

1st Spark Fund Call

The Materials Lab Incubator

Background

The Materials Lab Incubator empowers founding teams in the area of advanced materials to innovate products with high value. The Materials Lab Incubator combines material sciences with modern methods of biotechnology and biocompatible as well as scalable production technologies to become the leading materials deep tech science incubator in Europe.

The Materials Lab Incubator is funded with a total of €11 million as part of the bioeconomy model region in the Rhenish mining area to generate future-oriented jobs in the area of advanced materials and valuable compounds and thereby contribute to an economically, ecologically and socially sustainable bioeconomy as part of a biotransformed climate-neutral circular economy.

The Materials Lab Incubator is thematically linked to the sister project, the Bio4MatPro competence center, and builds on the RWTH Excellence Start-Up Center (ESC) in order to recruit excellent start-up teams. MerLin start-up teams are early-on guided by VC investors, which participate in the project selection process, in order to direct and to speed up the development of innovative and high-value products. Spark Fund projects should envision value creation in at least one of the three Focus topic areas stated below and build on renewable (ideally locally available) resources with a potential to replace petrochemical-based products.

In detail, the themes of The Materials Lab comprise the following three Focus topic areas:

- From renewable resources to valuable materials and compounds,
- Enabling platform technologies leading to sustainable materials innovations and/or scalable/biocompatible production technologies
- Sustainable materials and coatings for the biological transformation of industries.

The 1st Materials Lab Spark Fund Call

The Spark Fund is intended for founding teams to incubate their envisioned product idea in the MerLIn lab located in Baesweiler, to develop and validate their respective business model, and prepare a pitch/reading deck to present the team, their technology and their product in front of an evaluation panel composed of investors and experts. In case of success, teams can apply for a subsequent WARP SPEED Fund with a mentoring investor or directly establish a start-up company

The **1st MerLIn Spark Fund Call** addresses **all three Focus topic areas**.

The scientific content of the three Focus topic areas is described in the ANNEX in chapter “I. Scientific requirements and content”.

In the ANNEX chapter II. “Quality and funding criteria for the 1st Spark Fund application” outlines the funding scope and selection criteria in more detail.

Applications should be submitted via the [online application form](#). Application templates and the “Guide for application management in the scope of the The Materials Lab Spark Fund (“Guideline”) including further information regarding the selection procedure (evaluation form) can be downloaded from the [website](#).

Duration of Spark fund: 8 months after receiving the approval/funding letter.

Employment: Through RWTH Aachen is a prerequisite.

Work place: S1-Labs of The Materials Lab Incubator will be provided in Baesweiler for all funded teams.

IP regulation: IP regulation complies with the RWTH Innovation guidelines for IP regulation. [The guidelines](#) can be found on the [RWTH Innovation website](#). If you have any further questions, please contact the head office (merlin@biotec.rwth-aachen.de).

Application deadline for the MerLIn 1st Spark Fund Call:

15.05.2025

Please submit complete electronic proposals at the [fs6 questionnaire](#), including all [appendices](#) (5-slider, financial plan)

ANNEX to the 1st MerLIn Spark Fund –Call

I. Scientific requirements and content

The **MerLIn 1st Spark Fund call** covers **all three Focus topic areas** of the Materials Lab Incubator. Examples of topics within the three Focus topic areas are listed below and successful applications have to at least one of the Focus topic areas.

Focus topic area 1: *From renewable resources to valuable compounds and materials*

The biological transformation of industries requires a shift from oil-based to renewable resources. Successful examples to synthesize from ideally local renewable resources, valuable molecules, polymers, materials, or material systems are within the core scope of The Materials Lab Incubator. Functional materials or materials systems can include but are not limited to, e.g., fibers, textiles, hydrogels, particles, or complex polymer systems. Programmable properties such as but not limited to programmed degradation or stimuli that provide novel/sustainable solutions or substitute harmful molecules/materials across all industries fit to the Focus topic area 1.

Important: Focus topic area 1 does not cover work that purely focusses on the production of biomass or bulk chemicals, the use of biomass for energy production, or include processes that employ pyrolysis.

Focus topic area 2: *Enabling platform technologies leading to sustainable materials innovations and/or scalable/biocompatible production technologies*

The design of products for recycling requires novel concepts, materials, and recycling processes. Enabling technology platforms such as (a) switchable glues that enable bonding and/or debonding on demand, (b) materials with biointegrated and programmable properties or other (c) key enabling technologies that are used for a product development are in the core of Focus topic area 2. The envisioned products of the founding teams should include a concept for a scalable production with a biotransformative impact. Novel scalable and biocompatible production technologies, especially for multi-layered products, which lead to new and improved recyclability, are also in the core of Focus topic area 2.

Important: Focus topic area 2 does not cover work on biobased composite materials, which cannot be recycled, as well as incremental improvements of established recycling or production processes.

Focus topic area 3: *Sustainable materials and coatings for the biological transformation across industries*

The transformation of industries toward sustainable materials and coatings that contribute to a climate-neutral circular economy are of high economic and societal interest. Therefore, high-value and sustainable products such as, but not limited to, functional textile-, lightweight construction-, paper-, chemical- or food industry, functionalized medical as well as machine manufacturing are funding themes in Focus topic area 3. Sustainability of products can also be achieved through biobased or sustainable functional coatings or finishes in order to improve existing materials or material systems. Improvements are, for instance, but not limited to, replacing toxic chemicals or enabling recyclability.

Important: Focus topic area 3 does not cover work on materials or composites that cannot be recycled. Research on pharmacological compounds or drugs is in contrast to devices not covered within Focus topic area 3.

II. Quality and funding criteria for the 1st Spark Fund application

2.1 Questionnaire and formal review

It is advised that the questions defined in the questionnaire be answered as precisely and completely as possible to check all formal criteria needed for funding eligibility. Therefore, the formal criteria that will be reviewed after submission will be:

- Configuration of the applying team and availability during the funding period
- Working permission in Germany during the funding period
- Founding of a legal entity before or during the funding period
- Exclusion of public double funding
- Involvement of the Focus topic areas in the scope of The Materials Lab Incubator
- Financial Planning (formal aspects)

2.2 5-Slider

The application deck needs to be submitted via our online application tool along with the financial plan. Your submitted deck must have a minimum of 5 slides (including a title slide that you should create) and a maximum of 10 slides in total. More slides are not necessarily better. Focus on quality and clarity over quantity, get straight to the point, and effectively communicate the essential aspects of your project within the limit. Avoid unnecessary jargon or overly lengthy explanations.

The 5-slider will be evaluated by the industrial committee by the following criteria:

1. Motivation & Executive Summary
 - Team's motivation & passion
 - Summarizing graphic
2. Business idea
 - Plausibility of idea origin
 - Novelty, differentiation & envisioned impact

- Preliminary work and state of the art
 - Problem definition & value proposition
 - Working plan to specify the research needs and the oriented work on translation
3. Team & Network
- Competences/roles in the founding team
 - Network/support awareness
 - GAP analysis & self-awareness
 - Overall team potential (impression)
4. Market & Competitors
- Awareness of potential market/need
 - Identification of initial target customer
 - Awareness of alternatives/competition
 - Product solution
 - Weaknesses & strengths vs. chances & risks
5. Overall Impression & Formal Aspects
- Overall clarity & professionalism
 - Conciseness & focus
 - Adherence to guidelines
 - Logical flow
 - Use of visuals

2.3 Quality criteria for further application process

Concerning funding eligibility, the following quality criteria are part of the founding team evaluation and should be checkmarked.:

- Compliance with at least one of the three Focus topic Areas
- Use of renewable resources (ideally locally available) in particular
- Potential for scalable production of biofunctionally integrated materials
- Potential for the realization of a marketable product or a Start-Up business in the Rhenish Mining Area
- Potential to generate jobs

In addition, briefly mention the envisioned impact of your founding idea.

Other criteria are not directly related to the region but are helpful for the success of a Spark Fund application:

- Expression of interest/participation of industrial partners
- Contribution to the preservation of livelihoods in a sustainable circular economy

For further information about the application process, please check the [application guidelines](#) and the [online application form](#).

III. Eligible applicants

Eligible applicants are founding teams of 1 or more team members that are not founded by another public entity. Perquisite for applicants is a valid working permit for Germany, since applicants of the Spark fund are employed through RWTH Aachen University for the period of funding. It is expected that the translation work is mainly performed by at least one team member in Aachen/Baesweiler and that all team members participate in the personalized team coaching.