# **Carbon Management Technology Conference (CMTC 2019)**

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# Carbon Management Technology Conference 2019 (CMTC 2019) proceedings

### **General Submissions**

### Sessions:

Session 1: Carbon Capture - Transformational and 2nd Generation (I)

Papers:

Bench Scale Testing of Next Generation Hollow Fiber Membrane Modules

Shilu Fu David Hasse Andrew Hamilton Alex Augustine Sudhir Kulkarni

Doe's Efforts to Accelerate Transformational Carbon Capture R&D through Advanced Computing and Manufacturing

<u>John Litynski</u> <u>Lynn Brickett</u> <u>Michael S. Matuszewski</u>

Evaluated Results for Pilot Testing of CO2 Capture By Piperazine Regeneratec By the Advanced Flash Stripper

Eric Chen Gary T. Rochelle Tianyu Gao Yuying Wu Korede Akinpelumi Kent Fischer Ching-Ting Liu Karen Farmer Andrew Sexton

Reducing CO2 Capture Cost By 30% Using Advanced KM CDR ProcessTM

Takashi Kamijo

Transformational Graphene Oxide-Based Membrane Process for Post-Combustion CO2 Capture

<u>Shiguang Li</u> <u>Miao Yu</u>

### Session 2: Storage and EOR (I)

Papers:

Clarifying the Relationship of Enhanced Oil Recovery with Associated Storage of CO2

John A. Hamling Neil Wildgust James A. Sorensen Wesley D. Peck Charles D. Gorecki

Evaluating Foam Stability Using Tailored Water Chemistry for CO2 Mobility Control Applications

Zuhair Al Yousef Nethajisubhash Ayirala Amin AlAbdulwahab Sunil Kokal

Integrated Stacked Carbon Storage in the Midcontinent of the United States

Andrew Duguid Jared Hawkins Isis Fukai Richard Middleton Brendan Hoover John Swanson

Mechanical Earth Modeling at Farnsworth Unit, Texas, USA: Implications for Caprock Integrity, Fault Reactivation, and Reservoir Forecasting

Robert Balch Robert Will Marcia McMillan

Miscibility Management for CO2 EOR and Storage at Depleted Oil Reservoirs

<u>Peila Chen</u> <u>Ganesh Thakur</u> <u>Sriram Balasubramanian</u>

### Session 4: Carbon Capture -Transformational and 2nd Generation (II)

Papers:

<u>Calcium Looping Implementation at Heavy Fuel Oil-Fired Power Plants: The Effect of</u> <u>Calcination/Carbonation Cycles on SO2 & CO2 Co-Capture By Two Structurally Distinct</u> <u>Limestones</u>

Sally Homsy Robert Dibble

Development of CO2 Capture Technologies for Coal-Fired Power Plants in China: Idealized Test Challenges for China-Specific Conditions

Pingjiao Hao Xiao Liu Baodeng Wang Qian Cui Xinglei Zhao Bin Xu Surinder Singh Anthony Ku

New Amine-Based Membranes for Post- and Pre-Combustion CO2 Capture

W.S. Winston Ho

Transformational Sorbent-Based Process for a Substantial Reduction in the Cost of CO2 Capture

Ravi Jain

### Session 5: Storage and EOR (II)

### Papers:

Application of Hydrodynamic Flow Modeling Integrated with Geomechanics for Partially Depleted Sandstone Reservoir: Fwu CO2-EOR Project

Marcia McMillan Robert Will William Ampomah Robert Balch Paige Czoski

CO2 Sequestration-Enhanced Oil Recovery (CO2/EOR) in the 21st Century

**David Merchant** 

Impact of NO2 co-Injection on Geological Carbon Sequestration

Ram Kumar Scott W. Campbell Jeffrey Cunningham

Pressure Interpretation for Leaky Well Characterization during CO2 Storage

Mojtaba Mosaheb Mehdi Zeidouni

### Session 6: International Test Center Network (ITCN) - Panel Discussion

### Papers:

Options for Minimising CCS Retrofit Costs to Natural Gas and Coal Power Plants in US Markets

<u>Bill Elliott</u> John Gulen <u>Gus Benz</u> Jon Gibbins

### **Session 7: Demonstration / Pilot Scale Projects**

### Papers:

An Advanced Pccc Control Scheme Utilizing Predictive Control and System-Dependent Fast-Response Variables at the Uky-Caer 0.7 MWe Small Pilot Scale CO2 Capture Facility

Jonathan V. Pelgen Bradley Irvin

### Kunlei Liu

CO2 Capture from Power Plant Flue Gas with the Mtr PolarCapTM Process: Update on Field Demonstration Tests

Jay Kniep Richard Baker Carlos Casillas Ken Chan Brice Freeman Thomas Hofmann Ivy Huang Tim Merkel Vincent Nguyen Zhen Sun Xuezhen Wang

### Cost Analysis of the Uky-Caer Transformative CO2 Capture System

Heather Nikolic Kunlei Liu

Engineering-Scale Demonstration of the Mixed-Salt Process for CO2 Capture: Site Preparation

Indira Jayaweera Palitha Jayaweera Elisabeth Perea

Paths to Affordable Deployment of Ccus for a Power Plant Fleet in China

Surinder Singh Pingjiao Hao Xiao Liu Chang Wei Wayne Xu Anthony Ku

### Session 8: Storage & EOR (III)

#### Papers:

Feasibility of a Commercial-Scale Carbon Storage Project in North Dakota

<u>Neil Wildgust</u> <u>Wesley D. Peck</u> John A. Hamling Charles D. Gorecki

Optimizing Carbon Utilization and Sequestration Efficacies in Sandstone Oil Reservoirs Using an Integrated Machine-Learning Workflow

<u>Junyu You</u> <u>William Ampomah</u> <u>Qian Sun</u> <u>E.J Kutsienyo</u> <u>Robert Balch</u> <u>Martha Cather</u> Quantifying CO2 Injection Performance in Depleted Reservoirs for Operational Optimization in CCUS Projects

Priya Ravi Ganesh Srikanta Mishra Neeraj Gupta

The Development of CO2 Plume in CO2 Sequestration in the Aquifer

Hao Fu Sai Wang Kegang Ling Yifu Long Peng Yu Yanbo Wang

Wyoming's CarbonSAFE Phase II Project at Basin Electric's Dry Fork Station

Steven M. Carpenter Kipp Coddington J.F. McLaughlin Scott Quillinan

### Session 9: Economic Analysis and Modeling & Business and Financial Approaches

Papers:

Direct Air Capture with CO2 Storage - a backstop technology for achieving net-zero

Jon Gibbins

Techno-Economic Modeling of Dual-Purpose LNG CO2 Shipping

<u>Rafael De Leon</u> <u>Aparajita Datta</u> <u>Ramanan Krishnamoorti</u>

The Economics of Accelerated Carbonation Routes Using Captured CO2

Till Strunge Henriette Naims

Toward Improved Guidelines for Cost Evaluation of CO2 Capture Technologies

Simon Roussanaly Edward S. Rubin Mijndert Van Der Spek Niels Berghout George Booras Timothy E. Fout Monica Garcia Stefania Gardarsdottir Minh Ho Michael S. Matuszewski Shareq Mohd Nazir Andrea Ramirez

# Session 10: Carbon Capture - Transformational and 2nd Generation (III) & Monitoring and Characterization Protocols and Technologies

Papers:

Direct Air Capture - Advances and Opportunities

John F. Cirucci Klaus S. Lackner Allen B. Wright Robert Page

Incremental Time-Lapse Monitoring of CO2 EOR and Geologic Storage Using a Scalable Automated Semipermeant Seismic Array

Amanda Livers-Douglas Shaughn Burnison Cesar Barajas-Olalde John A. Hamling Neil Wildgust Wesley D. Peck Charles D. Gorecki

Integrated Midcontinent Stacked Carbon Storage Hub Phase II: Storage Complex Data Collection Planning

Isis Fukai Andrew Duguid

Packing Free Gas Absorption Columns for Amine Scrubbing of CO2

Ishan Fursule Heather Nikolic Kunlei Liu

<u>Sensor and Control Technologies for Geologic CO2 Storage Operations - a Doe Carbon Storage</u> <u>Project Review</u>

<u>William Aljoe</u> <u>Kanwal Mahajan</u> <u>Traci Rodosta</u>

The Carbon Capture and Storage Readiness Index: Is the World Ready for Carbon Capture and Storage

Christopher Consoli Ian Havercroft

### **Session 11: Laboratory Investigations**

Papers:

A Study of Ultra-Fast CO2 Desorption Kinetics for a Microwave-Enhanced Regeneration Process

<u>McMahan L. Gray</u> <u>Tuo Ji</u> <u>Yee Soong</u> <u>Fan Shi</u>

Controlled Synthesis of MgO with Diverse Basic Sites and Its CO2 Capture

Wanlin Gao Qiang Wang

Experimental Evaluation of Aerosols Formation and Control during CO2 Absorption into Monoethanolamine Solution

Hafiz Salih Paul Nelson Qing Ye Abiodun Oki Yongqi Lu

Hydrothermal Processing of Food Waste for Resource Recovery

Umakanta Jena Hengameh Bayat

Investigation of Coal Wettability for the CO2 Sequestration and ECBM Applications: A Review

Ahmed Ibrahim

The Carbonation Kinetics of Alkaline Solids at Conditions Relevant to Direct Flue Gas Utilization

Iman Mehdipour Gabriel Falzone Erika Callagon La Plante Gaurav Sant

# Session 12: Policy, Legislation, and Permitting Approaches & Country and Regional Climate Change

Papers:

Incentivizing Carbon Utilization Research

Anthony Chavez

International Standardization As a Tool for Global Commercial Deployment of Ccus

Ingvild Ombudstvedt Ada Gimnes Jaroy Maria Ellingsen Gran

Pathways for a Political Consensus Policy Framework to Rapidly Scale the Ccus Industry for Atmospheric Carbon Dioxide Removal

Henry Adams

Testing the ISO Carbon Dioxide Geological Storage International Standard (ISO 27914) Against a U.S. CO2 Storage Site Characterization Program

David Riestenberg Brian Zupancic George J. Koperna

What Parasitic Load? a New Paradigm for Ccus

Wesley D. Peck John A. Hamling Neil Wildgust Charles D. Gorecki

### Session 13: Carbon Utilization (I)

### Papers:

CO2 Utilization in Precast Concrete

Issam Amr Bandar Fadhel Solmoi Park Ali Hunaidy Rami Bamagain

Coupled Techno-Economic Analysis with Life Cycle Assessment for Ccus Evaluation Techniques

Ali Al Hunaidy

Fine Calcium Carbonate Production By CO2 Mineralization of Industrial Waste Brines

Erika La Plante Dante Simonetti Gaurav Sant Bu Wang

### Session 14: Industry and Energy Sector CCUS Projects (I)

### Papers:

CO2 Compression Options for CCUS

Ray McKaskle

Exploring the Gulf of Mexico Sub-Sea Floor As a Sink for Waste CO2

Tracy J. Benson Adhish Madugula Susan D. Hovorka Timothy Meckel

Retrofitting an Australian Brown Coal Power Station with Post-Combustion Capture

Bill Elliott John Gulen Gus Benz Abdul Qader Jon Gibbins

### Session 15: Carbon Utilization (II)

### Papers:

Carbonation Processing and Strength Evolution of Portlandite-Based Cementing Systems

Erika La Plante Gabriel Falzone Gaurav Sant Iman Mehdipour Laurent Pilon Narayanan Neithalath

Low-Temperature Synthesis of Portlandite for Carbon Dioxide Mineralization

Erika Callagon La Plante Sara Vallejo Castaño Narayanan Neithalath Laurent Pilon Gaurav Sant

Nano-Engineered Catalyst for the Utilization of CO2 in Dry Reforming to Produce Syngas

Shiguang Li Baitang Jin Zeyu Shang Xinhua Liang

Performance Verification of Carbon Utilization Technologies in the Nrg Cosia Carbon Xprize, Transforming CO2 into Valuable Products

Bill Chatterton Kevin McCabe

### Session 16: Industry and Energy Sector CCUS Projects (II)

Papers:

Carbon Capture: The Scope of Carbon Capture Technologies in Indian Steel Industry

R.G. Sangode

CCUS Applied to Industrial Sources: A Significant Near-term Deployment Opportunity

Ron Munson

Characterization of a World Class Carbon Dioxide Storage Complex in Kemper County, Mississippi, USA

David Riestenberg George J. Koperna Jack C. Pashin Kimberly Sams Gray Richard Esposito Moving Bed Chemical Looping Technology for Carbonaceous Fuel Combustion and Hydrogen Production: Process Development and Assessment

Andrew Tong Dikai Xu Yitao Zhang Dawei Wang Pengfei He Tien-Lin Hsieh Mengqing Guo Sourabh Nadgouda Luis G. Velazquez-Vargas Thomas Flynn Liang-Shih Fan

### **Poster Session**

### Papers:

2018 EOR Survey in China-Part 2

<u>Hu Guo</u>

A New Evaluation Method of CO2 Storage Capacity in Coalbed Reservoirs

<u>Shanglin Yao</u> <u>Mei WU</u>

Assessment of Forest Degradation in Omo-Sashsa- Oluwa Forest Reserves, Southwestern Nigeria

Judith Eke Oluwole Samuel

Carbon Utilization and Storage of Associated and Enriched Gas

Mohamad Salman Pushpesh Sharma Kostarelos Konstantinos

Co-Optimization of CO2 Storage and Oil Recovery Using Alcohol-Treated CO2 Injection

<u>Furqan Hussain</u> <u>Saira Saira</u> Emmanuel Ajoma

Conversion of Captured CO2 from Post-Combustion Coal Fired Power Plants to Useful Chemicals

Emmanuel A. Dada Oladeinde Balaja

Environmentally Safe Offshore Platforms

Kseniya Sherbakova

Evaluation of Ccus Pilots in China

<u>Hu Guo</u> <u>Lei Lv</u>

Flourinated Membranes for CO2 concentration and Carbon Capture

Hannah Murnen Ning Shangguan Sudip Majumdar

Investigations of Carbon Sequestration Mechanisms in Partially Depleted Oil Reservoirs

E.J Kutsienyo William Ampomah Qian Sun Robert Balch Martha Cather

Laboratory Experiment of CO2 Huff and Puff in Tight Reservoir and Determination Method of Development Parameters for CO2 Huff and Puff Development

<u>JInLONG LI</u> <u>Wei Wu</u> <u>Hao Wang</u> Xiaoliang Zhao

Monitoring Utilizing Multiple Data Sets for the Carbon, Capture, Storage, and Utilization Project at Farnsworth Unit, TX

Paige Czoski Robert Balch George El-Kaseeh

Optimization of Well Placement and Operating Condition for Various Well Types in CO2 Sequestration in Pohang Basin, Korea

<u>Changhyeok Jun</u> <u>Min Kim</u> <u>Hyundon Shin</u>

Performance of Rice Straw Ash As an Alternative, Low Cost Oxygen Carrier in Chemical Looping Combustion Technology

Barnali Bhui Prabu Vairakannu Potential Application of CCS Technology for Reducing the Carbon Footprint Created during Deepsea Mining Operations

<u>Shukai Wu</u>

Rapid Evaluation Model of Enhanced Oil Recovery of CO2 Flooding Based on Modification Fractional Flow Theory

Qiang Yu Hongli Xi Xiaoliang Zhao

Reaction Experiments of CO2-Rock-Water-Crude Oil and Its Effect on CO2 EOR

Qiang Yu Xiaoliang Zhao Hongli Xi

Refiner's Industrial Scale Facility Uses CO2 in Stack Gas to Enhance Crop Production

Brian Kolodji

Synthesis Metal-Doped Mesoporous Resin for Carbon Dioxide Capturing and Electrochemical Conversion

Mahboubeh Nabavinia

The Effect of Asphaltene Structure on Wettability Alteration during Enhanced Oil Recovery Using Carbonated Water

Mohammad Alqam Nadrah Alawani

Understanding the Subsurface Structural Formation for Potential CO2 Storage and Capture in Geologic Formation

Uchenna Nwoke

### **Poster Session (Registered)**

#### Papers:

3D-Printed Monoliths for CO2 Capture and Utilization Applications

Fateme Rezaei

<u>A Review of the Mechanisms of Miscible and Immiscible Carbon Dioxide Injection in Shale</u> <u>Reservoirs for Storage and Increased Oil Recovery Applications</u>

Sherif Fakher Abdulmohsin Imqam

An Experimental Study of the Factors Impacting Asphaltene Stability in Crude Oil during Carbon Dioxide Injection in Nanopores

Sherif Fakher

#### Abdulmohsin Imqam

An Overview on the leaghg Technical Programme: CO2 Capture Technologies for the Power and Industrial Sectors, Their Integration and Potential to Reduce Costs

Monica Garcia

Analytical Solutions of Leakage through the Caprock in Carbon Sequestration in a Closed-Boundary Aquifer System

Xinwei Liao Lingyu Mu Xiaoliang Zhao Jiandong Zou Hongyang Chu Rongtao Li Jingtian Zhang

Bringing It All Together: Innovative Public Policy and Technology for Carbon Purification Catalyzes Power Production, Enhanced Oil Recovery, and Geological Sequestration in Depleted Oil Reservoirs: An Oklahoma Example

Daniel Tormey Richard Schuller

Carbon Dioxide Capture By Gas Hydrate Based Technology

Rajnish Kumar Gaurav Pandey Omkar Singh Kushwaha Gaurav Bhattacharjee Jitendra Sangwai

Carbon Dioxide Decomposition Using Oxygen Deficient Metal Oxides

Sang-Hyeok Kim Jong Tak Jang Jaeyong Sim Jung-Hyun Lee Sung-chan Nam Chan Young Park

Demonstration of Hydrogen Production Process Using Hyperthermophilic Archaebacteria Thermococcus Oonnurineous NA1

Hyungtaek KIM

Direct Thickening of Supercritical Carbon Dioxide Using CO2-Soluble Polymer

Zuhair Al Yousef Othman Swaie Amin AlAbdulwahab Sunil Kokal

Effect of Water-Alternating-Gas Injection on Gas and Water Production Control in Carbonate Reservoirs

Chuang Zhao Yang Yao Jirui Hou Bin Han Likun Xu Zhaojie Song Liguang Song Qiang Liu Mei Qi Yunbo Li

Effectiveness of CO2 Foamed Acid for Stimulating Low Permeability Carbonate Formations

Ali AlTaq Zuhair Al Yousef

Effects of Electrolyte Environment on Carbon Dioxide Reduction

Felicia Lucci Sarah Baker

Empirical Correlation of Pressure Interval of Near-Miscible Flooding for Pure and Impure CO2 Streams

Hao Chen Xiansong Zhang

Evaluating Carbon Dioxide Flow Regimes in Micro and Nano Pore Sizes during Carbon Dioxide Injection in Hydrocarbon Reservoirs and Their Impact on Oil Recovery

<u>Sherif Fakher</u> <u>Abdulmohsin Imqam</u>

Evaluation and Optimization of Gas Volume on CO2 Huff 'N' Puff By Multiple Horizontal Wells in Fault-Block Reservoirs with Edge Aquifers

Zhixing Wang Fenglan Zhao Jirui Hou Hongda Hao Li Yan Shijun Huang

Experimental and Numerical Studies on Asphaltene Precipitation Distribution during CO2 Flooding in Ultra-Low Permeability Reservoirs

<u>Jiandong Zou</u> <u>Lingyu Mu</u>

Experimental Investigation of Supercritical CO2 Injection for Enhanced Gas Recovery in Tight Gas Reservoir

<u>Jingchen Ding</u> <u>Tongsheng Cao</u> <u>Jianbiao Wu</u> Experimental Modeling of Gas Channeling for Water-Alternating-Gas Flooding in High-Temperature and High-Pressure Reservoirs

Zhaojie Song Bin Han Yang Yao Yunbo Li Likun Xu Chuang Zhao Jirui Hou Mei Qi Qiang Liu Liguang Song

Feasibility Study of Gas-EOR Using CO2 and N2 Mixture in a Heavy Oil Reservoir: Experiments and Pilot Tests

<u>Jirui Hou</u> <u>Hongda Hao</u> <u>Fenglan Zhao</u> <u>Handong Huang</u> <u>Zhixing Wang</u> <u>Huaizhu Liu</u>

Heuristic Method for Determining C/N Using Inline Process Sensors

Bradley Irvin Reynolds A. Frimpong Jonathan V. Pelgen Heather Nikolic Kunlei Liu

Impact of Reservoir Characterization, Field Activities, and Monitoring Results on Numerical Modeling and Forecasting of a Saline Carbon Dioxide Storage Project

George J. Koperna Anne Oudinot

Improvement of Mobility and Conformance for CO2-EOR, a Review of Technologies and Application Conducted in China

Yifu Long

Investigating Factors Impacting Carbon Dioxide Adsorption to Shale Rock and Their Effect on Carbon Dioxide Storage Capacity

Sherif Fakher Abdulmohsin Imgam

Investigating Spatial Reservoir Heterogeneity at the Shenhua CCS Demonstration Project Using CO2 Injection Simulations

<u>Minh C. Nguyen</u> <u>Ye Zhang</u> <u>Ning Wei</u> Xiaochun Li Philip H. Stauffer

Is Ccus Feasible? Wyoming's Triple Threat - the Cowboy Unicorn

Steven Carpenter

Laboratory Investigation of Sweeping Efficiency By Multiple Horizontal Wells CO2 huff and Puff in Fault-Block Reservoirs with an Edge Aquifer

Zhixing Wang Jirui Hou Hongda Hao Fenglan Zhao Li Yan

Microfluidics As a Tool for Rapid Testing of Chemicals for Supercritical CO2 Foams

Ayrat Gizzatov Zuhair Al Yousif Scott Pierobon Amr Abdel-Fattah

Models for Calculating Corrosion Rates in Water-Saturated and Under Saturated CO2 Systems & Water Solubility in CO2 Systems at Supercritical Conditions

Rama Kowta Dale Erickson Richard Barker Anne Neville Yong Hua

Modifying Peng-Robinson Equation of State to Consider Influence of Confinement on Fluid Phase Behavior

<u>Yilei Song</u> <u>Zhaojie Song</u> <u>Jirui Hou</u> <u>Zhixing Wang</u>

Nano-Silica Hybrid Gel System for the Conformance Improvement of CO2-EOR

Yifu Long

Nuclear Process Heat for Direct Air Capture of CO2

Andrew Lockley

Numerical Analysis of CO2 Utilization As Hydrates in Depleted Natural Gas Hydrate Formation

<u>Sheraz Ahmad</u> <u>Yiming Li</u> <u>XiangFang Li</u> <u>Wei Xia</u> <u>Zeen Chen</u> Performance of Preformed Particle Gel in Supercritical CO2

Yifu Long

Proposal of a New Standard of CO2 Concentration in Seawater

Shunsuke Nishimura Toru Sato Keisuke Uchimoto Koichi Goto Meguru Miki

Recovery Potential and Mechanism Investigation of the Supercritical CO2 EOR in the Bakken Tight Formation

Sai Wang Juan Han Yanbo Wang Kegang Ling Bao Jia Hongsheng Wang Yifu Long

Research on Well Integrity during CO2 Geological Utilization and Storage Based on CT Scanning Technique

<u>Jingtian Zhang</u> Lingyu Mu

Sealing Wellbores at the End of Their Lifecycle to Restore Subsurface Seal Integrity and Enable Safe Ccus

<u>Mileva Radonjic</u> <u>Yanyao Li</u> Vamsikrishna Vissa

State of the Art for Conformance Control in CO2 EOR: A Comprehensive Review of Research and Field Applications Related to Gel Remediating Bypassed Zone

Yifu Long

Study on Dynamic Phase Behavior of Oil and Gas System during CO2 Flooding

Hao Chen

Study on Operation Strategy of Aquifer Underground Gas Storage Using CO2 As Cushion Gas

Xinwei Liao Lingyu Mu Xiaoliang Zhao Jiandong Zou Rongtao Li Jingtian Zhang

The Applicable Limits of the High Strength Gel System to the Tight Sandstone Fractured Reservoir in CO2 Flooding Fenglan Zhao Ting Xu Jirui Hou Liguang Song Guoyong Lu Hairu Feng

The Carbon Dioxide Removal Potential of Liquid Air Energy Storage: A High-Level Technical and Economic Appraisal

Andrew Lockley

The Development of CO2 Plume in CO2 Sequestration in Aquifer

<u>Hao Fu</u> <u>Yanbo Wang</u> <u>Sai Wang</u> <u>Kegang Ling</u> <u>Yifu Long</u> <u>Peng Yu</u>

The Development of Robust Particle Gel for CO2 Flooding

Yifu Long

<u>Understanding the Plugging Performance of HPAM-Cr(III) Polymer Gel for CO2 Conformance</u> <u>Control</u>

<u>Xindi Sun</u> Baojun Bai

Well Integrity Analysis of Injection Wells during CO2 Sequestration, Tarim Basin, China

<u>Jingtian Zhang</u> <u>Lingyu Mu</u> <u>Zhixiang Cai</u> <u>Qingfeng Guo</u>

Why and How Subsurface Barrier Materials Fail Under Geomechanical Load

<u>Hui Du</u>