# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Research Scientist/ Engineer – Graphene and 2D Materials |
| Job Reference | 64779 |
| Tenure | Specified Term to 30 June 2022  Full-time |
| Salary Range | AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Lindfield, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Position reports to the | Team Leader – Graphene |
| Client Focus – Internal | 10% |
| Client Focus – External | 90% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Katie Green via email at katie.green@csiro.au or phone +61 2 9413 7522  P*lease do not email your application directly to Katie Green. Applications received via this method will not be considered* |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Role Overview

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The Research Scientist/Engineer will be part of the CSIRO Manufacturing Graphene and 2D Materials team and assist in further development of novel graphene-based materials and devices. The team is developing a novel graphene-based water membrane and is seeking to grow the team to continue the scale-up of the technology. <https://www.csiro.au/en/News/News-releases/2018/Tiny-membrane-makes-Sydney-Harbour-drinkable>

### Duties and Key Result Areas:

* Prepare detailed design proposals and experimental protocols to develop a scalable and repeatable process for synthesising graphene films.
* Refine and document an optimised process for transferring graphene films onto support structures (glass, polymers, silicon etc) for characterisation and testing.
* Develop and implement a bespoke Membrane Distillation water purification system compatible with graphene based flat sheet membranes.
* Provide guidance and support to interns/laboratory assistants to develop standard protocols and methodologies for testing and characterising graphene films and graphene-based membranes.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* CSIRO requires National Police Checks to be provided by preferred applicants for all new positions. Where matters are disclosed in a National Police Check, only those that are relevant to the position and the ability of the applicant to perform the role will be taken into account.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Relevant doctorate or equivalent relevant work experience in Materials Science, Physics, Chemistry or Engineering
2. Demonstrated research experience in design, operating and assessing experimental setups and equipment for CVD and/or Plasma synthesis of graphene or other 2D materials and associated charterisation techniques (SEM, Raman etc)
3. Proven experience in process diagnosis and design iteration for improvement and optimisation.
4. Demonstrated ability to manage changing priorities and meet project milestones
5. Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO's scientific objectives.
6. High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including the presentation of research outcomes at national and international conferences.

## **Desirable:**

1. Expertise in water purification and treatment (ideally in ultrafiltration or membrane distillation), membrane transport, modules for housing membranes (ideally flat sheet geometry), purification systems (ideally design of custom systems)
2. Expertise in the operation, design and/or optimisation of membrane distillation water purification systems
3. Knowledge of materials, membranes and components compatible with water purification handling and systems
4. Experience with technology scale up and/or commercialisation

Special Requirements

The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO Manufacturing [here](https://www.csiro.au/en/Research/MF)!