, intelligent material systems for robotics, green(er) chemistries and non-traditional cements.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 9) will be assigned:

Sustainable alternative chemistries for dynamic covalent polymer networks towards green stimuli-responsive materials

Project description

For self-healing material concepts to find commercial application, the production of these materials and resulting products need to be economically and ecologically viable. Alternative chemistries need to be developed for a more sustainable production of stimuli-responsive materials, intended for self-healing applications. In a first stage, green synthesis routes are envisioned using renewable resources (e.g. bio-based i.o. petroleum feedstock) to produce the polymer network and the functional building blocks in a more sustainable fashion. In a second stage, biocompatibility will be explored, e.g. for wearable devices, opening up a wide range of new possible applications.

The aim of the project is to obtain:

- Sustainable synthesis procedures for large scale material synthesis
- Bio-derived alternative chemistries from renewable resources
- Biocompatibility of stimuli-responsive materials
- Development of a self-healing sensor for wearable electronics





Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ *Be early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment.*
- ✓ *Willingness to move countries for ESR placement and temporary secondments.*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering.*
- ✓ *Profound knowledge in polymer chemistry.*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of MS Office mathematical and communication tools or equivalent.*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40 h per week*
- ✓ *Possibility to perform a PhD in Engineering at the Vrije Universiteit Brussel*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>



VRIJE
UNIVERSITEIT
BRUSSEL



Marie Skłodowska-Curie fellowship in the field of plant/hydrogel soft robots

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

BUChem host is located at Bilkent University Chemistry Department and National Nanotechnology Research Center - one of the largest nano research centers in the region. The host is a chemistry/material science research group with top achievements in the field of soft-robotics, as well as in static electricity, and mechanochemistry. Implementation of chemical concepts such as self-regulation into the soft robots is the main aim in the group's soft robotic endeavors. The group presented so far, the very first examples of completely untethered self-regulated suntracking plant robots, which are also among the first examples of autonomous operation in the field of soft robotics.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 10) will be assigned:

Feedback Materials for Self-Regulation and Self-Healing on Plant Robots

Project description

Self-regulation is a form of self-healing, in which the system reverts back to initial state after the input is removed. Materials with internal feedback can be used to build a self-regulation property, however, this idea has only recently been used in soft robotics. The PhD work of ESR will be exploring this brand-new area of achieving this property in soft robots/robotic parts. The materials we will utilize are organic polymers and/or hydrogels, which are appropriate for the desired robotic applications.

The aim of the project is to obtain:

- To produce soft actuators using a set of organic polymers and/or hydrogels that will serve in the self-regulation of plant robots
- to develop novel designs of robot plants for optimization of self-regulation
- to assess and link the chemical structure of the actuator material to the self-regulation efficiency of the plant robots
- to assess the effects of environmental factors in the self-regulation process



Bilkent University



Marie Skłodowska-Curie fellowship in the field of self healing soft robots

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full- time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in organic/hydrogel materials and/or in soft robotics*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Experience of material characterization and synthesis*

We provide

- ✓ *Advanced research in a multi-disciplinary team and access to the region's largest nanotechnology facilities where one can learn and work by himself on the state-of-the art instruments*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week, monthly meal tickets*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>



Bilkent University



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

Empa is an interdisciplinary research and services institution for material sciences and technology development within the ETH Domain. Empa's research and development activities are oriented to meet the requirements of industry and the needs of our society, and link together applications-oriented research and the practical implementation of new ideas, science and industry, and science and society.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 11) will be assigned:

3D Hybrid printing of sensor integrated soft robotic structures

Project description

3D printing will be used to develop smart soft robot structures. Self-healing, and conventional elastomer materials will be filled with inorganic functional particles or fibers to achieve magnetorheological, shape memory or piezoelectric soft robot structures. Their properties can be tailored by applying an external stimulus like magnetic field or electrical field. Alternative well defined functional fibers network (e.g. grid structure) will be integrated during the 3D printing process. To be able to direct print the functional structures, the rheological properties have to be tailored by fillers and organic rheological additives (e.g. thickening agents). Good adhesion (bonding) between the printed layers can be achieved by rheological modified elastic materials. In a pre-study, 3D printed lightweight magnetorheological honeycomb structures haven be already successfully printed and a magnetorheological effect > 50% could be observed.

The aim of the project is to obtain:

- a detailed understanding of fiber based functional elastomer structures
- to synthesize ceramic magnetic and ferroelectric particles (ferrimagnetic and ferroelectric materials) by wet chemistry, flame synthesis and electrospinning
- to evaluate concepts of magneto- and ferroelectric active elastomer structures
- to introduce the developed materials and composites in soft robotics applications
- to develop soft sensors and actuators considering industrial application



Empa

Materials Science and Technology



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.
- ✓ Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment
- ✓ Willingness to move countries for ESR placement and temporary secondments
- ✓ Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of material science or engineering
- ✓ Profound knowledge in material science, ceramic magnetic material, synthesis of inorganic powders and nano fibers, direct printing or FDM printing technology
- ✓ Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.
- ✓ Advanced knowledge of FEM simulation, ORIGIN- and MS Office
- ✓ Personal initiative, reliable, responsibility, teamwork and communication skills

We provide

- ✓ Advanced research in a multi-disciplinary team
- ✓ Excellent contacts to industry as well as to national and international research organizations
- ✓ Additional educational program involving training schools, workshops and summer schools
- ✓ Flexible working hours, 42h per week
- ✓ Possibility to perform a PhD at Swiss or European University

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>





Marie Skłodowska-Curie fellowship in the field of polymer chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

Empa is an interdisciplinary research and services institution for material sciences and technology development within the ETH Domain. Empa's research and development activities are oriented to meet the requirements of industry and the needs of our society, and link together applications-oriented research and the practical implementation of new ideas, science and industry, and science and society.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 12) will be assigned:

Synthesis of self-healable elastomers for soft robotics

Project description

Novel materials that respond to an electric stimulus by producing motion are of high scientific and economical interest. The aim of the project is to synthesize dielectric elastomer materials with good dielectric and mechanical properties to be implemented as dielectric in electrically driven soft robots. The emphasis will be on the synthesis of specially designed polymers that can be processed in thin films by conventional printing and can be easily cross-linked to elastic materials which self-heal after damage. The dielectric, mechanical and electromechanical properties of the synthesized elastomers will be evaluated.



Empa

Materials Science and Technology



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (MSc.) (or obtaining a diploma before 15/10/2020) in the field of chemistry*
- ✓ *Profound knowledge in polymer chemistry*
- ✓ *Ability to work with air and water sensitive compounds*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of ORIGIN- and MS Office*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 42h per week*
- ✓ *Possibility to perform a PhD at ETH or EPFL*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>



Empa

Materials Science and Technology



Marie Skłodowska-Curie fellowship in the field of polymer chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

The Polymer Competence Center Leoben GmbH (PCCL) is the leading Austrian "Center of Excellence" for cooperative research in the area of polymer engineering and sciences. In close cooperation with its scientific partners at four universities 100 highly qualified employees are active in a wide field of applications for plastics ranging from automotive and aircraft, to packaging and photovoltaic industries. By linking scientific knowledge to the industrial need for innovation PCCL contributes to the competitiveness of its industrial partners who cooperate on the basis of medium- and long-term R&D-projects with the PCCL.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 13) will be assigned:

Design of smart elastomeric materials for soft robotics: on-demand self-healing and recycling

Project description

Smart polymers are gaining increased attention in the design of high performance products as the use of external triggers enables changes of material properties in a controlled fashion. The use of UV-light as a stimulus for smart polymers enables a temporal and spatial change of material properties in a predictable manner. Within this project, the focus will be set on self-healing and recycling of polymer networks by using UV triggered crosslinking and decrosslinking strategies. UV sensitive groups will be introduced into the backbone or side chain of elastomeric materials by employing chemical functionalization steps, which will be developed by the ESR. The successful functionalization will enable UV-triggered changes of selected material properties. "On-demand" UV-induced self-healing and recycling strategies will be finally validated by a quantitative investigation of a specific material property (e.g. storage modulus, solubility etc.).

The aim of the project is to obtain:

- a detailed understanding of polymer functionalization techniques
- to establish advanced, application-oriented characterization methods
- to evaluate concepts to verify chemical functionalization and describe self-healing/recycling capacity
- to introduce the developed materials in soft robotics applications
- to develop light-sensitive elastomeric materials considering industrial application





Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in polymer chemistry*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of ORIGIN- and MS Office*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week*
- ✓ *Possibility to perform a PhD at the Montanuniversitaet Leoben*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website

<http://www.smartitn.eu/recruitment/>





Marie Skłodowska-Curie fellowship in the field of polymer / organic chemistry

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

The Polymer Competence Center Leoben GmbH (PCCL) is the leading Austrian "Center of Excellence" for cooperative research in the area of polymer engineering and sciences. In close cooperation with its scientific partners at four universities 100 highly qualified employees are active in a wide field of applications for plastics ranging from automotive and aircraft, to packaging and photovoltaic industries. By linking scientific knowledge to the industrial need for innovation PCCL contributes to the competitiveness of its industrial partners who cooperate on the basis of medium- and long-term R&D-projects with the PCCL.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 14) will be assigned:

Design of functional polymer systems for 4-D printing techniques

Project description

4D printing of stimuli sensitive polymers has the potential to introduce additional functionalities to a wide variety of practical applications and further to fabricate customized functional devices. Within this project photopolymers are developed comprising stimuli sensitive groups that change the network structure, network density, (thermo-)mechanical properties but also surface properties in response to external trigger. Taking advantage of the high reactivity and excellent mechanical properties, 3D printed stimuli sensitive polymers will be based on photopolymerization of (methyl-) methacrylates as well as on "click" chemistry, suitable for DLP (digital light processing) based printing processes. Advancing from investigations of 2D photopolymers, complex 3D architectures with smart functionality (e.g. self-healing, shape memory, etc.) will be manufactured by employing additive manufacturing techniques. The smart functionality based on stimuli-triggered dynamic bond cleavage and formation mechanisms of the polymers will be investigated and the potential and limitations of the designed architectures for different transformations (e.g. gripping of objects) and applications in soft robotics will be evaluated.

The aim of the project is to obtain:

- Comprehensive knowledge of synthesis methods for stimuli sensitive monomers
- Expertise on additive manufacturing techniques for stimuli-triggered polymer networks
- Detailed understanding of advanced characterization methods for stimuli sensitive monomers and polymers (thermal and mechanical testing; optical, infrared, Raman and fluorescence spectroscopy; NMR spectroscopy)
- In-depth knowledge of using the developed material concepts for soft robotics





Marie Skłodowska-Curie fellowship in the field of polymer chemistry

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of natural science or engineering*
- ✓ *Profound knowledge in polymer chemistry*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Advanced knowledge of ORIGIN- and MS Office*
- ✓ *Personal initiative, reliable, responsibility, teamwork and communication skills*

We provide

- ✓ *Advanced research in a multi-disciplinary team*
- ✓ *Excellent contacts to industry as well as to national and international research organizations*
- ✓ *Additional educational program involving training schools, workshops and summer schools*
- ✓ *Flexible working hours, 40h per week*
- ✓ *Possibility to perform a PhD at the Montanuniversitaet Leoben*

Salary

The successful candidates will receive an attractive salary in accordance with the MSCA regulations for Early Stage Researchers (<http://ec.europa.eu/research/mariecurieactions/>) in the form of a scholarship. The exact salary will be confirmed upon appointment and is dependent on the country correction factor (to allow for the difference in cost of living in different EU Member States). The salary includes a living allowance, a mobility allowance and a family allowance (if already married). The guaranteed PhD funding is for 36 months.

Application

Please apply till **30/4/2020** according to the instructions on project website
<http://www.smartitn.eu/recruitment/>



Marie Skłodowska-Curie fellowship in the field of self healing soft robots

The **SMART** Innovative Training Network (ITN) is recruiting 15 motivated PhD students starting in March 2020. **SMART** is a joint venture between academia and industry, providing scientific and personal development of young researchers in the multidisciplinary fields of soft robotics and smart materials. The fellowships are funded as part of the Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks under the European Commission's H2020 programme. The successful candidates will be hosted at leading international universities, research centres and companies. They will contribute to the project "**S**oft, **S**elf-responsive, Smart **M**Aterials for **R**obo**T**s" as early stage researchers (ESRs) with the possibility to write a PhD thesis within the 3 years project duration.

SupraPolix is a young company based in Eindhoven, the Netherlands, that is developing innovative supramolecular polymeric materials for self-healing and biomedical applications. Our SupraB™-materials deliver unique processing and rheological benefits together with tunable material performance critically needed in the application of choice. SupraPolix is a partner in the SMART project and are worldwide recognized for the development of self-healing polymers using quadruple hydrogen bonding systems.

As of **March 1st** 2020 the following Marie Skłodowska Curie fellowship (ESR 15) will be assigned:

Design and synthesis of supramolecular self-healing polymers

Project description

Self-healing polymeric materials are beginning to reach the market in which the use of reversible non-covalent interactions is a recurring design principle. SupraPolix uses its proprietary H-bonding approach to take this design principle to its extreme. In this project, these supramolecular polymers will be combined with other self-healing approaches, such as Diels-Alder, in a very close collaboration with the Vrije Universiteit Brussel (VUB). The applicant will design and synthesize these new hybrid self-healing materials and study the properties to relate the achieved properties to the designed chemical structure. These hybrid materials will be processed into new, paramount, self-healing objects, which will ultimately cumulate in the generation of a robotic demonstrator.

The aim of the project is:

- To design, synthesize and characterize (chemically and rheologically) new hybrid polymeric self-healing systems
- to investigate and apply state-of-the-art processing methods such as additive manufacturing
- to integrate the new materials in a soft robotic demonstrator





Marie Skłodowska-Curie fellowship in the field of self healing soft robots

Your profile

- ✓ *Be Early-stage researchers (ESR). ESRs are those who are, at the time of recruitment by the host, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which formally entitles them to embark on a doctorate.*
- ✓ *Compliance with the mobility rules laid out in the MSCA ITN guidelines: At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years immediately prior to their recruitment*
- ✓ *Willingness to move countries for ESR placement and temporary secondments*
- ✓ *Completed degree (Mag., Dipl.-Ing. or MSc.) (or obtaining a diploma before 15/10/2020) in the field of Chemistry or similar.*
- ✓ *Profound knowledge in polymer synthesis and material characterization*
- ✓ *Fluent in English: Network fellows (ESRs) must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficiently high for them to derive the full benefit from the network training.*
- ✓ *Experience with polymer processing and/or 3D-printing are an asset*
- ✓ *Personal initiative, curiosity, reliable, responsibility, teamwork and communication skills*

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