# Postdoctoral Fellowship – CSOF4

Role summary for potential applicants

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| Advertised Job Title**:** | CSIRO Postdoctoral Fellowship in Chemical and Materials Engineering |
| Reference Number**:** | 57185 |
| Classification**:** | CSOF4 |
| Salary Range: | AU $80k to AU $91k plus up to 15.4% superannuation |
| Location**:** | Clayton Victoria |
| Tenure: | Specified Term of up to 3 years (or part time equivalent) |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only  Australian/New Zealand Citizens and Australian Permanent Residents Only   * All Candidates |
| Functional Area**:** | Research Scientist / Engineer - Postdoc |
| % Client Focus - Internal: | 50% |
| % Client Focus - External: | 50% |
| Reports to the: | Senior Research Scientist |
| Number of Direct Reports: | 0-3 (interns, PhD students) |

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| **Role Overview:** |
| **Postdoctoral Fellowships** at CSIRO provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.  Postdoctoral Fellows **are appointed for up to three years or part time equivalent** and will work closely with a leading Research Scientist or Engineer in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.  In the Materials for Energy, Water, and Environment team at CSIRO we collaborate widely to focus on science solutions to global issues that are linked to atomic, ionic, and molecular separations. We are a diverse and inclusive team of interns, PhD students, postdoctoral fellows, early- mid- and late- career researchers. We research and develop and translate our technologies with industry. We have a spin-in company MOFWorx that you can check out <https://www.mofworx.com/> . We have a number of team members who are early to mid-career researchers with their activities highlighted on the web: check out <http://www.aips.net.au/tall-poppies/vic-tall-poppies/past-vic-tall-poppy-winners/2012-vic-award-winners/dr-aaron-thornton/> and <http://www.aips.net.au/tall-poppies/vic-tall-poppies/past-vic-tall-poppy-winners/2013-vic-award-winners/dr-cara-doherty/> .  You will be located in Melbourne and have the opportunity to travel and work with our collaborators. This project involves a collaboration with Monash University, The University of Texas, and Cambridge University, with exchange of staff and students helping us deliver on our commitments. Our team supports postdoctoral fellows to learn project management and business skills that assist in project management including finances, Intellectual Property protection, student supervision, Health, Safety and Environment, communication, sales, and leadership. Our postdoctoral fellows have successful careers globally in industry, defence science and technology, academia, and government institutions.  This postdoctoral fellowship is focussed on the challenge of low energy selective separation of ions from seawater, brines, produced water, and waste streams. Our team has demonstrated proof of concept success in materials and membrane science approaches to this challenge, and we are working to scale the materials and processes to higher technology readiness level with a consortium of industry collaborators. This opportunity will suit a researcher who enjoys collaborative team work and who has a passion for applied science and engineering approaches that scale.  If you are skilled in chemical engineering or materials engineering or a related field and are passionate about the role that disruptive separations can play in the circular materials economy, please contact us. |

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| **Duties and Key Result Areas:** |
| * Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes. * Undertake regular reviews of relevant literature and patents. * Produce high quality scientific and/or engineering papers suitable for publication in quality journals and produce when needed client reports and patents. * Prepare appropriate conference papers and present those at conferences as agreed with your supervisor. * Contribute to the development of innovative concepts and ideas for further research. * Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans. * Work collaboratively with colleagues within your team, the business unit, across CSIRO, and externally. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals. * Undertake an appropriate training and development program developed in collaboration with your supervisor. * Other duties as directed.   **CSIRO’s postdoctoral training program**is developed between the Postdoctoral Fellow and a CSIRO scientist or engineer. The program will focus on enhancing the Fellows’ capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:   * Discipline-specific techniques and protocols * Professional growth * Project management * Communication and influencing skills * Working and collaborating with others   <http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships> |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   1. **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as chemical engineering, materials engineering, chemistry, mathematics, or related field.   ***Please note:*** *To be eligible for this role you must have* ***no more than 3 years (or part time equivalent)*** *of relevant postdoctoral experience.*   1. **Communication: High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including at national and international conferences.** 2. **Publications: A record of publications in quality, peer reviewed journals and/or patents.** 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.   ***Essential Criteria:***   1. Experience in materials fabrication and characterisation, including for example metal-organic framework synthesis and fabrication, or amorphous material synthesis and characterisation. 2. Experience in device fabrication, characterisation, and device testing in environments. 3. Experience in translating processes developed in the lab into practical application. 4. **The ability to work effectively as part of a multi-disciplinary, internationally dispersed research team, as well as the ability to carry out self-motivated research.** 5. A record of science innovation and creativity and willingness to incorporate novel ideas and approaches into scientific investigations.   **Desirable Criteria:**   1. Coding fluency, computational chemistry, and visualisation skills. 2. Use of Artificial Intelligence techniques and machine learning in data collection, mining, and analysis.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   **In your application and at interview you will need to demonstrate alignment with these behaviours.**  To be appointed as a Postdoctoral Fellow within CSIRO, candidates are required to have **submitted** their PhD at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4-1 (AU$80,833).Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.  ***Special requirements:***  Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- <http://www.ielts.org/default.aspx> |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at <https://jobs.csiro.au/> and enter requisition number **57185**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  Please load your CV (Maximum 2MB). You may also be required to respond to some screening questions.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: Please provide contact details of two previous supervisor or academic/professional referees in your resume/CV. We will ask your permission before making contact.  **Contact:** If after reading the position details above you require more information please contact:  **Dr Anita Hill**via email: Anita.Hill@csiro.au or phone: +61 3 9545-2665  Please do not email your application directly to Dr Hill. Applications received via this method will not be considered by the selection panel.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.  Find out more! [CSIRO Balance](https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance)  **CSIRO Manufacturing**  CSIRO Manufacturing is developing cleaner advanced materials and technologies to enable manufacturers to secure a competitive and sustainable future which contributes strongly to national productivity, economic growth and societal wellbeing.  In particular, Manufacturing seeks to support the metals, chemicals, carbon fibre, cotton, biomedical and biotechnology industries. |