

Alchemy Pump Priming Call: Distributed Peer Review

What is distributed peer review?

A distributed peer review process is one whereby the applicants to a funding call also make up the reviewer pool within the same funding call and evaluate a sub-section of the proposals. For the Alchemy Pump Priming Funding call, there will also be a separate review panel to moderate and make final funding decisions.

Why are we proposing to use such an approach?

AI for Chemistry is still a relatively niche area, with limited numbers of people who we could call on as expert reviewers. This process will enable maximum engagement from the UK scientific community and not exclude any individuals who would have otherwise been requested to form a review panel. Also, as the number of reviewers scales with the number of applications, those reviewing will not be over-burdened with reviews should we receive a higher number of applications than anticipated.

The use of applicants as reviewers also means that each application can be reviewed multiple times, and thus improve quality assurance.

Has this approach been used by other funders?

The distributed peer review process has been used by a number of other funding organisations, including the [European Southern Observatory](#) who use this process to allocate telescope time; the Dutch Research Council [NWO](#); and the [Volkswagen Foundation](#). The Volkswagen Foundation's review process was part of an evaluation by the [Research on Research Institute](#) (RORI), which resulted in their 2025 guide "[Applicants as reviewers: a guide to distributed peer review](#)" which we have used when designing this process. Since then, UKRI has also started to use the distributed review process for certain calls.

How will the review run?

Reviewers and reviewees will be anonymous, with applicant details separated from the application prior to review. Applicants will be asked to ensure their anonymity when writing

their application. Identifying details may be redacted by the Alchemy project management team prior to being sent out for review.

By submitting an application, each applicant (including co-applicants) is agreeing to be included in the reviewer pool for the same funding call. Reviewers will be asked to review between 5-10 applications, with exact numbers determined by the number of applications and the corresponding number of applicants.

Standardised evaluation forms will be used (see form below), with quantitative scoring and qualitative feedback, to ensure a consistent approach to the evaluation.

Applicants will be asked to include names of conflicted reviewers on their application form and will also have the opportunity to decline to review an application if they feel that they have a conflict of interest. The Alchemy team will also ensure that reviewers are not given an application from their own institution.

The review will run via a strict timeline set in advance (see below). If a reviewer does not submit their reviews by the review deadline, their own application will be removed from the funding process. This applies to both the lead application and any co-applicants. We advise lead applicants to ensure all their co-applicants are aware of these reviewing responsibilities.

Review timeline

5 th October 2026	Call opens
4 th December 2026	Call closes at 17.00
w/c 4 th January 2027	Reviews sent out
29 th January 2027	Deadline for return of reviews
w/c 15 th February 2027	Panel meeting and final funding decisions
w/c 22 nd February 2027	Applicants contacted regarding funding outcomes

Details of the funded projects will be once all contracts are in place.

What criteria will I be asked to review against?

There are four criteria that all Alchemy funding applications will be reviewed against:

1. **Quality and fit of the proposed research:** A well-defined research question; good awareness of the current state of the art and how this will be moved forward; fit with the vision of the Hub to transform the AI-chemistry landscape.

2. **Potential for impact:** Research leading to advancements at the AI-chemistry interface e.g. new applications of AI within chemistry, new software development, new collaborations/partnerships, improved quality and access to data.
3. **Interdisciplinarity:** Aligned with the vision, research should look beyond a single discipline and be focused at the AI-chemistry interface.
4. **Ability to deliver:** Feasibility of the proposal within the resources and timeline requested.

How will you ensure that reviewers score fairly?

Alchemy Hub Managers will review all evaluations to identify inconsistencies in scoring, prior to panel review meetings. Where reviewers have noticeably scored either higher or lower than other reviewers without providing relevant justification, or where the confidence score is low, an additional review by a member of either our ECR Committee or Leadership Committee may be requested. Following additional reviews, moderation of scoring may be used at the discretion of the review panel.

What happens after submission of evaluations?

To account for normal variations in reviewer scoring, the highest and lowest scores for each application will be removed before an average score is recorded for each application.

Applications will be ranked according to the averaged evaluation scores and funding allocated to the highest scoring proposals. The review panel will make final decisions on which applications are funded, in accordance with the Alchemy flexible funding principles.

Who will be on the review panel?

The review panel will include members of the Alchemy Leadership Team. This panel will only include members who have not applied to the funding call. It is expected that members of the review panel will have undertaken both Research Integrity and Unconscious Bias training, to ensure a robust and fair decision-making process.

Has this review process been agreed with the EPSRC?

In designing this review process we have closely followed the [UKRI principles of assessment and decision making](#). We have discussed the reasoning for this type of review with EPSRC and it has been confirmed that this is within the spirit of the UKRI principles.

Alchemy Pump Priming Call: Review Form

Please complete using 10pt Calibri font and send to funding@alchemy.ac.uk by 5pm on Friday 29th January 2027

Project ID Number: For office use only

Title of project (25 words)

Name of reviewer

Review Criteria 1: Quality and fit of the proposed research

A well-defined research question; good awareness of the current state of the art and how this will be moved forward; fit with the vision of the Hub to transform the AI-chemistry landscape.

Score (out of 5):

Justification:

Review Criteria 2: Potential for impact

Research leading to advancements at the AI-chemistry interface e.g. new applications of AI within chemistry, new software development, new collaborations/partnerships, improved quality and access to data.

Score (out of 5):

Justification:

Review Criteria 3: Interdisciplinarity

Aligned with the vision, research should look beyond a single discipline and be focused at the AI-chemistry interface.

Score (out of 5):

Justification:

Review Criteria 4: Ability to deliver

Feasibility of the proposal within the resources and timeline requested.

Score (out of 5):

Justification:

Total Score (out of 20)	
Reviewer confidence Please rate your confidence in reviewing this application. 1 – High confidence, expert in the topic(s) covered in the proposal and actively working in that area 2 – Confident, have knowledge of the topic(s) covered in the proposal and have worked in that area/closely aligned area 3 – Low confidence, lack knowledge of the topic(s) covered in the proposal, not actively working in that area	
Additional comments for the review panel These comments will not be passed to the applicants.	
Feedback for the applicants Note that this will be provided to the applicants unedited so please ensure your feedback is constructive and does not disclose your identity.	

Please use the following scale to score each review criteria

5	Outstanding proposal with no identifiable weaknesses.
4	Strong proposal with no significant weaknesses.
3	Good proposal with some weaknesses.
2	Limited proposal scientifically with definite weaknesses.
1	Proposal has serious flaws; lacks clarity and/or feasibility.

Distributed Peer Review – guidance for reviews

1. By submitting an application, you have accepted to review on average 5 proposals submitted by your peers. As such, you are expected to deliver the evaluations and provide constructive feedback by the reviewing deadline (see timetable). You will have approx. 4 weeks to complete your reviews. Failing to submit the assigned reviews on time will lead to the automatic rejection of all proposals where you are an applicant/co-applicant.

2. You will have an opportunity to flag any perceived conflicts of interest during the review processes. Note that you should restrict yourself to those where you feel you are not able to express an objective opinion. Flagging a conflict of interest will not reduce the overall number of reviews you have to deliver by the given deadline.
3. As a reviewer, we ask that you provide feedback in a completely anonymous way, so that you do not disclose, directly or indirectly, your identity. Your feedback should be constructive, using appropriate, factual, and non-offensive language. Keep in mind that your comments will be passed unedited to the applicants. Offensive and inappropriate language used in the feedback will not be tolerated, and this may lead to your own application being removed from the process.
4. The use of generative AI models (ChatGPT, CoPilot etc) in the preparation of reviews is not permitted to ensure confidentiality throughout the review process. Documents provided for review are confidential and may not be used as input for generative models.
5. The review process is confidential as outlined in the call terms and conditions. As a reviewer you will have access to information which is covered by intellectual property. None of this information can be disseminated, copied or plagiarised. At the end of the review process you should delete/destroy any copies of the proposals which were assigned to you (whether digital or printed).
6. As a reviewer you are expected to adhere to responsible research conduct and take ethics and integrity into account when undertaking evaluations. UKRI's [Good Research Resource Hub](#) has useful guidance if required.