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| 1. Basic informat | ion |
|-------------------|--|
| Title | 12 PhD positions (Early Stage Researchers) available within the MSCA-ITN Project 'NIPU - European Joint Doctorate'. An Innovative training network on SYNTHESIS, CHARACTERIZATION, STRUCTURE AND PROPERTIES OF NOVEL NON-ISOCYANATE POLYURETHANES |
| Offer Description | NIPU-EJD is formed by a consortium of 15 international research- performing institutions, from both the academic and non-academic sectors. This consortium is collaborating in the achievement of common scientific/technological objectives and the creation of an innovative doctoral training programme for early-stage researchers (ESRs). |
| | The global vision of NIPU-EJD is to support innovation and entrepreneurship on the development of more sustainable, less hazardous Polyurethane systems that are produced without isocyanates from bioand CO_2 -sourced monomers as high-performance alternatives to conventional Polyurethanes in very demanded and emerging applications, such as rigid and flexible foams, coatings, elastomers, adhesives, vitrimers and 3D-printing. |
| | NIPU-EJD will offer to 12 ESRs the opportunity of being awarded with joint or double doctoral degrees from two EU universities. The 7 participating Universities have excellent reputations in awarding PhDs in Chemical, Polymer and Material Science. |
| | All the ESRs will carry out individual research projects in the realm of NIPUs under a stimulating joint supervision. The main part of the PhD project will be carried out at the recruiting institution. An academic secondment (12 months) will be spent at the joint or double degree awarding host institution. In addition, NIPU-EJD offers intersectoral secondment opportunities of 3 months in renowned partners organizations to ensure that the ESRs benefit from apply-oriented scientific cooperation and complementary knowledge and skills from industrial prospective. |
| | Research Projects |
| | There are 12 PhD positions in the realm of non-isocyanate polyurethanes: |
| | POSITION ESR 1: Design and synthesis of novel (poly)amines derived from fatty acid derivatives and polyols |





Recruiting institution: Karlsruhe Institute of Technology (Germany)

Academic secondment: University of Bordeaux (France)

POSITION ESR 2: Synthesis of activated carbonate monomers

Recruiting institution: University of Montpellier (France)

Academic secondment: Karlsruhe Institute of Technology (Germany)

POSITION ESR 3: Design of NIPUs through transfer reactions and complementary reactions

Recruiting institution: University of Bordeaux (France)

Academic secondment: Karlsruhe Institute of Technology (Germany)

POSITION ESR 4: Synthesis of functional NIPU oligomers and applications for water- or solvent-free based coatings/adhesives

Recruiting institution: University of Liège (Belgium)

Academic secondment: Karlsruhe Institute of Technology (Germany)

POSITION ESR 5: New strategy to produce NIPU foams from reactive formulations

Recruiting institution: University of Bordeaux (France)

Academic secondment: University of Liège (Belgium)

POSITION ESR 6: NIPUs recycling and upcycling

Recruiting institution: University of Liège (Belgium)

Academic secondment: University of the Basque Country (Spain)

POSITION ESR 7: Synthesis and foaming of novel NIPUs by continuous reactive extrusion

Recruiting institution: University of Mons (Belgium)

Academic secondment: University of Montpellier (France)

POSITION ESR 8: Development of biocomposites on basis of NIPU

Recruiting institution: KTH Royal Institute of Technology (Sweden)

Academic secondment: University of Mons (Belgium)

POSITION ESR 9: Functionalized nanocellulose for waterborne NIPU

Recruiting institution: KTH Royal Institute of Technology (Sweden)

Academic secondment: University of Bordeaux (France)

POSITION ESR 10: Room temperature UV curable NIPUs for 3-D manufacturing using photobase generators

Recruiting institution: University of the Basque Country (Spain)

Academic secondment: University of Liège (Belgium)





| | POSITION ESR 11: Design of structural NIPU-based materials |
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| | Recruiting institution: University of Mons (Belgium) |
| | Academic secondment: University of the Basque Country (Spain) |
| | POSITION ESR 12: Design of isocyanate-free polyhydoxyurethane vitrimers for recycling applications |
| | Recruiting institution: University of the Basque Country (Spain) |
| | Academic secondment: University of Montpellier (France) |
| Researcher Profiles | First Stage Researcher (R1) PhD candidate or equivalent. Early stage researcher with less than 4 years FTE research experience. |
| | Recognised Researcher (R2) PhD holder or equivalent, not yet fully independent. Experienced Researcher with more than 4 years FTE research experience or has a doctoral degree. |
| | Established Researcher (R3) Established Researcher with a developed level of independence. Experienced Researcher with more than 4 years FTE research experience or has a doctoral degree. |
| | Leading Researcher (R4) Leading his/her research area or field. |
| 2. Research field | Please select main research field and sub research field (optionally) |
| □ Agricultural sciences | Please select |
| Anthropology | Please select |
| □ Architecture | Please select |
| □ Arts | Please select |
| Astronomy | Please select |
| □ Biological sciences | Please select |
| Chemistry | Organic chemistry |
| Communication sciences | Please select |
| | |
| Computer Science | Please select |
| Computer Science Criminology | Please select Other |
| · · · · · | |
| | Other |
| CriminologyCultural Studies | Other Please select |
| Criminology Cultural Studies Demography | Other Please select Other |

| Environmental science | Please select |
|-----------------------------|---------------|
| □ Ethics in health sciences | Other |





| Ethics in natural sciences | Other |
|--|---|
| Ethics in physical sciences | Other |
| Ethics in social sciences | Other |
| Geography | Please select |
| Geosciences | Please select |
| History | Please select |
| Information science | Please select |
| Juridical sciences | Please select |
| Language sciences | Please select |
| Literature | Please select |
| Technology | Please select |
| □ Religious sciences | Please select |
| | Please select |
| □ Psychological sciences | Please select |
| | Please select |
| □ Pharmacological sciences | Please select |
| □Mathematics | Please select |
| □ Philosophy | Please select |
| Medical sciences | Please select |
| Political sciences | Please select |
| Physics | Please select |
| 3. Hiring informat | ion and work location |
| Type of contract | Temporary |
| Jobs status | Full-time |
| Hours per week | Click here to enter text |
| Application deadline | 30/04/2021 |
| Envisaged starting date | From 01/07/2021 to 01/10/2021 Email : |
| How to apply | Website : http://www.nipu-ejd.eu/ |
| Department / address | Multiple locations, more information about work locations at http://www.nipu-ejd.eu/ |
| Contact person email | contact@nipu-ejd.eu |
| Phone | Click here to enter text |
| Number of positions available | 12 |
| Is the job funded through a EU Research Framework Programme ? H2020 / Marie Sklodowska-Curie Actions Reference Number : 955700 | |
| □ Science4Refugees (Find out more on <u>Science4Refugees</u>) | |
| □ Is the Job related to staff position within a <u>Research Infrastructure</u> ? | |





| 4. Requirements | |
|---------------------------------|--|
| Required education level | □ Bachelor Degree or equivalent |
| | Master Degree or equivalent PhD or equivalent |
| Main field education | Chemistry, Chemical Engineering & Materials |
| Skills / Qualifications | Ability for research management, dissemination, communication with |
| | colleagues and supervisors, strong teamwork spirit, creativity, problem solving and attention to safety. |
| Specific Requirements | We welcome applications from highly motivated candidates of any nationality completing the following requirements for participation in a MSCA-ITN: |
| | ESRs must not have resided or carried out their main activity (studies, etc.) in the country of the recruiting institution for more than 12 months in the 3 years immediately prior to their recruitment. Date of recruitment means the first day of the employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract/equivalent direct contract). ESRs shall at the date of recruitment by the host institution, be in the first four years of their research careers *(full time equivalent research experience) and have not been awarded a doctoral degree. * It is measured from the date when the researchers obtained the degree which would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the researcher is recruited, irrespective of whether or not a doctorate is or was ever envisaged. |
| Required Languages | French, level : Please select |
| | ⊠ English, level : Excellent |
| | German, level : Please select |
| | □ Other language, level : Please select |
| | □ Other language, level : Please select |
| | □ Other language, level : Please select |
| Required Research Experience | Research experience in the academic or industrial sector will be considered |
| Year of experience | |
| · · · benene | □ 4-10 |
| | More than 10 |
| 5. Additional info | |
| Benefits | 3-4 years full time employment contract, PhDs are paid with a living allowance (the monthly living allowance for researchers in MSCA-ITN actions multiplied by country- specific correction coefficient of the country in which the researcher is recruited), an additional mobility allowance of 600 €/month (depending on the country regulation, it may be taxed), and, for researchers who have a family, a Family |





| | Allowance of 500 €/ month. The family allowance is due if the researcher has a family at the time of recruitment. 'Family' means persons linked to the researcher by marriage (or a relationship with equivalent status to a marriage recognised by the legislation of the country where this relationship was formalised) or dependent children who are actually being maintained by the researcher. All amounts are subject to employers and employees deductions and taxes, and the exact (net) salaries are dependent on local tax regulations and on the country correction factor (to allow for the difference in cost of living in different EU Member States). |
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| | 2) Each ESR will be admitted as a doctoral student and |
| | registered at the host and joint university. |
| | 3) Acquisition of advanced research skills on sustainable |
| | chemistry development within a network combining an |
| | interdisciplinary, international and intersectoral |
| | environment. In particular, advanced research skills in organic chemistry, green chemistry, catalysis, polymer engineering, renewable products, polymer latexes, coatings, |
| | adhesives, foams and composites, each directly related to current challenges in NIPU technology. |
| | 4) Intersectoral secondment opportunities. Each ESR will spend |
| | around 10% of their time in one of the companies (3 months) |
| | in addition to the academic secondment (12 months) needed |
| | for the double or joint doctorate. The industrial secondments |
| | are fundamental to fully developing their individual research projects, to exchanging knowledge, to exploiting the network potential and to fostering the development of a team working culture. The ESRs will directly experience the challenges involved in the transfer of academic research to |
| | meeting industrial needs. |
| | 5) A well-structured training programme consisting of |
| | transferable skill courses, workshops, social events and |
| | networking with strong industry participation. |
| | 6) Training in laboratory conduct and best practices in research. 7) Participation in dissemination, exploitation and communication activities. |
| | 8) Broadening their professional network and enhancing their |
| | future research career prospects for their consolidation into |
| | competitive EU research institutions and world-class EU |
| | companies. They will have the scientific recognition, |
| | knowledge, and skills to sustain potentials collaboration and develop new research ideas for future research projects. |
| Eligibility criteria | The selection criteria will be: Professional/scientific experience (Wt: |
| | 40%), motivation and recommendation letters (Wt: 20%), interview (Wt: 40%). |
| Selection process | The selection process will be in accordance with the European Charter for |
| | Researchers (https://euraxess.ec.europa.eu/jobs/charter/european- |
| | charter) and the European Code of Conduct for recruitment of researchers |
| | (https://euraxess.ec.europa.eu/jobs/charter/code). |
| | Please find further details on the selection process at http://www.nipu- ejd.eu/ |





| Additional comments | APPLICATION PROCESS: Applications must be filed on-line through the NIPU-EJD website http://www.nipu-ejd.eu/ with the following supporting documents in a single PDF file: |
|---------------------|--|
| | a) a digital copy with all academic certificates and academic records in the respective official transcription in English b) a detailed CV (including publications, relevant skills and experience) and a motivation letter in English (including a statement of your research interests) c) 2 letters of recommendation (including contact details) |
| | Please find further details on the application process at http://www.nipu- ejd.eu/ |
| | GENDER ASPECTS All the NIPU partners support equal opportunities for all researchers regardless of their gender, upon the "European Charter for Researchers and the Code of Conduct" and "EU objectives for gender equality in research". |



