

Additional Information for Researchers

NSF-DFG Lead Agency Activity on Chemistry and Transport in Confined Spaces (NSF-DFG Confine)

NSF-DFG 2022

Full call text including specific instructions for applicants from Germany

Recognising the importance of international collaborations in promoting scientific discoveries, the National Science Foundation (NSF) and the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) have signed a Memorandum of Understanding (MoU) on research cooperation. The MoU provides an overarching framework to enhance opportunities for collaborative activities between U.S. and German research communities and sets out the principles by which jointly-supported activities might be developed. To facilitate the support of collaborative work between U.S. researchers and their German counterparts under this MoU, the Division of Chemistry (CHE) and the Division of Chemical, Bioengineering, Environmental and Transport Systems (CBET) at the NSF and the Divisions of Physics and Chemistry (PC) and Engineering Sciences (ING 1) at the DFG are pleased to announce a Lead Agency Activity in the areas of chemistry and transport in confined spaces.

Chemical and physical processes that operate under spatial confinement often exhibit complex, interesting, and poorly understood variations in chemical properties and physical dynamics. Many such systems are intrinsically nonlinear and dynamic, often involving simultaneous reaction, diffusion and convection and/or chemical processes far from equilibrium. Improved experimental and computational tools are needed to predict how variations over the confinement length scale affect the overall dynamics and efficiency of large-scale processes. Much of the needed research requires synergistic efforts among those versed in the applications and experts in measurement techniques, modelling methods, and data analysis.

The goal of this Lead Agency Activity is to reduce current barriers to working internationally by allowing US and German researchers to submit a single collaborative proposal that will undergo a single review process while funding organisations maintain budgetary control over their awards. Proposals eligible to apply for this Lead Agency Activity will need to have a research focus relevant to the topic areas identified above. Proposals of German applicants are accepted in the subject areas 321–327 and 403, 404 (please refer to [DFG's subject classification](#)). US researchers should review the CHE and CBET programme descriptions for research supported through these NSF divisions/organisations. Proposals are expected to adhere to typical proposal budgets and durations for the relevant programmes from which funding is sought.

Proposals will be reviewed by either NSF or DFG as the lead agency, depending on where the largest proportion of research lies. Proposals must provide a clear rationale for the need for a US-German collaboration, including the unique expertise and synergy that the collaborating groups will bring to the project.

Expression of Interest (EOI) Submission

Prior to submission, prospective principal investigators (PI) are strongly encouraged to contact appropriate programme officers to discuss the suitability of their proposed research. The prospective PI must discuss within their research team where they feel the largest proportion of research lies and agree on a lead agency (either NSF or DFG). For proposers to be invited to submit a formal proposal, an Expression of Interest (EOI) is required and has to be submitted to the prospective lead agency no later than **29 November 2021, 5pm local time.**

The EOI should contain:

- An indication of the target programme or subject area (321–327 and 403, 404) for the proposed topic in the participating divisions at both NSF and DFG. Please note that the PI-indicated target programme may not be the only programme that will consider the submitted EOI. The submitted EOI may be shared with other interested programmes within NSF and DFG;
- Brief description of the proposed research, including a breakdown of the German/US contributions to the research. The document submitted should not exceed 5000 characters, including spaces;
- The names and affiliations of the researchers; and
- Bottom line estimates of total funding to be requested from NSF (including indirect costs) and from DFG. A detailed budget is not required at this time.

If NSF is the lead agency, PI should email the Expression of Interest (EOI) to NSFDGF@nsf.gov.

If DFG is the lead agency, PI should email the Expression of Interest (EOI) in a password-protected ZIP file to NSF-DFG-Chemistry@dfg.de. Please submit the corresponding password in a separate email.

The lead agency will share all EOI received with the non-lead agency in order for both funding organisations to validate whether the proposed research is within the focus relevant to the topic areas of this solicitation and if the institutions meet the funding organisation's eligibility requirements (following the regulations for the participating NSF and DFG programmes for funding).

Upon confirmation from both funding organisations that the collaborative research proposal is appropriate for the NSF-DFG Confine solicitation, the lead agency will then contact the researchers to inform them that they may submit a full research proposal to the lead agency. In some cases, an alteration of the NSF and/or the DFG budget request, their lead agency role, and/or the target programme may be required in the full proposal submission.

Full Proposal Submission

For US researchers or for proposals submitted to NSF as the Lead Agency, please consult the NSF funding website <https://www.nsf.gov/pubs/2021/nsf21626/nsf21626.htm> for additional information.

If NSF is the Lead Agency, in parallel to submitting the proposal to NSF, the German Cooperation Partner is required to submit a copy of the proposal to DFG via elan to input the necessary information and forms into the system. A detailed breakdown of funding requested from DFG and the project data form (sent to applicants invited for submission) must be added as a Supplementary Documents. In elan the US investigator should be appointed as Cooperation Partner.

If DFG is the lead agency, please follow the instructions below:

- For their joint proposals, PI and co- PI must comply with the proposal preparation requirements outlined in the Guidelines for the Research Grants Programme (DFG form 50.01). Proposals within this call must be prepared according to the Proposal Preparation Instructions (DFG form 54.01) and the template for Project Description (DFG form 53.01). Please note that for joint proposals, the list of up to ten project-related publications may include papers authored by the German applicant(s) and papers authored by the US applicant(s).

- Full proposals must be submitted via elan, the DFG's electronic proposal processing system. After logging in, please use the link "Proposal for a Research Grant" in the Proposal Forms column (Proposal Submission > New Project > Individual Grants Programme > Proposal for a Research Grant). Please select "NSF-DFG Confine" from the list of calls. Applicants to be funded by the DFG are requested to fulfil the eligibility requirements of DFG Research Grants. This includes the duty to cooperate ("Kooperationspflicht", DFG form 55.01) within Germany for members of non-university institutions with permanent positions.
- The title of the proposal should begin with "NSF-DFG CONFINE:".
- The proposal must include a description of the full proposed research programme and research team, and the total resources for the joint project (that is, the funds requested for both the US and German side). A separate document, the Justification of Resources, should include a clear summary and justification of the funds requested from NSF, as well as a detailed breakdown of funding requested from NSF. The latter document will be shared with NSF to verify the allowability of funds requested.
- The US investigators should be included as Cooperation Partners. A Biographical Sketch for each of these individuals should be provided with a format that conforms to the DFG guidelines for publication lists (DFG form 1.91).
- Letter(s) of Collaboration from participating US organisation(s) should be included.
- If you are using the elan system for the first time, please note that you need to register yourself and your institutional addresses before you are able to submit a proposal. Also, if you are planning to move to a different institution, you need to register the new institutional address beforehand. Please make sure that all applicants for your project (if there is more than one) start their registration no later than 21 January 2022. The registration requests are handled manually by the DFG staff.
- US Investigators: Once a German PI is notified of a pending award by DFG, the non-lead (U.S.) collaborator(s) associated with the project must submit a copy of the proposal to the proper programme in NSF so that NSF has complete documentation of the overall proposed research project. The non-lead (U.S.) collaborator will receive submission instructions from NSF at that time.

The full proposal deadline is 7 March 2022, 5pm local time.

Please note the DFG's data protection notice on research funding, which can be viewed and downloaded at www.dfg.de/privacy_policy. If necessary, please also forward this information to those individuals whose data will be processed by the DFG due to their involvement in your project.