



ESR2 – Job vacancy

Position description	
Reference	ESR2
Title	Crystallization of recycled polyolefin blends: from molecular characterization to processing
Recruiting Institution	University of Genoa (UNIGE)
Secondment Institution	Borealis
Expected start date (estimated)	November 1, 2020

For more information regarding the application rules at the host institution please visit: <https://unige.it/usg/it/dottorati-di-ricerca>

Job Offer description	
Objective	Evaluation of the applicability of conventional and advanced analytical methods based on polymer crystallizability to derive information on the molecular composition of post-consumer recycled polymer blends. Use the information derived by crystallization-based characterization techniques to understand the effect of processing variables on blend structuring. i) Assessment of the use of Successive Self-Nucleation and Annealing protocol to characterize recycled polymer blend, ii) Optimization of CRYSTAF, TREF and CFC method to adapt them to the characterization of recycled polymer blends, iii) Development of a Turbidity analysis method and application to recycled polymer blends, iv) Describe the crystallization of recycled polyolefin blends under processing conditions (fast cooling, shear flow).
Expected results	ESR should evaluate drawbacks and points of strength of the various crystallization-based techniques for molecular characterization in the specific recycled polymer blend; ESR should understand the effect of processing variables (cooling rate and strength of flow fields) on the crystallization process of recycled polymer blends.
Supervisors	Dr. Dario Cavallo (UNIGE); Dr. V. Barroso (Borealis).
Secondments (short term academic and industrial internships)	Borealis: Solution-based characterization of virgin or recycled polyolefin blends, use of cross-fractionation techniques,

Vacancy requirements	
Qualifications	Not having resided in Italy for more than 12 months in the 3 years immediately before the recruitment date, and not having carried

	<p>out their main activity (work, studies, etc.) in Austria during this period.</p> <p>Having a master degree or equivalent diploma, less than 4 years of research career at the recruitment date, and not having a doctoral degree.</p> <p>Solid background in polymer materials</p>
Languages	Excellent command of written and spoken English is a must.
Skills	Ability for research management, dissemination, communication with colleagues and supervisors, strong teamwork spirit, creativity, problem solving and attention to safety.
Experience	Research experience in the academic or industrial sector will be considered

Job details	
Salary	Salary and benefits will be following the rules of the ITN-MSCA, as foreseen in the Marie Skłodowska-Curie Actions Work Programme. Gross salary: (3270€ per month*CCC Italy 104,4%) 3413,88€/month + 600 € mobility allowance *CCC (Country Correction Coefficient)
Other benefits	Other benefits: Gross family allowance: 500€ per month - if applicable at the time of recruitment
Duration	36 months (18 months at UNIGE and 18 months at Borealis)
Start date	Estimated: 01/11/2020
Type of contract	Full time
Place of work	At University of Genoa: Genoa, Italy At Borealis: Linz, Austria.