

Call for proposals

Circularity of Critical Metals

Profile Area: Societal Transformations

Deadline: February 15, 2027 (2.00pm CET)

The energy transition and digitalisation are increasing the demand for critical metals. However, natural reserves are limited. When mining takes place in countries with low social and environmental standards, it results in high societal and ecological costs. The current processing of raw materials outside Europe creates geopolitical dependencies and carries the risk of supply shortages.

Recycling and circularity could help address this problem. Apart from steel, iron, copper, and aluminium, industrial metal recycling is still in its infancy. To change this in the long term, the foundation is funding innovative and scalable approaches to the recovery and cycling of critical metals.



Research Area: Engineering, Natural Sciences, including combination with Computer Science or Economics / Business



Funding Type: Research Projects



Target Group: Postdoc, Senior Researcher, Professor



Max.: 1,200,000 EUR



Max.: 3 years



Interdisciplinary collaborations with two to three principal investigators (PIs) and ties to industry or stakeholders. A total of about seven projects will be funded.

1 Objectives

The overarching funding initiative ‘Circularity with Recycled and Biogenic Resources’ aims at unresolved scientific questions and practical solutions for closed raw material-product cycles. This call for proposals focuses on critical raw materials¹. Among critical raw materials, rare earth elements and other critical metals play a significant role in the energy transition and digitalization – and thus in key societal transformations. Critical metals are needed, for example, in the production of wind turbines, batteries, and smartphones. The circular reuse of critical metals after the end-of-life of such high-tech products is still in its infancy and is the long-term goal of this call for proposals.

The recovery and recycling of critical metals face a wide range of challenges, such as heterogeneous input streams, hard-to-access and complex material composites, low quantities or concentrations, sufficient yield, high purity, consistent product quality, and finally, energy consumption and process costs. The “Circularity of Critical Metals” call for proposals supports technologies and concepts that explore circular reuse and recycling processes for rare earth elements and other critical metals and develop scalable solutions.

The focus of this call is on the circularity of end-of-life products and collected electronic waste. Possible research topics include innovative approaches to

- improving recovery rates
- separation of complex material composites, selective separation processes
- (electro-)chemical and biotechnological recovery
- scaling up proof-of-concepts and laboratory-scale pilots
- product design optimized for recycling.

The research topics listed are intended as examples and are not meant to exclude other open questions and novel approaches regarding the circularity of critical metals. Practical relevance is key, so scalability should be considered from the outset. Close collaboration with stakeholders from industry, associations, or startup ecosystems is explicitly encouraged. However, funding is limited exclusively to scientific research. Innovation funding and financial support for companies fall outside the scope.

Scope: Resource efficiency and material substitution are crucial factors for resilience and security of supply but are addressed here only in the context of circularity. Soil remediation through the extraction of metals – e.g., from tailings piles – is outside the scope of this call. Problems already solved on an industrial scale, such as the recycling of iron/steel, copper, and aluminium, are not considered. Projects targeting non-metallic critical raw materials are also excluded.

2 Scope of Funding

Funding is provided for collaborative projects by leading research groups at universities and non-university research institutions. The principal investigator (PI) must hold a position (which may be temporary) or a professorship in Germany; that is, they must not merely have guest status at the institute.

¹ The EU and the German Raw Materials Agency (DERA) have identified critical raw materials based on their economic importance, the lack of material alternatives, global scarcity, and the risk of supply shortages.

A local, Germany-wide, or international scientific collaboration is a prerequisite for funding. An eligible project consortium consists of two to three applicants (PI, co-PI). The foundation expects to fund seven collaborations, provided there are enough high-quality applications.

A scientific or engineering project part focused on the recycling and recovery of critical metals forms the basis of every proposal. If relevant for addressing the chosen scientific question, other fields – such as logistics management, digitalization, artificial intelligence, and business models – may be included. However, proposals that focus exclusively on these aspects will not be considered.

Ideally, the two to three applicants (PI, co-PI) should have complementary academic backgrounds. In the selection process, interdisciplinary collaborations are given clear preference over teams from the same field. Collaborations between the natural sciences and engineering, engineering and business studies, or involving all fields are particularly welcome (i.e., one principal investigator each from the natural sciences, engineering, and economical sciences).

Researchers who have earned a doctoral degree are eligible to serve as principal investigators (PI) or co-principal investigators (co-PI). Each person may submit only one application – either as a PI or as a co-PI. Postdocs, senior researchers, and professors who wish to apply must register personally on the funding portal. Applications may not be submitted on behalf of another person, such as using a differing name or email address.

The scope of the project should be planned so that it can realistically be completed within a three-year project duration. There are no provisions for extension requests. The maximum grant amount is 1.2 million EUR for direct project costs. If there are two applicants instead of three, a budget of less than 1 million EUR is expected.

The PI and co-PI from different institutions submit separate expenditure plans. If the proposal is approved, the respective institute is responsible for administering the funds. Funding may be requested for the following cost categories: research staff, other staff (e.g., technician), travel expenses, equipment (e.g., for prototypes), supplies (e.g., consumables), and publication costs (preferably Open Access). For institutions in Germany, doctoral candidates must be employed as full-time positions, as explained in section 4.3.2. For institutions abroad, the local standard rate of remuneration applies.

Additionally, funding may be requested for an overhead lump sum (10%) if eligible, for science communication, for equal opportunity and sustainability measures. Section 4 provides details on the respective provisions. These additional cost items must be explicitly requested in the expenditure plan; otherwise, they cannot be considered. They are not part of the maximum grant amount / direct project costs.

3 Application and Selection Procedure

Please read this information sheet carefully and familiarize yourself with the terms and conditions of the call for proposals. A webinar will be held in mid-January 2027 for anyone who has questions about the call. The date and time of the webinar will be announced shortly on the initiative's website (link at the end).

Use the provided templates when preparing your application. Submit your application, written in English, in digital form via the funding portal. Early registration and electronic invitation of co-applicants in the funding portal is recommended to avoid time pressure right before the deadline. All entries made in the portal and uploaded documents can be modified until submission.

Please do not forget to actively submit your application. The funding portal does not accept submissions after the specified deadline.

3.1 Overview

In the best case, the processing of the applications will take seven months. Interviews of the pre-selected application teams with the review panel are expected to be scheduled in July 2027.



3.2 Procedure

Submitted applications are first subject to an internal review by the foundation to check that all formal and call-specific criteria have been met. Applications that do not meet these criteria will not undergo external evaluation.

An international review committee evaluates all eligible proposals on a comparative basis. The committee is composed of scholars from the relevant fields. For each application, committee members who are experts in a related field provide a brief evaluation based on standardised criteria. Only applicants with promising, high-quality proposals are shortlisted and invited to present their projects at the review meeting and to address any open questions. The reviewers then prioritize the applications and make funding recommendations.

The evaluation is based on the following review criteria:

- Scientific quality and originality
- Practical Relevance for circular economy and recycling of critical metals
- Potential for scientific impact, scalability and transfer
- Interest and successful engagement of stakeholders outside of academia
- Qualifications of the research team, including the organization of the collaboration and the added value of an interdisciplinary approach.

Finally, the foundation will decide based on the reviewers' recommendations. Thereafter, applicants will be immediately informed of the final decision. A realistic project start could be between October 1, 2027 (at the earliest) and October 1, 2028 (at the latest).

4 Information on the Application

4.1 Our Funding Platform

Applications must be submitted via the Volkswagen Foundation's [funding platform](#). All templates (CV, expenditure plan, etc.) are available for download on the funding platform and on the website for the respective programme announcement. Please only use the templates available for download there when submitting your application.

In the case of international participation, the partner at the German research institution must create the application in the funding platform and be defined as PI. Otherwise, PI and co-PI are equal partners.

It is important that all applicants (PI, co-PIs) register early in the process. Co-applicant(s) can only be invited to work on an application if they have registered.

For further support please contact support@volkswagenstiftung.de.

4.2 Information on Enclosures

Unless otherwise specified below, please use only the template available for download at the funding platform or on the website for the respective programme announcement.

4.2.1 Project Description

Please observe the specifications in the template regarding the maximum number of pages as well as the other formal requirements.

The description of the research project must not exceed ten pages (Arial 10 pt), not including the data management section and the bibliography. The project description should include the following information:

- In a nutshell: key question, key result, key impact (3 sentences)
- Introduction with problem analysis, significance of the critical metal, status quo regarding circularity
- Justification, including the research question, objective, proposed solution, expected results, and comparison with competing approaches (advantages and disadvantages).
- Implementation with research program, methods, innovative aspects, risk, scaling
- Work plan and time schedule, including milestones and distribution of tasks in the team.
- Organisation of the collaboration, team composition, putting interdisciplinarity into practice, and external partnerships
- Data management
- Bibliography.

4.2.2 Expenditure Plan

Please use only the Excel template available for download at the funding platform and follow the instructions in the "Guide" worksheet. Other formats can neither be uploaded nor processed.

Please note: Each co-PI has to submit an individual expenditure plan. The template may be left blank for a co-PI, for example if two PIs at the same institute share a budget.

4.2.3 Curricula Vitae

Please submit the curricula vitae of all applicants in tabular, narrative form according to the respective template (four pages maximum each, Arial 10 pt).

4.2.4 Equal Opportunity Funds

To support equal opportunities and diversity in the research system, the Volkswagen Foundation offers the possibility to apply for equal opportunity funds. These funds – granted in addition to the maximum funding sum – support measures that serve to compensate for disadvantages at an individual level and/or aim to strengthen diversity in the education and research system in general. Equal Opportunity Funds can be applied for as lump sum of 1% of the total application amount (excluding overheads). Please indicate in the expenditure plan if you would like to apply for Equal Opportunity Funds; no further documents are required.

For further information please refer to our [website](#).

4.2.5 Sustainability Funds

The Volkswagen Foundation is committed to sustainability, and in particular resource-efficient research processes. It therefore provides funds to certify research laboratories involved in the research project via providers such as [LEAF](#) or [mygreenlab](#) as sustainable. These funds – granted in addition to the maximum funding sum – amount to a lump sum of up to 3,000 EUR per laboratory. Laboratories are eligible if at least one of the PI/co-PIs conduct the respective research there. To apply, please indicate the correct lump sum in the expenditure plan at the corresponding position.

4.2.6 Further Enclosures

Please include substantive letters of intent (LOIs) from stakeholders outside of academia with detailed information whether, for example, they will provide access to materials or facilities, contribute their practical perspective, have expressed interest in the results achieved or in scaling.

If a principal investigator (PI, co-PI) applies for his/her full salary, a statement of the institution confirming the willingness of his/her employment, infrastructure provided and administration of funds is required.

4.3 Further Information

4.3.1 Overheads

Except for Max Planck, Leibniz, Fraunhofer and Helmholtz institutes or centres, public or non-profit scientific institutions in Germany can apply for 10% overheads in addition to the direct project costs. The same applies to comparable scientific institutions abroad. For more information on overheads, see 'Information on Lump Sum for Overheads', which is provided at our [download section](#).

4.3.2 Positions for PhD-Candidates at German Institutions

To improve working conditions in academia, the foundation only funds full-time positions for PhD candidates at German institutions. Within the expenditure plan, doctoral positions must thus be calculated as 100% positions without exception.

In justified exceptional cases, it is possible to fill a doctoral candidate position with an employment share of less than 100% (for example, to better accommodate work-family balance). However, such reduced staffing can only be applied for after approval and therefore does not change the requirement to calculate doctoral candidate positions as 100% positions in the expenditure plan. Please note that in such a case, the personnel funds released by a part-time filling of a doctoral candidate position (i.e., the difference between the approved 100% position and the actual part-time position) cannot be used for other project expenses and will therefore no longer be available for the project.

4.3.3 Open Science

The foundation is committed to Open Science ([Open Science Policy](#)). Thus, we expect that results will be published open access and that data generated will be made available for scientific use following the FAIR principles via recognized repositories (see [NFDIs](#), [re3data](#), and [RI-sources](#)). If you intend to generate or reuse data, please provide the relevant information in the appropriate section of the project description template. Clearly state here if you do not intend to generate or reuse any data.

Note: The Volkswagen Foundation offers the module '[Data Reuse - Additional funding for the preparation of research data](#)' for funded projects to prepare research data. You can apply for the module during or up to six months after the project duration.

4.3.4 Support for Science Communication

The Foundation encourages researchers to engage in science communication as part of their projects funded by the Foundation. As a rule, the budget for science communication activities may not exceed 5% of the total direct project costs requested (excluding overhead costs, e.g. for a total of 500,000 EUR = max. 25,000 EUR).

4.3.5 Animal Studies

If animal studies are planned, please explain their role within the overall methodology, which standards have been followed in the planning of the experiment (e.g. PREPARE/ARRIVE guidelines), which refinement measures are planned and whether pre-registration of the experiment is intended. Please describe the extent to which the 3R principle (replace – reduce – refine) is applied in a particularly innovative way and state the budget reserved for this purpose. The foundation also encourages applicants to use non-animal laboratory materials (e.g. recombinant antibodies, non-animal sera and gels) in their experiments. The costs of these materials can be included in the expenditure plan under the category "Other research funds".

4.3.6 General Information

The foundation cannot be held responsible for any obligations entered into prior to the receipt of grant approval.

Applications that have been or are intended to be submitted in this or a similar form to another funding organization will not be processed by the foundation. The foundation can only award funds to scientific institutions.

The foundation reserves the right not to process applications that do not meet the formal requirements or are incomplete.

5 Contact

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6 Further Information

- [Website VolkswagenStiftung](#)
- [Website programme announcement](#)
- [FAQ and Service \(including download section\)](#)
- [Influence of Generative AI on Research and the Volkswagen Foundation's Funding Activities](#)
- [Recommendations for Sustainable Travel](#)
- [Applying for Science Communication Funding](#)