



**i**nterdisciplinary centre  
for **S**torage,  
**T**ransformation and  
**U**pgrading of **T**hermal  
**E**nergy

Bob Critoph

# Personal Introduction

**Bob Critoph**  
**University of Warwick**

Worked on adsorption cycles for nearly 30 years

Director of the i-STUTE

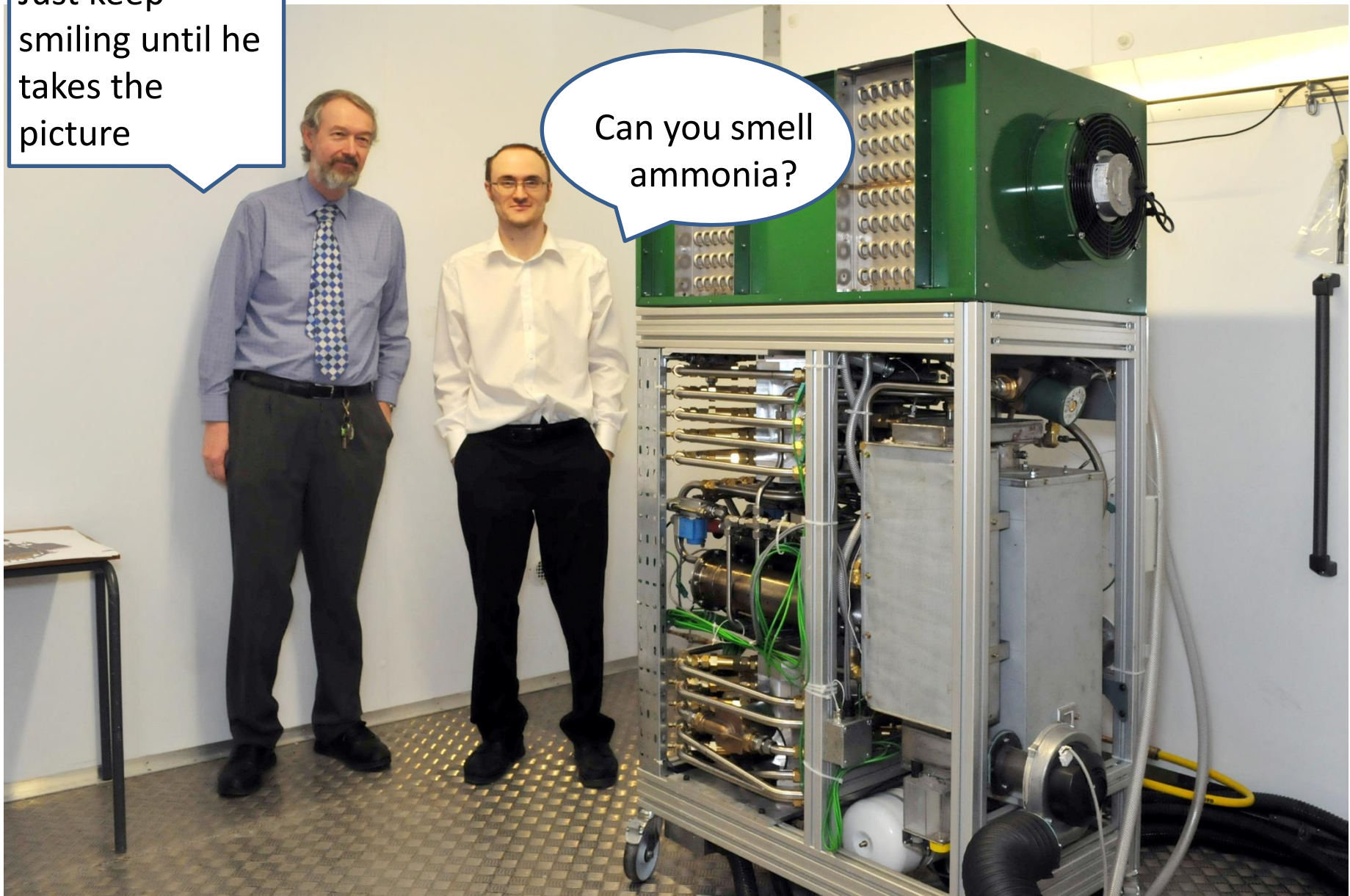
WP 4 Theme leader:

- Compact chemical heat store
- Compact latent heat energy storage
- Advanced electric heat pump
- Next generation gas/heat powered heat pump

Example of a previous project:

Just keep smiling until he takes the picture

Can you smell ammonia?



## CALEBRE – Domestic Gas Fired Heat Pump

# The future?



- Split system fits into standard wall-mounted boiler
- Fitted by plumber
- 3-year payback





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Angeles M. Rivero Pacho

# Personal Introduction - Background



**Angeles M. Rivero Pacho,**  
**PhD student at the University of Warwick**



UNIVERSITAT  
POLITÈCNICA  
DE VALÈNCIA

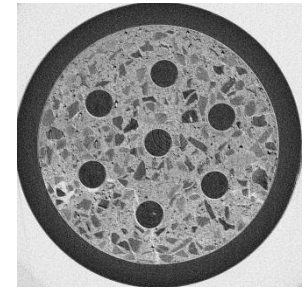
MEng in Industrial Engineering  
Valencia, Spain

*Cranfield*  
UNIVERSITY

MSc Design of Rotating Machines  
Cranfield, UK

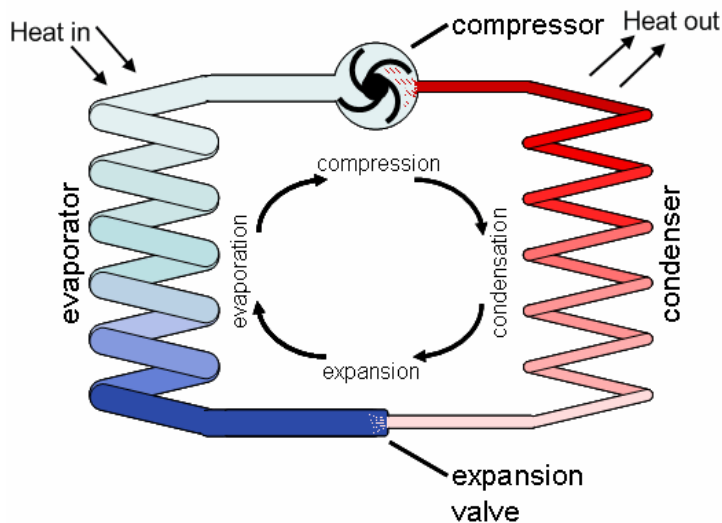
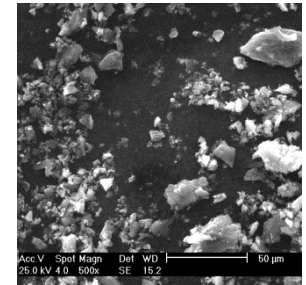
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## - Current work



### PhD topic: Development of a solid sorption heat pump (active carbon and ammonia)

- Cycle simulation
- Thermal conductivity tests
- Heat pump testing





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Steven J. Metcalf



# Personal Introduction - Background



**Steve J. Metcalf,**  
**Research Assistant at the University of Warwick**



MEng in Mechanical Engineering  
PhD in solid sorption heat pumps  
Research Assistant (5 years experience)  
University of Warwick, UK

Thank you!