CAMBRIDGE CARES CAMBRIDGE CENTRE FOR ADVANCED RESEARCH AND EDUCATION IN SINGAPORE LTD.

SM3

Research Fellow (Chemical Engineer)

Who are we?

We are the University of Cambridge presence in Singapore called Cambridge CARES, sponsored by the NRF CREATE program CAM.CREATE. CARES also hosts industry-funded and other agencies funded projects. Our team is comprised of world-class scientists and engineers working in a vibrant, fast-paced environment with great opportunities for knowledge and skills development.

CARES is leading a new project "Sustainable Manufacture of Molecules and Materials (SM_3)", funded by NRF CREATE programme within the Decarbonisation Grand Challenge. SM_3 project is a collaboration with NTU, NUS, CARES & the University of Cambridge and EPFL. The broad aim of the project is to develop novel approaches and technologies for fully de-fossilised routes to complex functional molecules and molecular materials. The project will explore novel chemical transformations for conversion of net-zero feedstocks to building blocks typically used in pharma, agrochem and other end applications. The project will also explore novel synthetic methods for conversion of the building blocks into end-use functional molecules. Novel synthesis technologies (photoelectrochemistry, sonochemistry, mechanochemistry, etc), as well as advanced research methods (AI, chemoinformatics, high-throughput synthesis) and process metrics (LCA and technoeconomic analysis) are included in this large project.

Who are we looking for?

We are looking to fill a vacancy of a Research Fellow or a Senior Research Fellow with experience in **techno-economics** and **object-oriented programming**. The candidate would have experience in assessing engineering reports and scientific papers on novel synthesis technologies, **extracting key process performance parameters**. The successful candidate would also have experience in **designing and performing simple experimental work** in the broad area of **process and reaction engineering**.

What skills do you have?

Working with chemical process simulators (e.g. Aspen Plus). Coding in Python or C++. Hands-on experimental experience in building and operating chemical reactors on laboratory scale.

When is position available and for how long?

The position is available from January 2025 for 1 year in the first instance and up to 4 years in total.

What can we offer you?

- A stimulating working-environment with friendly, highly motivated colleagues.
- Opportunities to develop and implement new ideas in a creative environment.
- A competitive salary in line with your skills and experience.
- A one-year contract in the first instance, extendable following satisfactory performance.
- A comprehensive medical insurance cover as part of your employment.

Please apply by uploading your CV and academic transcript to https://jobs.swagapp.com/jobs/cambridge-cares-research-fellow-chemical-engineer-techno-economicobject-oriented-for-sm3-em. Please note that this post is mainly based in the CREATE Tower at NUS University Town, Singapore. Informal enquiries could be sent to the academic lead of the project: Dr Ewa Marek (ejm94@cam.ac.uk).