



CAMBRIDGE  
CARES

CAMBRIDGE CENTRE  
FOR ADVANCED RESEARCH AND  
EDUCATION IN SINGAPORE LTD.

## CARES Biannual Newsletter Issue 1, September 2022

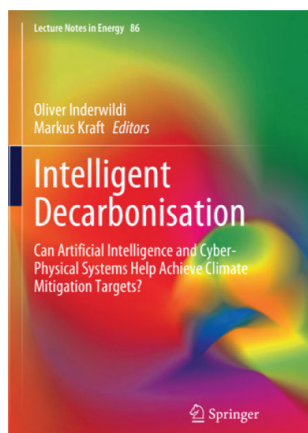
# Highlights



### *Biannual Report*

Our 16th Biannual Report highlights all research programmes, small projects, and collaborations; including updated publications and forewords from Cambridge PIs.

[read more >>](#)

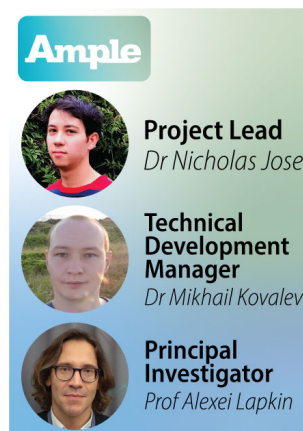


### *Intelligent Decarbonisation*

Prof Markus Kraft and Dr Oliver Inderwildi outline how AI can deliver environmental benefits with minimal cyber-physical risks.

[watch a talk >>](#)

[read more >>](#)



### *The AMPLE Project*

CARES awarded NRF's Central Gap Fund in collaboration with NTUitive to start [AMPLE](#), a project to scale up nanomaterial production; led by Dr Nicholas Jose.

[watch a talk >>](#)

# Outreach & Engagement



**Top:** The AMPLE team presented at this year's CREATE Webinar.

**Centre-Left (CL):** CARES guest lecture by Prof Javier Perez-Ramirez. [Read more.](#)

**CR:** Markus Hofmeister at the [International Conference on Evolving Cities](#).

**BL:** Prof Markus Kraft, Dr Laura Pascazio, Simon Rihm, and Tan Yong Ren at the [39th Symposium on Combustion](#).

# Congratulations

## Dr Magda Barecka

2022 CAS Future Leaders will receive leadership training and visit the ACS National Meeting

## Prof Iftekhhar Karimi

Awarded Long Service Medal for serving 25 years in the field of education

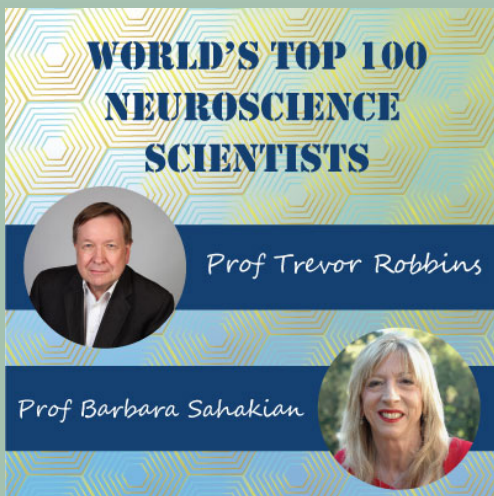


### CLIC Advisors

Prof Trevor Robbins and Prof Barbara Sahakian were ranked as "Top 100 Neuroscience Scientists" by Research.com

### Dr Casper Lindberg

Starting an 18-month project w/ NTU that will use dynamic knowledge graphs for sustainable energy systems



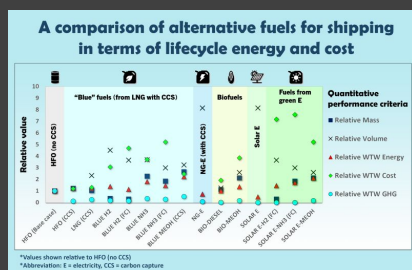
### PIPS Projects

Two streams from the industry-led platform to enhance the pharmaceutical sector's productivity and efficiency have successfully closed; new streams to follow.





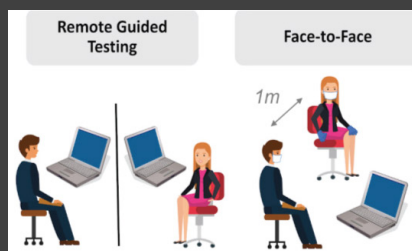
# Publications



## A Comparison of Alternative Fuels for Shipping in Terms of Lifecycle Energy and Cost

Li Chin Law, Beatrice Foscoli, Epaminondas Mastorakos, Stephen Evans

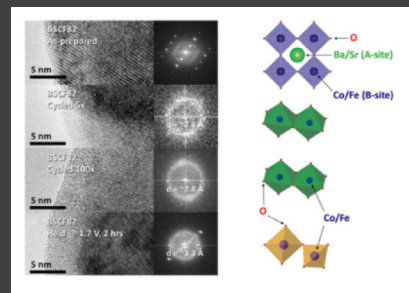
This paper reviews 22 potential pathways for low- or zero- carbon marine fuels to decarbonise the shipping industry. [Read the paper.](#)



## A New Remote Guided Method for Supervised Web-Based Cognitive Testing to Ensure High-Quality Data: Development and Usability Study

Victoria Leong, et al.

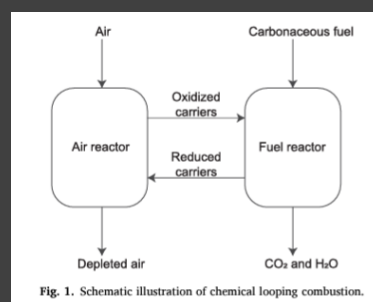
This paper provides standardised procedures for remote-guided testing for human psychology research. [Read the paper.](#)



## Surface Reconstruction of Perovskites for Water Oxidation: The Role of Initial Oxides' Bulk Chemistry

Haiyan Li, Yubo Chen, Justin Zhu Yeow Seow, Chuntai Liu, Adrian C. Fisher, Joel W. Ager, Zhichuan J. Xu

This paper discusses the roles of initial bulk chemistry in the surface evolution process of perovskite oxides during oxygen evolution reactions. [Read the paper.](#)



## Coupling chemical looping combustion of solid fuels with advanced steam cycles for CO2 capture: process modelling study

Syed Saqline, Zhen Yee Chua, Wen Liu.

This paper assesses chemical looping combustions for carbon capture technology in solid fuel power plants. [Read the paper.](#)

CARES is open to collaborating with new partners and projects. Please see our [Careers page](#) for a list of opportunities or email [enquiries@cares.cam.ac.uk](mailto:enquiries@cares.cam.ac.uk)

Thank you for reading this #CambridgeCARES newsletter, follow our social channels for any updates!





CARES was established in 2013 in Singapore and is the University of Cambridge's only research centre outside the UK.

Flagship C4T programme on decarbonisation

AMPLE scales up nanomaterial production

CLIC studies cognitive flexibility throughout the life course

PIPS is an industry-funded project for pharmaceutical manufacturing

Cities Knowledge Graph focuses on urban planning.

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