

Andrew Fellowship

Aims of the Fellowship

The primary aims of the scheme are to:

- Support academic research enhancing the science of formulation of heterogeneous catalysts.
- Foster collaborative links between academic researchers and industry, and promote scientific research that addresses industrially relevant challenges.
- Strengthen research excellence and independence by funding promising researchers at an early stage of their careers.
- Stimulate research that advances progress against UN Sustainable Development Goals.

Key dates

- Applications open: 30 August 2024
- Deadline for applications: 01 December 2024
- Shortlisted applicants invited to interviews: 20 December 2024
- Shortlisted applicants' interviews: 13–14 January 2025
- Offer of awards: 20 January 2025
- Deadline to commence Fellowship: 28 April 2025

What the award covers

The Fellowship offers early-career researchers funding to undertake independent industrially relevant post-doctoral research for one year while employed by a supportive, well-equipped host organisation (a university or research institute). The award covers their salary costs and associated direct¹ costs to their employer, plus up to £15,000 to spend flexibly to support their research.

Who is eligible to apply

Members of IChemE who are early-career researchers may apply for the Andrew Fellowship. Applicants should normally have submitted their doctoral thesis (for a PhD or equivalent degree) within 18 months of the submission deadline for Fellowship applications. Before the Fellowship is awarded, the applicant's doctoral thesis must have been successfully examined. The Fellowship should commence within three years of successful examination of the applicant's doctoral thesis.

Applicants who have taken career breaks for reasons related to health, disability, pregnancy, maternity or caring responsibilities, or who have other extenuating circumstances, may request that the 18-month and three-year deadlines are extended accordingly.

Fellowship arrangements

The award will fund employment of the Fellow by a suitable university or research institute for the duration of the Fellowship (12 months full time or part time pro rata), where the available resources, facilities and staff resource would enable them to carry out their proposed research and develop professionally. The Fellowship will also fund research-related expenses of up to £15,000. This expenditure must be directly incurred by the research, and may include research equipment or

¹ Examples of directly incurred staff costs are employer's contributions to pensions and taxes such as National Insurance and the apprenticeship levy in the UK.

consumables, open-access publishing charges, training costs, and travel, subsistence, fees and exceptional costs to attend conferences and other research events. The award will not cover the Fellow's costs of relocation, visas, work permits, etc.

Applicants may request a part-time Fellowship (minimum 0.5 full-time equivalent, ie maximum two-year appointment) and/or propose to delay the start of the Fellowship, for reasons related to health, disability, pregnancy, maternity or caring responsibilities. Applicants may also request flexible working arrangements from their host organisation (their employer). Fellows are required to obtain permission from IChemE to take up or hold another post or paid role during their Fellowship. It is not permitted for Fellows to simultaneously hold another award worth £10,000 or more.

Host organisation

The host organisation – a university or research institute – is expected to employ the Fellow, and to support them as an employee, with facilities, resources and development opportunities. A letter of support from an authorised representative of the host organisation should agree to this, and confirm that the organisation is an appropriate host for the Fellow, considering the proposed research, and its facilities, culture and practices.

Industrial partner

To ensure that the research addresses challenges and potential solutions that are relevant to industry, the Fellow is expected to engage significantly with an industrial partner during their Fellowship, by working in industry for 3–12 months, or having an industry-based co-supervisor and/or an industry-based mentor. A letter of support from an authorised representative of the industrial partner should confirm the industrial relevance of the proposed research and commitment to engage with the Fellow and their research.

Fellows and IChemE

Applicants must be members of IChemE and Fellows must remain members for the duration of the award. They must submit an interim progress report and a final report to IChemE and provide IChemE with copies of publications and presentations incorporating their Fellowship research. Their publications and other communications of their research must acknowledge the support of IChemE, and IChemE channels should be among those through which their work is disseminated.

Further details on the application process

Preparing to apply

Applications must be submitted using the Oxford Abstracts online platform by the submission deadline. The process requires you to set up an account and provide or upload the following information and documents via this link: <https://app.oxfordabstracts.com/stages/69740/submitter>:

- Applicant's CV and details of their doctoral degree studies
- Title of research proposal and lay summary of the proposal
- Research proposal, including an estimate and justification of research-related expenditure
- Career development goals and the expected impact of the Fellowship on your career trajectory.
- Letter of support from the host organisation
- Letter of support from the industrial partner
- References from two referees, where one or both are supervisors of the applicant's PhD project or current postdoctoral research, and neither will be actively involved in the proposed research

Applications will be assessed by a panel of subject matter experts who will interview shortlisted candidates. IChemE staff will administer the application, selection and award processes.

Overview of the application

You can apply for a Fellowship via the Oxford Abstracts platform, for which you will need to set up an account: <https://app.oxfordabstracts.com/stages/69740/submitter>.

The information you need to provide includes your full name; email address; IChemE membership number²; title of your doctoral thesis; status of your doctoral degree award (eg degree confirmed, thesis examined, date of examination confirmed, etc); title and a lay summary of your research proposal, and an outline of your career development goals.

You will need to upload the documents listed below by the submission deadline. It is recommended that you inform the host organisation and industrial partner about the need for a letter of support and alert your referees that you will need a reference well in advance of the closing date.

- A short CV (maximum 2 pages) and details of your doctoral degree studies (dates of submission, examination or completion)
- Research proposal, including an estimate of research-related expenditure
- Career development goals and the expected impact of the Fellowship on your career trajectory
- Letter of support from the host organisation
- Letter of support from the industrial partner
- References from two referees, where one or both are supervisors of your PhD project or current postdoctoral research, and neither will be actively involved in the proposed research

The expected impact of the Fellowship on your career development goals could include longer-term plans for future research activity or collaborations, or for securing subsequent research funding, for example.

The application form asks you to agree to commit to standards of ethics and integrity in your research, to follow the host organisation's regulations, policies and practices for employees, and to be bound by national or state laws (eg around export controls and employment law).

² To apply, you must be a current member of IChemE - not just 'registered' with IChemE.

Proposed research

The proposed research must aim to enhance the science of formulation of heterogeneous catalysts. Your proposal, CV, supporting statements, and references must demonstrate your potential for excellent independent research.

Your research proposal must describe the context, aim, scope and methods of the planned research, the schedule of work and required resources, its potential for innovation and impact in the field and practice of heterogeneous catalysis, and its alignment with selected UN Sustainable Development Goals. The proposal should also explain why and how your research background, your host organisation and your industrial partner will enable the aims of the proposed independent, industrially relevant research to be achieved.

Your proposal needs to demonstrate the independence of your planned research: it should not be a straightforward continuation of your PhD research, and should be based on your own initiative. You are expected to carry out your research at a suitable university or research institute (the host organisation). To demonstrate and develop your independence, you are strongly encouraged to conduct your Fellowship research at an organisation other than the university at which you carried out your PhD project, or at least in a separate department or research group. You are asked to justify your choice of host organisation, whether or not you plan to move to a different organisation.

Your proposal needs to demonstrate its relevance to industrial application, and include industry-based research for 3 months or more, or industry-based co-supervision or mentoring for the duration of the Fellowship.

Research proposal title and lay summary

You are asked to provide a title and lay summary for your proposal (maximum 150 words) that can be understood by non-specialist audiences.

Proposal

The proposal must explain the potential of the proposed research for significant impact in the field of heterogeneous catalysis, including in the industrial application of catalysis. The proposal must demonstrate quality and innovation and address a significant problem. The proposal must also indicate how the research is aligned with one or more UN Sustainable Development Goals.

Your proposal should motivate your choice of host organisation, considering the implications for your independence as a researcher. The research proposal (maximum 1,500 words and three figures, plus details of cited references) should be comprehensible to a non-expert, and describe and justify:

1. The **proposed research**, including its context, aim, scope, objectives, methods, schedule of work, required resources, and expected outcomes, highlighting how it is realistic, shows initiative and independence, and is innovative, relative to the state of the art.
2. The rationale for the **choice of host organisation**: this is expected to be a university or research institute. If the host organisation is the same as the institution where you completed your doctoral degree, give reasons why you wish to remain at that institution.
3. The rationale for your **choice of industrial partner** and planned interactions.
4. How your **background and experience** will enable you to undertake the planned research.
5. Identify and assess **key risks** and outline **management/mitigation** options.
6. An estimate, with justification, of expected **expenditure** of IChemE (Andrew Legacy) funds to support your research.

Equality, diversity and inclusion

Your application will be judged on the quality of the proposed scientific research and your potential for carrying out excellent independent research, as evidenced by your track record, proposal and references. Under-represented groups are particularly encouraged to apply. IChemE welcomes applications for part-time fellowships for reasons related to your health, disability, pregnancy, maternity or caring responsibilities. You are invited to provide information about career breaks or extenuating circumstances, if relevant, and may request a delayed start or a part-time arrangement for reasons related to health, disability, pregnancy, maternity or caring responsibilities.

Rigour and integrity

IChemE expects all recipients of the Andrew Fellowship to conduct their work while observing standards in rigour and integrity, as these are fundamental to good research. The UK's [Concordat to Support Research Integrity](#) outlines key elements of good research conduct. Researchers will be bound by the code of conduct of their host organisation and/or country requirements, such as the UK's [Code of Practice for Research](#) or the [Australian Code for the Responsible Conduct of Research](#).

Data Protection

IChemE complies with UK law and respects the privacy of its members and customers, and aims to act consistently with the UK's General Data Protection Regulations and the Data Protection Act 2018. IChemE holds and uses data on members for administrative purposes, to keep them informed of activities, and to offer goods and services provided by the Institution. IChemE's privacy policy is set out online at www.icheme.org/legal.

Host organisation

A letter of support is needed from a representative of the host organisation who is authorised to sign a formal agreement between the host organisation and IChemE. This should:

- Agree to employ the Fellow (you) for the duration of the Fellowship (whether full time or part time), if awarded, and provide the same support that an employee on a fixed-term contract would receive.
- Confirm that the organisation is supportive of the Fellow carrying out the proposed research.
- Describe the organisation's suitability to host the proposed research, eg facilities, expertise and availability of academic and support staff.
- Confirm the facilities and support which will be available to the Fellow; these should include an academic mentor and training opportunities.
- Provide an estimate in GBP of the direct costs of employing the Fellow and agree to invoice IChemE for these costs on a quarterly basis in arrears. (For example, in the UK, these costs would be the salary of a newly appointed post-doctoral researcher, in line with the UK's nationally agreed single pay spine point 293 and the employer's pension and national insurance contributions and apprenticeship levy.)
- Given that IChemE is registered as a charity (in the UK and Australia), clarify expectations about what contribution from IChemE is expected towards the Fellow's indirect costs⁴.
- Agree to vet the Fellow's expenses claims, to pay these and to invoice IChemE for their reimbursement on a quarterly basis in arrears, up to the limit of £15,000.

³ This salary point is in line with that of someone in their first academic role. www.ucu.org.uk/he_singlepayspine equal to £36,024 from August 2023 www.unitetheunion.org/media/5649/jnches-single-pay-spine-2023-24.pdf

⁴ Indirect costs are costs of shared services that are not specific to the project – eg library, IT services, human resources.

- Estimate the time it would take from the Fellowship being awarded to the Fellow starting their Fellowship.
- Summarise the organisation's commitment to health and safety and to equality, diversity and inclusion.
- Set out the organisation's expectations concerning intellectual property rights related to the applicant's research proposal.
- Highlight any important contractual conditions related to the Fellow's employment.

The host organisation and IChemE will enter into a research grant funding agreement before the Fellowship begins. This will include arrangements for invoicing and payment, and financial arrangements, should the Fellow withdraw from the Fellowship at any stage, or ceases to be employed by the host organisation.

Industrial partner

Your application needs to outline the industrial relevance of the proposed research and be supported by a strong letter of support from the industrial partner organisation. The industrial partner is expected to adhere to good practice in the workplace with respect to health, safety and the environment and equality, diversity and inclusion.

The letter of support from the industrial partner organisation should:

- Confirm its commitment to engage and collaborate with you (the Fellow), outlining the nature of the envisaged engagement, the potential benefits of bringing an industrial perspective to the research, and the contributions or inputs the organisation has provisionally agreed to.
- Confirm the industrial relevance of the proposed research.
- Set out its approach for enabling effective collaboration, while protecting intellectual property, in the context of the Fellow's research proposal.
- Summarise the industrial partner's health and safety policy and culture/practice and its equality, diversity and inclusion policy and culture/practice.

Evaluation of your application

If you are eligible for the Fellowship, and support of your host organisation and industrial partner is evident, your application will be evaluated by an international panel of subject matter experts, typically IChemE Members and Fellows, considering:

- The candidate
 - The strength of your academic background and previous research on catalysis to date.
 - The potential for the Fellowship and associated work to enhance your career development, relative to your current trajectory.
 - The endorsement by your references of your capabilities and potential in this research field.
- The research proposal
 - The potential for the proposed research to further the field of heterogeneous catalysis, including via collaboration with industry.
 - The rigour, innovation and independence of your research proposal and the significance of the problem(s) addressed.
 - The alignment of your research with one or more UN Sustainable Development Goals.
- The host organisation and industrial partner
 - The suitability, resources, environment and stated commitment of the host organisation.
 - The fit and substance of the industrial partnership and the stated commitment of your industrial partner.

If you are shortlisted by the panel, IChemE will invite you to attend an online interview with the panel. IChemE will inform you about the panel's decision at relevant points, according to the schedule above. The deadline to commence the Fellowship sets out the expected timeframe, unless you have requested a delayed start.

If you are selected as a Fellow, IChemE will ask your host organisation to agree the terms of your employment, and IChemE will ask your industrial partner to formally agree and confirm your working arrangements before you commence your Fellowship.

Expectations of IChemE

The application form asks you to acknowledge the support of IChemE, to share your research outputs with IChemE members and to submit one progress report and one final report to IChemE.

Publications and other communications (eg conference presentations) that result from the Fellowship should include the acknowledgement: “[Your name] acknowledges the Institution of Chemical Engineers through an Andrew Fellowship”.

Fellows are expected to share their research outputs with IChemE members through appropriate communication activities and channels, for example by participating in the UK Catalysis Conference or Chemeca (Australia/New Zealand).

A progress report of 500 to 1,000 words will need to be submitted in the 7th month of the Fellowship (or after an equivalent time for a part-time Fellowship). The final report of 1,500 to 2,000 words will be required within a month of completing the Fellowship. This should describe the main achievements of the Fellowship, any future plans and an assessment of the extent to which the objectives of the research proposal have been met. An appendix to the report should include electronic copies of any publications submitted or accepted, and details of contributions to conferences or other dissemination events.

IChemE lays no claim to intellectual property arising from the research conducted during the holding of a Fellowship.

Terms and conditions

IChemE will enter into a research grant funding agreement directly with the host organisation. A copy of that agreement will be provided if required by the host organisation.

Preview of Andrew Fellowship application form

This section provides a preview of the inputs required by the application form. The deadline for applications is 23:59 GMT on 1 December 2024. You will need to set up an account in Oxford Abstracts to apply for a Fellowship: <https://app.oxfordabstracts.com/stages/69740/submitter>

If you have queries relating to your application, please email lsc@icheme.org

Curriculum vitae (CV)

Please upload a pdf of your CV (maximum 2 pages):

- Include details of your degree qualifications (including names of degree-awarding institutions and dates or expected dates of degree awards, and the names of your doctoral project supervisors);
- A summary of your academic background and current or previous research on catalysis.
- Details of your current or previous employment (including start and end dates, your employer's name, your role and the nature of your contract);
- An appropriately formatted list of your publications, with notes about their status (eg under review or published), your contribution to the publication, and whether they are or will be peer reviewed.

Research proposal

The proposal must explain the potential of the proposed research for significant impact in the field of heterogeneous catalysis, including in the industrial application of catalysis. The proposal must demonstrate quality, independence and innovation and address a significant problem. The proposal must also indicate how the research is aligned with one or more UN Sustainable Development Goals.

You are expected to carry out your research at a suitable university or research institute (the host organisation). In your proposal you are asked to motivate your choice of host organisation. To demonstrate and develop your independence, you are strongly encouraged to complete your Fellowship at an organisation other than the university at which you completed your PhD. The application form provides you with an opportunity to explain why this is not feasible, and to highlight the independence of the work, for example by working in a different research group or department.

The research proposal (maximum 1,500 words and three figures, plus details of cited references) should be comprehensible to a non-expert, and describe and justify:

The proposed research, including its context, aim, scope, objectives, methods, schedule of work, required resources, and expected outcomes, highlighting how it is realistic, shows initiative and independence, and is innovative, relative to the state of the art.

1. The rationale for the choice of host organisation: this is expected to be a university or research institute. If the host organisation is the same as the institution where you completed your doctoral degree, give reasons why you wish to remain at that institution.
2. The rationale for your choice of industrial partner and planned interactions.
3. How your background and experience will enable you to undertake the planned research.
4. Identify and assess key risks and outline management/mitigation options.
5. An estimate, with justification, of expected expenditure of IChemE funds to support your research.

Research expenses

You are asked to estimate and justify expected expenditure of IChemE funds to support the proposed research. This expenditure must be directly incurred by the research, and may include research equipment or consumables, open-access publishing charges, training costs, and travel, subsistence,

fees and exceptional costs to attend conferences and other research events. If awarded the Fellowship, you will have opportunities to revise and update your research-related expenditure. You may also provide information about resources that you hope to access through your host organisation.

References

You must upload references from two referees with your application.

- One or more of your referees should be a supervisor of your PhD or current postdoctoral research.
- Both referees should not be from the same research group in the host organisation.
- Neither referee should be actively involved in your proposed research.

Please ask your referees to explain the capacity in which they know you and to comment on your ability to conduct the proposed research, based on your academic track record and personal qualities.

Career development goals

The expected impact of the Fellowship on your career development goals could include longer-term plans for future research activity or collaborations, or for securing subsequent research funding, for example. You are asked to outline how you envisage that this Fellowship would support your career development goals (maximum 100 words).

Special arrangements (optional)

The Fellowship would normally be held as a full-time position and start by 28 April 2025. If your preferred date to start the Fellowship is after 28 April 2025, you are asked to provide reasons for this. The start date would normally be no more than three years since your doctoral degree was successfully examined.

If you have had a career break or have been affected by other extenuating circumstances, which means that your start will be more than three years since your doctoral degree was successfully examined, please provide further detail (including dates and circumstances).

Note: A career break may relate to health, disability, pregnancy, maternity or caring responsibilities. Time spent working outside academia does not qualify as a career break. If you have been affected by other extenuating circumstances, please provide information here about how these have affected your career.

Indicate whether you plan to hold the Fellowship as a part-time position (minimum 0.5 FTE, i.e. maximum term of 2 years),. Please provide reasons for this, your preferred working pattern and its full-time equivalence, and the expected impact on the proposed research.

Host organisation

Please upload a letter of support from a representative of the host organisation for the research who is authorised to sign a formal agreement between the host organisation and IChemE. This should:

1. Include the name of the university or research institute, and department or school where the majority of the research will be carried out;
2. Provide the name and email address of the representative of the host organisation;
3. Agree to employ the Fellow (you) for the duration of the Fellowship (whether full time or part time), if awarded, and provide the same support that an employee on an open-ended contract would receive.
4. Confirm that the organisation is supportive of the Fellow carrying out the proposed research.
5. Describe the organisation's suitability to host the proposed research, eg facilities, expertise and availability of academic and support staff.

6. Confirm the facilities and support which will be available to the Fellow; these should include an academic mentor and training opportunities.
7. Provide an estimate in GBP of the direct costs of employing the Fellow and agree to invoice IChemE for these costs on a quarterly basis in arrears. (For example, in the UK, these costs would be the salary of a newly-appointed post-doctoral researcher, in line with the UK's nationally agreed single pay spine point 295⁵ and the employer's pension and national insurance contributions and apprenticeship levy.)
8. Given that IChemE is registered as a charity (in the UK and Australia), clarify expectations about what contribution from IChemE is expected towards the Fellow's indirect costs⁶.
9. Agree to vet the Fellow's expenses claims, to pay these and to invoice IChemE for their reimbursement on a quarterly basis, up to the limit of £15,000.
10. Estimate the time it would take from the Fellowship being awarded to the Fellow starting their Fellowship.
11. Summarise the organisation's commitment to health and safety and to equality, diversity and inclusion.
12. Set out the organisation's expectations concerning intellectual property rights related to the Fellow's research proposal.
13. Highlight any important contractual issues related to the Fellow's employment.

Industrial partner

Please upload a letter of support from a representative of the industrial partner who is authorised to sign a formal agreement between the host organisation and IChemE. This should:

1. Provide details of the company name, name of primary industrial collaborator and their email address.
2. Describe the envisaged industrial collaboration – the nature and focus of interactions, the potential benefit to the research aims and outcomes of the Fellowship, and what contributions or inputs the industrial collaborator has provisionally agreed to.
3. Highlight the opportunities the collaboration might offer the industrial partner, identify relevant challenges (eg practical, logistical, commercial confidentiality, safety) and suggest how these can be overcome.
4. Summarise the industrial partner's commitment to health and safety and to equality, diversity and inclusion.
5. Set out its approach for effective collaboration, while protecting intellectual property, in the context of the Fellow's research proposal

⁵ This salary point is in line with that of someone in their first academic role. www.ucu.org.uk/he_singlepayspine equal to £36,024 from August 2023 www.unitetheunion.org/media/5649/jnches-single-pay-spine-2023-24.pdf

⁶ Indirect costs are costs of shared services that are not specific to the project – eg library, IT services, human resources.