China Australia Geological Storage of CO_2

中澳二氧化碳地质封存

CO_2 Geological Storage and Technology Summer School

21st – 25th August 2011

Sanya，Hainan Province，China

Hosts： Department of Social Development, Ministry of Science and Technology, P.R.China

The Administrative Center for China's Agenda 21

Department of Resources, Energy and Tourism, Australia

Geoscience Australia

Organizer： South China Sea Institute of Oceanology Chinese Academy of Sciences

中国21世纪议程管理中心 The Administrative Center for China's Agenda 21

Australian Government Geoscience Australia

中国科学院南海海洋研究所 SOUTH CHINA SEA INSTITUTE OF OCEANOLOGY, CHINESE ACADEMY OF SCIENCES

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Objectives: Summer school on CCS is planned for postgraduate students both from China and abroad. The goal of summer school is to improve the students' scientific understanding of CO_2 geological storage, and to help the students to engage in the field of CCS in the coming years.

Themes of Summer School:

（1） Overview of CO_2 geological storage
（2） Offshore Geological Storage and Capacity Assessment
（3） Offshore Site investigation and Engineering
（4） CCS Economics and CCS Readiness
（5） Simulation and storage capacity assessment
（6） Risk/Safety Assessment and Monitoring
（7） Demonstration Projects

Date: 21st – 25th August, 2011

Venue: NO.1 medium-sized conference room

Yuhai International Resort, Sanya, Hainan Province, China

About Sanya

Sanya lies at the southern tip of Hainan Island at Sanya Bay. Located at 18° 15' N latitude, it is about as far north of the Equator as the Island of Hawaii is. Though the administrative area (Sanya Prefecture) has a rough topography, the city itself is generally flat, lying on a parcel of land between low-level mountains to the north and the South China Sea. The area has a tropical wet and dry climate, featuring very warm weather all year around. Monsoonal influences are strong, with a relatively lengthy wet season and a pronounced dry season. The coolest month is January, at 21.6 °C (70.9 °F), while the hottest, unlike much of the rest of China, is June, at 28.8 °C (83.8 °F); the annual mean is 25.8 °C (78.4 °F). Water temperatures remain above 20 °C (68 °F) year-round.

Information

1. **Your badge is the only pass at this event. Please wear it throughout the course. If it is lost, please contact with the Secretariat.**
2. **Please make sure that your mobile phone is switched off or muted during the training. Do not make/answer phone calls in the conference room.**
3. **Smoking is not allowed in the conference room.**
4. **Please carry valuables.**
5. **If you check out, please give the key to the service desk of Yuhai International Resort.**
6. **Meals**

   Venue: YuHai Western restaurant (buffet)
   YuHai Chinese restaurant (Aug.22 Dinner)

   Time: Breakfast: 7:30-9:00
   Lunch: 12:00-13:30
   Dinner: 18:00-21:00

7. **Secretariat:**

Pengchun LI：	**13073083630**
Hui XIE：	**15018721736**
Secretariat' room:	**B1008**
Interphone number:	**2008**
Phone number:	**88918888 transfer to B1008**

Agenda

Day 1 Aug.21	All day	**Registration**	
	18:00-19:00	**Dinner(YuHai Western restaurant)**	
Day 2 Aug.22	**Opening Ceremony** **Chair:** Jiutian ZHANG		
	9:00-9:30	Sizhen PENG, *Deputy Director General, ACCA21* Rick CAUSEBROOK, *Project Leader, GA* Guanghao CHEN; *Guangzhou Branch of Chinese Academic of Science* Wenhuan ZHAN; *South China Sea Institute of Oceanology,CAS*	
	9:30-9:40	Group Photo	
	Session 1: Overview of CO_2 geological storage **Chair:** Andy NICOL; Jia LI		
	9:40-10:10	The context for CCS	Aleks KALINOWSKI *Geoscience Australia*
	10:10-11:00	Principles of CO_2 Geological Storage	Rick CAUSEBROOK *Geoscience Australia*
	11:00-11:20	Morning tea break	
	11:20-11:40	CCUS Activities in China	Li JIA *ACCA21*
	11:40-12:00	Questions	
	12:00-13:30	Lunch(YuHai Western restaurant)/Rest	
	Session 2: Offshore Geological Storage and Capacity Assessment **Chair:** Aleks KALINOWSKI; Liuqi WANG		
	14:00-14:30	An overview of offshore sedimentary basins in China and the potentiality and importance in CO_2 storage	Di ZHOU *South China Sea Institute of Oceanology, CAS*

	14:30-15:00	Storage potential of Australia' Offshore Basins	Rick CAUSEBROOK *Geoscience Australia*
	15:50-15:30	CO_2 Storage in Saline aquifers: The case of BohaiBay Basin	Zhonghe PANG *Institute of Geology and Geophysics, CAS*
	15:30-16:00	Afternoon tea break	
	16:00-17:30	Group Activity – Exercise 1	
	17:30-17:40	Teacher's Summary	
	18:00-21:00	Reception Dinner (YuHai **Chinese** restaurant)	
Day 3 Aug.23	**Session 3: Offshore Site investigation and Engineering** **Chair:** Wanwan HOU; Bin GONG		
	9:00-9:30	Geophysical and engineering methods for offshore CO_2 storage	Zhen SUN *South China Sea Institute of Oceanology, CAS*
	9:30-10:00	Engineering of Offshore platform, drilling, logging and testing in oil exploration and development	Hemin LIN *CNOOC Ltd.–Shenzhen*
	10:00-10:30	CO_2 hydrate for ocean carbon storage: formation and estimation	Qi LI *Institute of Rock and Soil Mechanics, CAS*
	10:30-11:00	Morning tea break	
	11:00-11:30	Group Activity – Exercise 1 (continued)	
	11:30-12:00	Group's presentation	
	12:00-12:10	Teacher's Summary	
	12:10-13:40	Lunch/Rest(YuHai Western restaurant)	
	Session 4: CCS Economics and CCS Readiness **Chair:** Jianhua LIU; Zhonghe PANG		
	14:00-14:40	CCS Economic Assessment	Wanwan HOU *University of New South Wales; CO_2CRC*

	14:40-15:20	Economic assessment of CCS	Lin GAO Institute of Engineering Thermophysics, CAS
	15:20-16:00	The Economics and Financing of CO_2 Capture and Storage	Xi LIANG *Exeter University, UK*
	16:00-16:30	Afternoon tea break	
	16:30-17:10	Introduction to CO_2 Capture Process	Jia LI *LinksChina Ltd., henzhen*
	18:00-21:00	Dinner(YuHai Western restaurant)	
Day 4 Aug.24	**Session 5: Simulation and storage capacity assessment** **Chair:** Saju MENACHERRY; Zhen SUN		
	9:00-9:30	CO_2-Water-Rock interactions for CO_2 geological storage	Zhonghe PANG *Institute of Geology and Geophysics, CAS*
	9:30-10:00	CO_2 storage capacity and injectivity analysis through dynamic simulation	Liuqi WANG *Geoscience Australia*
	10:00-10:30	A General Purpose Research Simulator (GPRS) for Numerical Simulation On CO_2 Sequestration	Bin GONG *Peking University*
	10:30-11:00	Morning tea break	
	11:00-11:30	Group Activity - Discussion 1	
	11:30-11:50	Group's presentation	
	11:50-12:00	Teacher's Summary	
	12:00-13:30	Lunch/Rest(YuHai Western restaurant)	
	Sightseeing tour of NanShan, Sanya		
	13:30-18:00	13:30 Depart from hotel to Nanshan (South Mountain) 14:30-18:00 Sightseeing tour of Nanshan(South Mountain) 18:00 Back to hotel	
	18:30-21:00	Dinner(YuHai Western restaurant)	
Day 5	**Session 6: Risk/Safety Assessment and Monitoring** **Chair :** Liuqi WANG; Saju MENACHERRY		

Aug.25	9:00-9:30	Risk evaluation and monitoring	Rick CAUSEBROOK *Geoscience Australia*
	9:30-10:00	Environmental safety and risk assessment	Andrew NICOL *GNS Science*
	10:00-10:30	Monitoring and Assessment of CO_2 seabed sequestration in China	Zhendong ZHANG *National Marine Environmental Monitoring Center*
	10:30-11:00	Morning tea break	
	11:00-11:50	Group Activity – Exercise 2	
	11:50-12:20	Group's presentation 5	
	12:20-12:30	Teacher's Summary	
	12:30-14:00	Lunch(YuHai Western restaurant)/Rest	
	Session 7: Demonstration Projects **Chair :** Rick CAUSEBROOK; Zhen SUN		
	14:00-14:40	The CO_2CRC Otway Project Stages 1 and 2	Saju MENACHERRY *CO_2CRC, The University of Adelaide*
	14:40-15.20	Geological Storage Potential Evaluation and Site Selection Method in Deep Saline Aquifers	Yujie DIAO *Center for Hydrogeology and Environmental Geology，CGS*
	15:20-16:00	CCS Projects in Western Australia: Gorgon and Collie Hub	Jianhua LIU Department of Mines and Petroleum, Western Australia
	16:00-16:30	Afternoon tea break	
	16:30-17:00	Group Activity 6 - Discussion 2	
	17:00-17:20	Group's presentation	
	17:20-17:30	Teacher's Summary	
	17:30-18:00	Closing Remarks	
	18:00-21:00	Closing Dinner(YuHai Western restaurant)	

Participant List

Name	Gender	Organisation	Position
Sizhen PENG	Male	The Administrative Center for China's Agenda 21	Deputy Director General
Jiutian ZHANG	Male	The Administrative Center for China's Agenda 21	Deputy Director
Li JIA	Female	The Administrative Center for China's Agenda 21	Senior Engineer
Rick CAUSEBROOK	Male	Geoscience Australia	Project Leader
Aleks KALINOWSKI	Female	Geoscience Australia	Adviser, International CCS
Jessica GURNEY	Female	Geoscience Australia	Project Manager
Liuqi WANG	Male	Geoscience Australia	Senior Reservoir Modeller
Guanghao CHEN	Male	Guangzhou Branch of Chinese Academic of Science	Researcher Subdecanal
Wenhuan ZHAN	Male	South China Sea Institute of Oceanology, CAS	Researcher，Deputy Director
Huilong XU	Male	South China Sea Institute of Oceanology, CAS	Researcher，Deputy Director
Saju MENACHERRY	Male	CO_2CRC, The University of Adelaide	Senior Research Fellow
Jianhua LIU	Female	Department of Mines and Petroleum, Western Australia	Petroleum Engineering Specialist
Andrew NICOL	Male	GNS Science	Principal Scientist
Wanwan HOU	Female	University of New South Wales; Cooperative Research Centre for Greenhouse Gas Technologies	Researcher
Di ZHOU	Female	South China Sea Institute of Oceanology, CAS	Professor
Qi LI	Male	Institute of Rock and Soil Mechanics, CAS	Professor
Yujie DIAO	Male	Center for Hydrogeology and Environmental, CGS	Assistant Researcher
Zhonghe PANG	Male	Institute of Geology and Geophysics, CAS	Professor
Lin GAO	Male	Institute of Engineering Thermophysics, CAS	Professor
Zhendong ZHANG	Male	National Marine Environmental Monitoring Center	Research Associate

Name	Gender	Organisation	Position
Zhen SUN	Female	South China Sea Institute of Oceanology, CAS	Professor
Bin GONG	Male	Peking University	Professor
Xi LIANG	Male	Exeter University, UK	Lecturer
Jia LI	Female	LinksChina Ltd., Shenzhen	Research Associate
Hemin LIN	Male	CNOOC Shenzhen Ltd.	Senior Engineer
Miao JING	Male	Institute of Rock and Soil Mechanics, Chinese Academy of Sciences	Graduate student
Jishun YAN	Male	National Marine Environmental Monitoring Center	Graduate student
Haiyan GENG	Female	CNPC Research Institute of Safety & Environment Technology	Graduate student
Yi XU	Male	China University of Petroleum (Beijing)	Graduate student
Ke CAO	Male	Qingdao Institute of Marine Geology	Assistant Researcher
Hongchuan MAO	Male	China University of Mining and Technology（Beijing）	Graduate student
Xiangcheng YUAN	Male	South China Sea Institute of Oceanology, Chinese Academy of Sciences	Assistant Researcher
Jianxin SONG	Male	China Institute for Geo-Environment Monitoring	Engineer
Jun ZHANG	Male	Institute of Coal Chemistry, Chinese Academy of Science	PhD
Yang ZHANG	Male	China University of Petroleum (QingDao)	Graduate student
Qiuyun HU	Female	China Geological Survey	master
Yanlong SUN	Male	Institute of Geology and Geophysics, Chinese Academy of Sciences	PhD
Tao PANG	Male	Tsinghua University	Graduate student
Feng LUO	Male	Tsinghua University	PhD
Fangyuan ZHONG	Female	LinksChina	English interpreter
Guiju LI	Female	The Wuhan Branch of The National Science Library, CAS	Assistant Researcher
Shan JIANG	Male	The Wuhan Branch of The National Science Library, CAS	Assistant Researcher

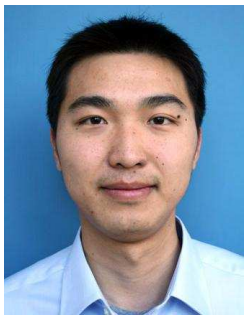
Name	Gender	Organisation	Position
Yinghong LIU	Female	CNOOC New Energy Research Center	Project Manager
Gengbiao QIU	Male	Center for Hydrogeology and Environmental Geology, China Geology Survey	Assistant Researcher
Zongxiang XIU	Male	The First Institute of Oceanography, State Oceanic Administration	postdoctoral
Yin HUANG	Female	Chinese Academy of Sciences Guangzhou Institute of Energy Conversion	Assistant Researcher
Cai LI	Female	Beijing Normal University	engineer
Qianqian DING	Female	CNOOC Research Institute	Engineer
Duanyang XU	Male	China Science and Technology Information Institute	student
Brian Joseph MARING	Male	Monash University Australia	student
Augustine NTIAMOAH	Male	Monash University	student
Jillian Doleng YONUG	Female	University of Western Australia	student
Keiran Ryan GALVIN	Male	Department of Mines and Petroleum. Government of Western Australia	student
Lisa Jade GAVIN	Female	University of Western Australia	student
Jen Deng LEE	Male	Australian National University	student
Paul STENHOUSE	Male	Australian National University	student
Zeeshan MOHIUDDIN	Male	The University of Adelaide	student
Cuimei ZHANG	Female	South China Sea Institute of Oceanology, CAS	Secretariat
Fucheng LI	Male	South China Sea Institute of Oceanology, CAS	Secretariat
Hui XIE	Male	South China Sea Institute of Oceanology, CAS	Secretariat
Jialong PENG	Male	South China Sea Institute of Oceanology, CAS	Secretariat
Pengchun LI	Male	South China Sea Institute of Oceanology, CAS	Secretariat
Yunfan ZHANG	Female	South China Sea Institute of Oceanology, CAS	Secretariat
Zhangwen WANG	Male	South China Sea Institute of Oceanology, CAS	Secretariat
Zhongxian ZHAO	Male	South China Sea Institute of Oceanology, CAS	Secretariat

Speakers Information

	**Name:**	**Jia LI**
	Professional Title:	**Research Associate**
	Research Field:	**CO_2 Capture Technologies and Capture Ready Design**
	e-mail:	**j.li@imperial.ac.uk**

Biography

Li Jia is a research associate at Imperial College London, the co-founder of Linkschina Investment Advisory Co. Ltd.; she has also participated in the establishment of the CCS Information Hub – www.CaptureReady.com. With in-depth understanding for both pre-combustion capture and post-combustion capture, she is familiar with the process design of various carbon capture systems, as well as designing capture ready options for power plants. In addition, she has participated in the IEA capture retrofit study for conventional thermal power plant and a number of international CCS research projects.

	**Name:**	**Xi LIANG**
	Professional Title:	**Lecturer in Energy Policy**
	Research Field:	**Economics and Finance of CCS Technologies, Energy Economics and Energy Finance**
	e-mail:	**x.liang@exeter.ac.uk**

Biography

Dr. Liang Xi is now a Lecturer in Energy Finance and Energy Economics at University of Exeter. He finished his PhD study at the University of Cambridge before joining Exeter. He has participated in a number of international collaboration projects in carbon capture and storage. Dr. Liang holds CFA (Chartered Financial Analyst) and FRM (Financial Risk Manager) charters.

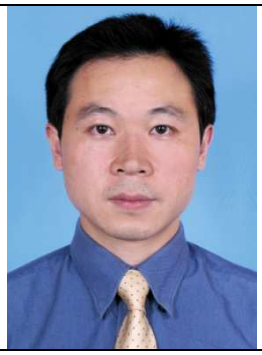
	**Name:**	**Jianhua Liu**
	Professional Title:	**Petroleum Engineer Special Projects**
	Research Field:	**Petroleum Engineering and CCS**
	e-mail:	**Jianhua.liu@dmp.wa.gov.au**

Biography

Jianhua holds BE and Ph.D. degrees from the University of Petroleum, China, and the University of New South Wales, Australia, respectively.

Her current position is Petroleum Engineer Special Projects with the Department of Mines and Petroleum, Western Australia. Her duties involve strategic aspects of the branch's activities that require special attention and support, such as CO_2 geo-sequestration. She manages and reviews outsourced studies. She is also involved in the technical assessment on application for declaration of location, retention leases, field development plan, and production licenses. Her other main role is in monitoring oil and gas field production.

She'd worked in Shengli Petroleum Administration Bureau, CNPC before she came to Australia. Her career started as an assistant reservoir engineer and progressed to a senior reservoir engineer. She worked in the area of oil field development, reservoir engineering, petroleum geology, and enhanced oil recovery.

	**Name:**	**Heming LIN**
	Professional Title:	**Senior Geologist**
	Research Field:	**Offshore petroleum exploration**
	e-mail:	**linhm_sk@cnooc.com.cn**

Biography

From 1990 to 1997: department of geology, Nanjing University, master of science

From 1997 to Present : CNOOC Shenzhen Ltd.

Name:	**Aleksandra Kalinowski**
Professional Title:	**Project leader- International CCS Geoscience Australia**
Research Field:	**Geological Storage of CO_2**
e-mail:	**Aleks.Kalinowski@ga.gov.au**

Biography

Aleks Kalinowski is a geologist working in the field of geological storage of carbon dioxide.

Aleks completed her geology degree at the Australian National University in Canberra and joined Geoscience Australia in late 2001. At Geoscience Australia Aleks has worked in economic geology and predictive mineral discovery, completed the GA Graduate Program, and since 2005 has been working on geological storage of CO_2. In 2006-7 Aleks worked on various aspects of CCS at the Massachusetts Institute of Technology at the Kennedy School of Government at Harvard University in Boston. In late 2007 Aleks returned to GA and lead the International CCS Project (including CAGS) at GA.

Currently Aleks is part of the International CCS Project team at GA and is undertaking postgraduate study in the field of geological storage with GA and the University of New South Wales.

Name:	**Rick Causebrook**
Professional Title:	**Project leader- International CCS Geoscience Australia**
Research Field:	**Geological Storage of CO_2**
e-mail:	**rick.causebrook@ga.gov.au**

Biography

Rick Causebrook is a petroleum exploration geologist with over 30 years experience working in the UK, USA, and Australia on world-wide projects. He joined Geoscience Australia in 2004 and until recently was project leader of the Greenhouse Gas Storage project. He is now leader of the International Greenhouse Gas Storage Team under which the collaborative China-Australia Geological Storage project is co-managed.

His work at Geoscience Australia has involved leading the studies into the geological storage of greenhouse gases in Australian basins and recently completed a national assessment of the storage potential of all Australian Basins which will guide the Australian Government in the acquisition of new data to assist companies interested in geological storage in making their investment decisions.

Name:	**Wanwan Hou**
Professional Title:	**Petroleum Economics**
Research Field:	**Petroleum Economics, CCS and CO_2 abatement economics**
e-mail:	**w.hou@unsw.edu.au**

Biography

Research Assistant, School of Petroleum Engineering, University of New South Wales, Sydney, Australia, working for the Cooperative Research Centre for Greenhouse Gas Technologies (CO_2CRC) on the economics of Carbon Capture and Storage (CCS) and alternative CO_2 abatement technologies.

Tutor and casual lecturer, University of New South Wales (2008-Present)

Casual consulting work, Petroleum Economics Pty Limited (2007-2010) Economic modeling and research for oil and gas industry consulting projects.

Research Intern, Schlumberger Oilfield Australia Pty Ltd (2009)

Casual Interpreter, University of New South Wales (2006)

Intern, China Petroleum & Chemical Corporation (SINOPEC) (2006)

Major Achievements and Honours

Wanwan is a research assistant in the University of New South Wales in Sydney, Australia. She is working for the Cooperative Research Centre for Greenhouse Gas Technologies (CO_2CRC) on the economics of Carbon Capture and Storage (CCS) and alternative CO_2 abatement technologies.

Wanwan made a major contribution to a project for the Asia-Pacific Economic Cooperation (APEC) which provided an assessment of the capture and storage potential of CO_2 co-produced with Natural gas in South-East Asia. She also participated in the analyses of the costs of CO_2 transport and injection in Australia for the Carbon Storage Taskforce.

Wanwan has built economic models for generic oil and gas projects in a number of countries in South-East Asia. She has made a key contribution to the oil industry's understanding of the economic effects of petroleum fiscal terms in the Asia-Pacific region on field exploration and development.

Wanwan has also undertaken research and carried out economic analyses for oil and gas industry consulting projects.

Name:	**Zhendong ZHANG**
Professional Title:	**Associate Researcher**
Research Field:	**Marine Ecology**
e-mail:	**zdzhang@nmemc.gov.cn**

Biography

张振冬，男，1977 年出生，博士，副研究员。2000 年毕业于中国海洋大学, 2005 年毕业于中科院海洋研究所，获博士学位。2005 年至今在国家海洋环境监测中心生态室工作，从事鱼类免疫学和海洋生态学研究工作。主要参加了先后主持了国家海洋局近岸海域生态环境重点实验室开放基金项目 2 项；国家自然科学基金（青年）1 项，国家海洋局青年基金项目 1 项。

Major Achievements and Honours

主持和参加了课题工作 10 项，已发表论文 13 篇（作为第一作者 9 篇，SCI 和 EI 收录 4 篇）；申请发明专利 2 项，参与编写海洋灾害调查技术规程 1 个。

Name:	**Liuqi WANG**
Professional Title:	**Reservoir Modeler**
Research Field:	**Reservoir static modeling and dynamic simulation**
e-mail:	**Liuqi.wang@ga.gov.au**

Biography

PhD of Petroleum Engineering (2000), Principal scientist at Geo Visual Systems Australia Pty Ltd (2000-2003), Research fellow at the University of New South Wales (2004-2007), Senior petroleum geoscientist/engineer/reservoir modeler at Geoscience Australia

Major Achievements and Honours

Publications on sedimentology and sequence stratigraphy, petroleum reservoir modeling and dynamic simulation

Name:	**Zhen SUN**
Professional Title:	**Research Scientist**
Research Field:	**Marine Geology Tectonics and Petroleum**
e-mail:	**zhensun@scsio.ac.cn**

Biography

Sun, Zhen, born in 1971. She graduated from Dept of Earth Sciences, Nanjing University and obtained her B.S. and M.S. degree. In 2000, she graduated from China Universities of Geosciences (Wuhan) and obtained her Ph.D. degree. Thereafter, she got the assistant professor position in South China Sea Institute of Oceanology (SCSIO) as a marine geologist. She participated in some 973 projects and Innovative projects studying the evolution and hydrocarbon potential in SCS. Now, she has been in charge of three NSFC projects, 1 Innovative projects from Chinese Academy of Sciences, co-leading 1 key important project of NSFC, in charge of two 12-5 petroleum projects. She has published around 50 papers with her co-authors.

Name:	**Yujie DIAO**
Professional Title:	**Hydrogeologist**
Research Field:	**CO_2 geological storage survey and evaluation**
e-mail:	**diaoyujie1983@163.com**

Biography

Diao Yujie, male, born in 1983, a hydrogeologist of Center for Hydrogeology and Environmental Geology, China Geological Survey (CGS). Main research area is the geological storage of CO_2 geological survey and research, including “Evaluation of CO_2 Geological Storage Potential and Demonstration Projects of China” implemented by CGS and “China-Australia Cooperation Project of Geological Storage of CO_2” implemented by the Administrative Centre for China’s Agenda21.

	**Name:**	**Zhonghe PANG**
	Professional Title:	**Professor**
	Research Field:	**CO_2 geological storage survey and evaluation**
	e-mail:	**z.pang@mail.iggcas.ac.cn**

Biography

南京大学：水文地质学教师(1984-1985)
中国科学院地质研究所：地热地质学助研（1988），副研（1992），研究员（1995），地热研究室主任（1995），博士生导师（1996）
中国科学院地质与地球物理研究所：水文地质学研究员（1999），固定研究员（2007）
国际原子能机构（IAEA）：同位素地球化学家（1997-1998），同位素水文学家（2000-2005）
中国科学院研究生大学兼职教授，主讲 “同位素水文学”（2006）
中国石油大学（华东）兼职教授（2010）

Major Achievements and Honours

1993 年获中国地质学会“青年地质科技奖-金锤奖”;
1994 年获中共中央组织部、国家人事部和中国科协“中国青年科技奖”;
1993 年起获国务院颁发的“政府特殊津贴”;
2005 获诺贝尔和平奖（Nobel peace prize）集体奖（作为 IAEA 成员）;
2007 年获国际地球化学协会（IAGC）“水岩相互作用之友”称号。

	**Name:**	**Bin GONG**
	Professional Title:	**Associate Researcher**
	Research Field:	**Numerical Simulation**
	e-mail:	**gongbin@pku.edu.cn**

Biography

Bin gong is an associate professor in Energy & Resources Engineering Department in Peking University since 2008. He holds a PhD degree in Petroleum Engineering from Stanford University, a Master and Bachelor degree in Petroleum Engineering from China University of Petroleum. Bin worked for Chevron from 2006 to 2011 as a research scientist and CSI Energy Techniques from 2000 to 2003 in various positions including reservoir engineer, chief scientist and vice president.

Name:	**Andy Nicol**
Professional Title:	**Principal Scientist, GNS Science**
Research Field:	**CCS risk assessment, faults and fluid flow, Earth deformation processes**
e-mail:	**a.nicol@gns.cri.nz**

Biography

Current Position

Principal Scientist and Structural Geologist, GNS Science, Lower Hutt, New Zealand
Member CO_2CRC fault geomechanics and Risk Assessment teams
Adjunct Assoc Prof University of Canterbury (NZ), and University College Dublin (Ireland)

Key Prior Positions

Senior Research Scientist, University of Liverpool, United Kingdom (1992-1995)
Research Fellow, University of Canterbury, New Zealand (1991-1992)

Major Achievements and Honours

Most cited paper Journal of Structural Geology 2005-2010.
Best Poster NZ Petroleum Conference 2010
Best Poster CO_2CRC Symposium 2010
New Zealand Geological Society McKay Hammer Award 2008
Journal Geosciences Editorial Board 2011-
The Open Geology Journal Editorial Advisory Panel 2007-
NZ Journal of Geology and Geophysics Editorial Panel 2004-2010
Best Technical Paper NZ Petroleum Conference 2004
Recipient of Royal Society of NZ Marsden Fund award 2000-2003, 2004-2007
Royal Society of NZ Marsden Fund Earth Sciences and Astronomy Committee 2000-2002.
FRST Top Achiever Doctoral Scholarships Committee 2002-2009
NZ Science and Technology Post-Doctoral Fellow 1995-1997
University Grants Committee Post Graduate Scholarship 1988-91
New Zealand Geological Society Member 1985-

Name:	**Saju Menacherry**
Professional Title:	**Senior Research Fellow**
Research Field:	**Sedimentology, Reservoir Characterisation and Carbon Dioxide Geo-Sequestration**
e-mail:	**smenacherry@asp.adelaide.edu.au**

Biography

Academic Background

Doctor of Philosophy (Ph.D.) – Australian School of Petroleum, The University of Adelaide, Australia, 2008.

Postgraduate Diploma – Personal Management and Industrial Relations, Annamalai University, India, 1994.

Master of Science (M.Sc.) – Geology, The University of Kerala, Kerala, India, 1991.

Bachelor of Science (B.Sc.) – with Bronze Medalist, Majoring in Geology with Chemistry and Geostatistics as subsidiaries, The University of Calicut, Kerala, India, 1989.

Professional Work History – Summary

(2008-Present)Senior Research Fellow, Reservoir Characterisation Scientist, CO_2CRC (CRC for Greenhouse Gas Technologies), Australia.

(2006-2008) Reservoir Geologist, Whistler Research Pty Ltd., Australia.

(2003-2006) PhD Candidate, Australian School of Petroleum, University of Adelaide, Australia.

(2002-2003) Quality Assurance Chemist, Mobil Refining Australia Pty Ltd. Adelaide, Australia.

(2000-2002) Geochemist, Penrice Soda Products Pty Ltd., Adelaide, Australia.

(1997-2000) Sr. Exploration Geologist. Whiterock Minerals Pty Ltd., India.

(1992-1997) Development Geologist, ABN Minerals P Ltd., India.

(1991-1992) Sedimentology guest lecturer and teaching assistant, Kerala University, India.

Major Achievements and Honours

Runner-up best poster presentation in AAPG International conference in Perth (2006).

PhD project is funded by an industry scholarship from ExxonMobil Upstream Research, Houston.

Bronze medal (3rd Rank) in Bachelor of Science Geology, University of Calicut, India.

Name:	**Di ZHOU**
Professional Title:	**Professor**
Research Field:	**Geology**
e-mail:	**zhoudiscs@scsio.ac.cn**

Biography

Di Zhou, PhD from the University of Kansas in 1984 and now a professor at the South China Sea Institute of Oceanology, Chinese Academy of Sciences. She served as the vice director of the institute, council member of the International Association for Mathematical Geologists, secretary of the International Committee of Quantitative Stratigraphy, etc. Also she served as a member of the standing committee and vice chairman of the Committee for Population, Resources, and Environment in the Guangdong Provincial Political Consultant Committee. In 2003-2005 she worked as a lead author of Chapter 5, the IPCC Special Report “Carbon Dioxide Capture and Storage”. Currently she is leading the research project “CCS Readiness in Guangdong Province”.

Name:	**Li JIA**
Professional Title:	**Senior Engineer**
Research Field:	**Climate Change**
e-mail:	**jiali@acca21.org.cn**

Biography

Li JIA is a program officer / Senior Engineer of The Administrative Centre for China's Agenda 21 (ACCA21). From 2006-2009, she works on the international cooperation training program about CDM, environmental management and sustainable development, which cooperate with the government of Chinese, Japanese, and Italian. She is also involved in the program of China-Australia Geological Storage of CO2, and working with the Chinese and Australian CAGS teams. She takes part in the national key R&D program on technology research and demonstration of address climate change.

Name:	**Lin GAO**
Professional Title:	**Professor**
Research Field:	**Clean Coal Technology**
e-mail:	**gaolin@mail.etp.ac.cn**

Biography

Dr. Lin GAO was born in 1975. After graduated from North China Electricity and Power University in 1997, he got his bachelor's degree in the field of Thermal Power Engineering of Power Plant. And at the same year, he entered the Institute of Engineering Thermophysics, Chinese Academy of Sciences. Under the supervision of Professor Hongguang JIN, he got his doctor's degree in 2005, whose doctor thesis is the innovation of coal-based polygeneration system. In this work, he clarified the basic principle for integration of polygeneration system, which is systematically illuminated as "cascade conversion of material according to composition", "cascade utilization of energy according to energy level" and "integration of clean fuel production and pollutants control". Accordingly, a novel coal based polygeneration system combining the power generation and liquid fuel (methanol) production in sequential configuration, especially adopting the partial-recycle methanol synthesis scheme without CO/H_2 adjustment process, is proposed, whose primary energy saving can reach 15%. And then, the polygeneration system with post-synthesis CO_2 captured is integrated, which can recover the 70% of CO_2 with nearly zero penalty. More than 40 scientific papers had been published in the last 5 years.

His major interests focus on the innovation of environmental friendly energy systems such as polygeneration system with CO_2 capture, the renewable energy system, and so on; comparisons and analyses of economic character and adaptability of different CCS technologies; and CCS route map suitable for specific conditions of China.

To the present, he had been involved in several international cooperation projects including Cooperation Action within CCS China- EU (COACH), Support to regulatory activities for CO_2 capture and storage ($STRACO_2$), and Near Zero Emissions Coal Initiative (NZEC), Supported by Defra, UK.

Name:	**Qi LI**
Professional Title:	**Professor**
Research Field:	**Underground storage; environmental remote sensing and risk assessment**
e-mail:	qli@whrsm.ac.cn

Biography

Qi Li holds a BS in earth sciences with diploma of minor programme on computer science from Nanjing University, China (1995), and in 1998 he received a MS in hydrogeology and engineering geology from the same University. In 2004, he received a Ph.D. in civil engineering from Ibaraki University, Japan. Before joining the faculty of the Institute of Rock and Soil Mechanics (IRSM), Chinese Academy of Sciences, Wuhan, China, he has been a member of Geological Survey of Japan, Tsukuba, from 2005 to 2009.

Dr. Li is now the Research Professor of CCS Research Group at IRSM; he is a geoscientist with expertise in the fields of hydrogeology and engineering mechanics. The focus of Prof. Li's research is to understand and use laboratory and numerical tools to design novel subsurface disposal processes and site monitoring systems on different temporal and spatial scales. His research is very interdisciplinary in nature and brings together the fields of hydrogeology, environmental geotechnics, mathematical mechanics, biogeochemistry and remote sensing.

His researches in the CCS field mainly include mechanical stability of disposal reservoirs, multiphase flow, coupled processes, and risk monitoring. The title of his doctorial dissertation is Numerical Simulation and Assessment on Stabilities of CO_2 Geological Sequestration.

Major Achievements and Honours	教育部科技进步二等奖 1 项

The introduction of South China Sea Institute of Oceanology, CAS

Founded in January 1959, the South China Sea Institute of Oceanology (SCSIO) is one of the largest marine research institutes in China, and one of the knowledge innovation institutes under the Chinese Academy of Sciences (CAS). There are 481 staff members, including 60 senior researchers, 60 Ph. D. advisers, 6 pluralistic academician and 18 members of the "Hundred Talents Program" under the CAS (three of them are awarded "National Outstanding Young Scientists Grants"). SCSIO is also a postdoctoral research station, with over 50 postdoctoral research fellows and visiting scientists. In addition, SCSIO offers six M.S. programs and five Ph.D. programs in Marine Biology, Physical Oceanography, Marine Geology, Marine Chemistry and Environmental Science to nearly 300 graduate students.

The research at SCSIO focuses on the interaction among hydrosphere, lithosphere, atmosphere, and biosphere as well as their structures and evolutions in the tropical marginal seas, the control and influence of these processes on the natural resources and environmental changes, and the development of a unique model for the South China Sea to understand its environment and to exploit its marine resources. Working towards the national strategic goal, "To Exploit the Sea Using Science and Technology," and the safeguarding of the national marine rights and interests, SCSIO has engaged in a scientific endeavor and technology enterprise in the areas of marine mineral and biological resources, marine engineering, and marine environment appraisal and forecast. These efforts bring foundational, strategic, and visionary contributions to the development of marine economy and the safeguarding of the national marine rights and interests.

The key disciplinary areas at SCSIO are Tropical Marine Environmental Dynamics and Ecosystem, Marginal Sea Geological Evolution and Energy Resources, Sustainable Utilization of Tropical Marine Biological Resources, and Monitoring of Marine Environment. SCSIO is the home of the CAS's Key Laboratories of Tropical Marine Environmental Dynamics, Marginal Sea Geology (co-founded by Guangzhou Institute of Geochemistry), and Sustainable Tropical Marine Biology Resources that includes the Guangdong Province's Key Laboratories of Marine Drugs, and Applied Marine Biology. SCSIO is also the home of the Open Laboratory of Marine Observation and Research. There are three other departments and the Center for Marine Environment Engineering.

SCSIO is featured by the Hainan Tropic Marine Life Experimental Station, a National Open Key Experimental Station and Chinese Ecosystem Research Network Station (CERN), the Marine Biology Research Station in Daya Bay (National Open Key Experimental Station and one of the CERN sites), the Marine Economic Animal Research Station in Zhanjiang City, and the Marine Plant Research Station in Shantou City. SCSIO is furnished by the research vessels of "Shiyan 2" and "Shiyan 3."

capable of carrying out large-scale oceanographic surveys, and is acquiring a new Small Waterplane Area Twin Hull (SWATH) for comprehensive research. In addition, SCSIO has a Tropical Marine Biology Specimen Hall and an Information Service Center.

In the last 50 years, SCSIO has had 688 major research accomplishments, including 238 awards from the State, the CAS, the Guangdong Province and the Guangzhou City. Two of the most notable accomplishments are "A comprehensive investigation on the resources and rights and interests of the Nansha Archipelagos and its vicinity" and "Utilizing techniques of bioactive substances from tropical marine organisms." One hundred and seventy-two patent applications were filed, and 91 were granted. In recent years, SCSIO scientists have published 541 SCI-indexed research papers. SCSIO is leading or participating in over 200 research projects funded by the "973," "863," and other national programs. It has engaged in collaboration with more than 40 nations and regions, including those in developed countries such as the United States, Japan, Australia, and some European countries; in the meanwhile, SCSIO has strengthened its relationship with the Association of Southeast Asian Nations (ASEAN) countries around the South China Sea. More than 150 consulting or cooperation projects are carried out annually.

SCSIO is the first national marine research institute that is awarded the ISO9002 Quality System Authentication, and is recognized as an authority to assess environmental impacts of coastal development, to survey marine engineering projects, and to prove measurement system. SCSIO hosts the Marine Physics Branch of the Chinese Society of Oceanology, the Guangdong Society of Limnology and Oceanography, and the Guangdong Society of Oceanography. It also oversees the publication of "Journal of Tropical Oceanography."