

CAGS Symposium, Perth, 26th June, 2018

CAGS and I: 10 years --- funding, exchange and platform

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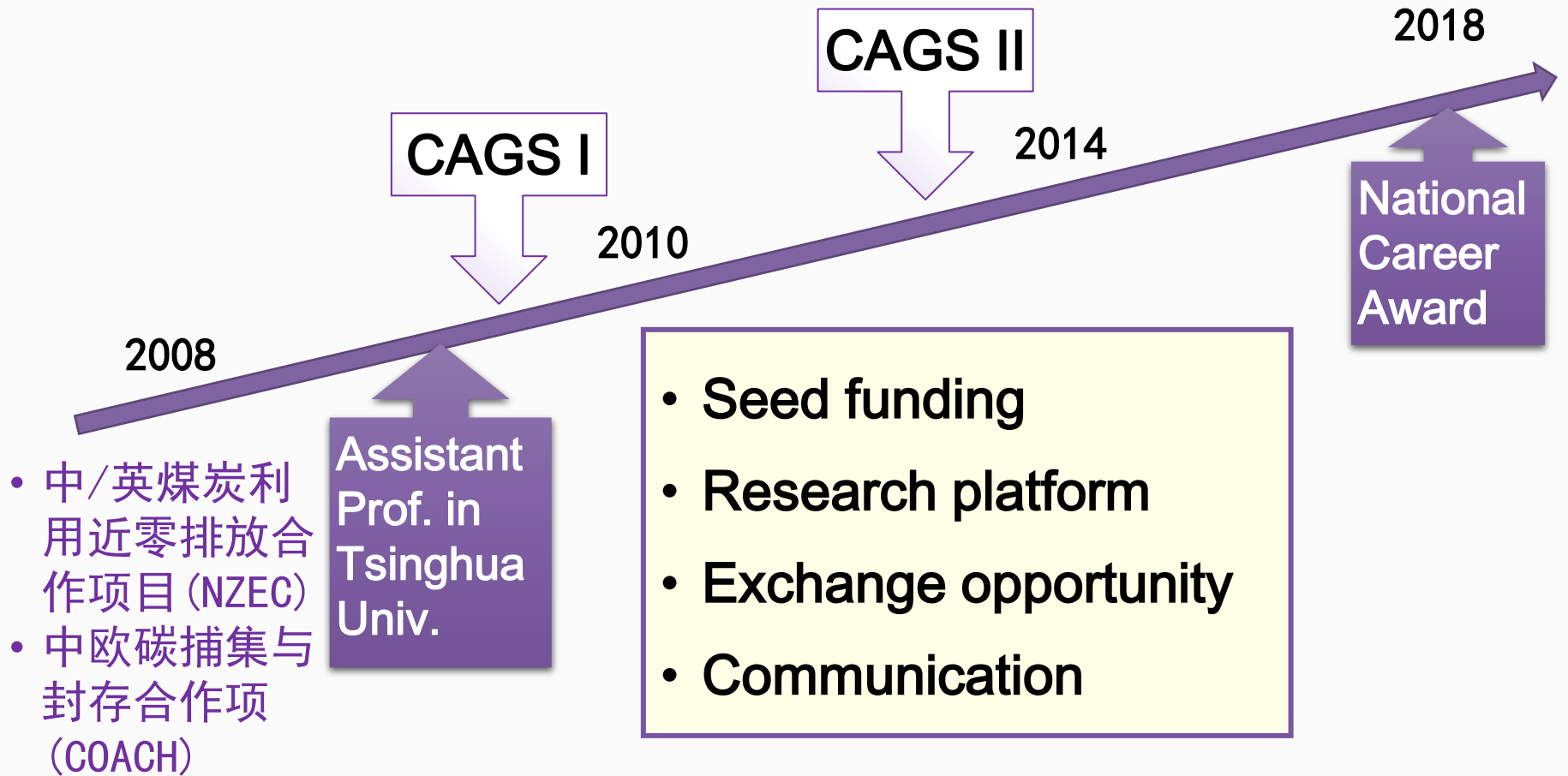


cags

China-Australia Geological Storage of CO₂
中澳二氧化碳地质封存



CAGS and I: 10 years



1. Seed funding

- NSFC,
- MOST,
- Sino-US cooperation
- CGS
- SinoPec
- Shenhua
- Shell
- BRGM

CAGS I:
Fundamental research on CO₂ geological storage, 2010

- NSFC,
- MOST,
- MOE,
- SinoPec,
- PetroChina
- Shell

CAGS II:
Feasibility analysis on CO₂ enhanced shale gas recovery, 2013

National Key Research Projects supported by MOST and NSFC

CAGS Platform:
(SinoPec, CAS, universities, etc.)

CCUS research in our lab

CO₂ Pipeline Transport and Leakage Characteristics



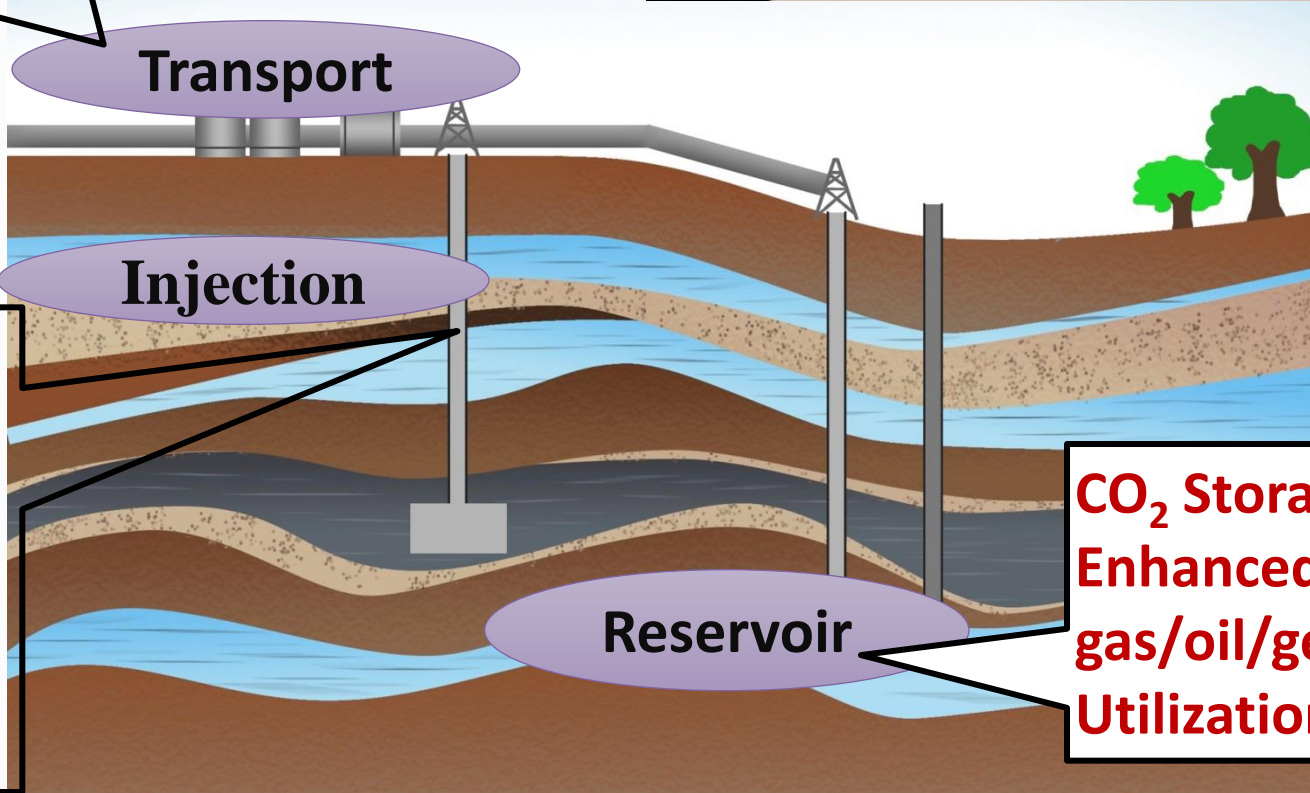
Transport

Injection

Reservoir

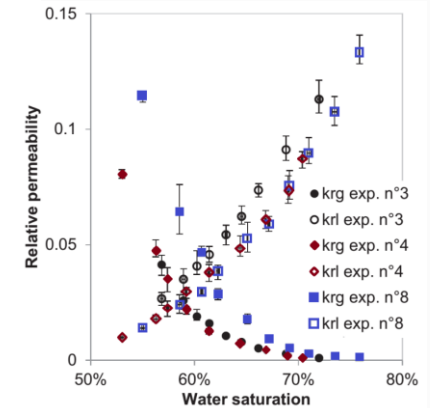
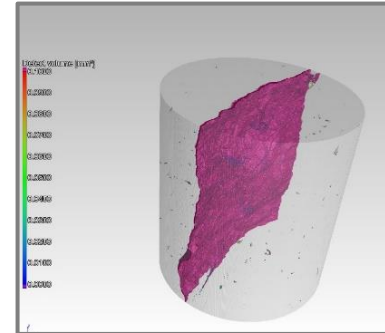
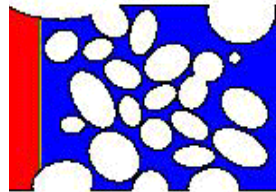
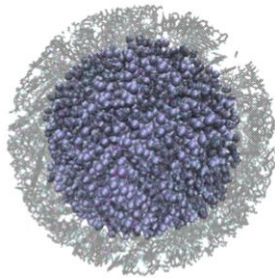
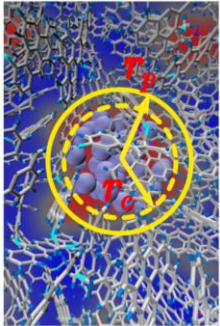
CO₂ injection through wellbore and Heat Transfer

CO₂ Storage and Enhanced Shale gas/oil/geothermal Utilization

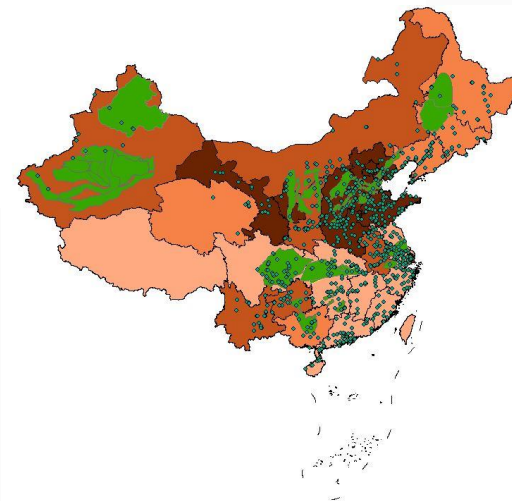
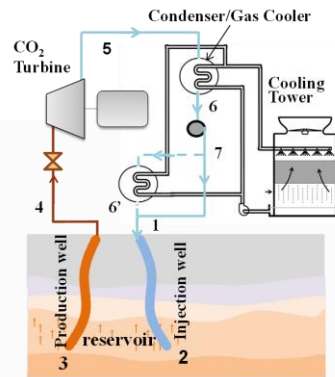
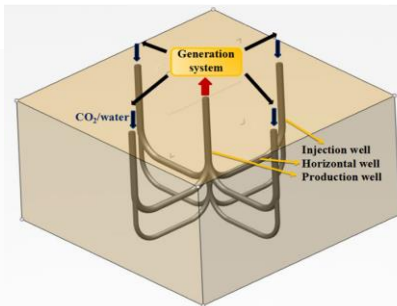


CCUS research in our lab

➤ Molecular-, Pore-, Core-scale



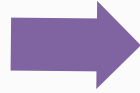
➤ Field-, Region-scale



2. Exchanges

Exchange 1

- To GA, working on **CO₂ geological storage**



Exchange 2

- To Monash University, working on **CO₂ geological utilization**



Exchange 3

- To University of Sydney, working on **CO₂ transport**



Luo Shu, Ph. D student, **6 months** supervised by Dr. Liuqi Wang, GA

Published **one journal paper**:
Effect of reactive surface area of minerals on mineralization trapping of CO₂ in saline aquifers. Petroleum Science, 9(3): 400-407, 2011

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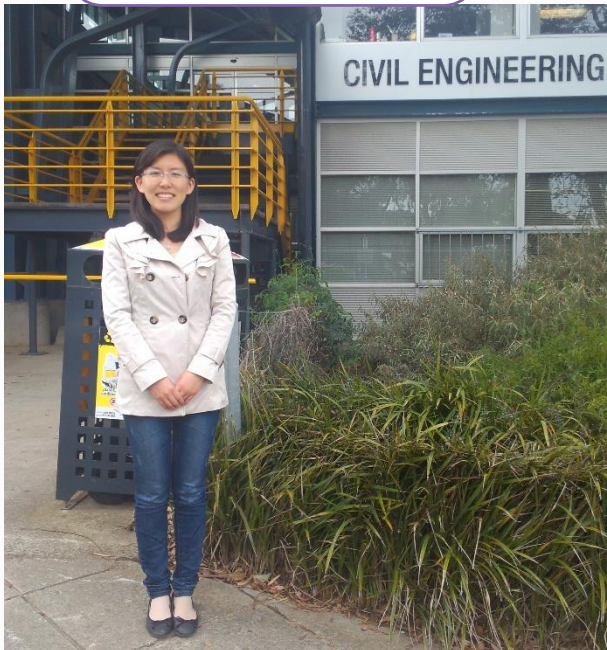
Exchange 2

- To Monash University, working on **CO₂ geological utilization**



Exchange 3

- To University of Sydney, working on **CO₂ transport**



Zhang Le, Ph. D student, **2 months** supervised by Prof. Ranjith PG, Monash University

Published **one conference paper**:

The 7th International Conference on Applied Energy – ICAE2015

Numerical simulations of mechanical effect on the fluid flow and heat transfer in Enhanced Geothermal Systems

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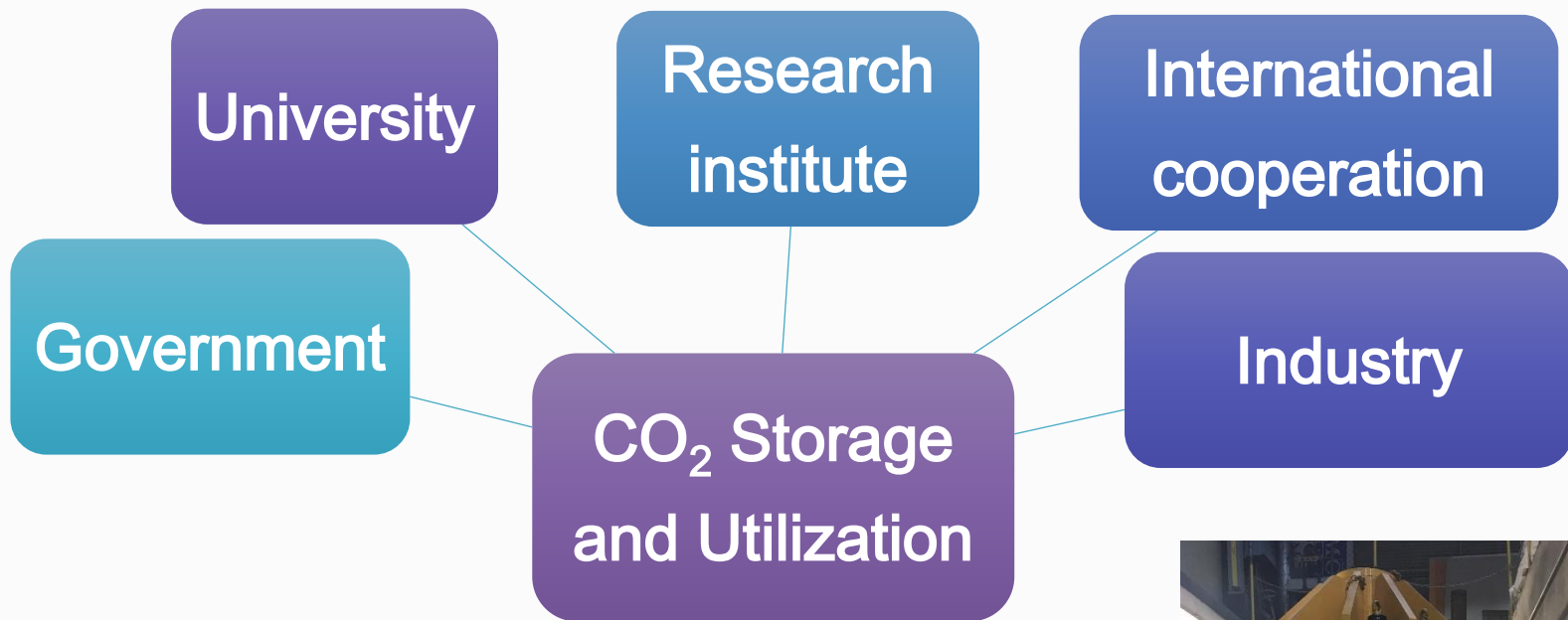


1 month, working with Prof. D. Wiley, University of Sydney

Accepted by **GHGT 14, Melbourne**, as an oral paper:

Investigations of dynamic phase changes in high-pressure pipelines during flexible CO₂ transport

3. National and international communication platform



Acknowledgement

- “Family” accompany with my research career
- GA, ACCA21, CGS.
- All partners and friends



**CAGS workshop 1
participants, 2010**

Looking forward to the next big step