GHGT9
Exhibit Hall
Posters and Sponsor Booths

9th International Conference on Greenhouse Gas Control Technologies

Washington, D.C.
16–20 November 2008
EXHIBIT HALL

THE EXHIBIT HALL will house the posters and the sponsors’ booths. It will be open as follows:

Monday, November 17  7:30 am – 12:30 pm | 2:30 – 6:30 pm
Tuesday, November 18  7:30 am – 12:15 pm | 2:15 – 6:00 pm
Wednesday, November 19  7:30 am – 12:15 pm | 2:15 – 5:45 pm
Thursday, November 20  7:30 am – 12:00 noon

Continental breakfast will be served each day in the Exhibit Hall from 7:30–8:30 am.

The Exhibit Hall will host the poster reception beginning at 4:15 pm on Monday, November 17.

All breaks will be served in the Exhibit Hall (breaks will also be available in the Bird Cage Walk).
Sponsor Booths

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Poster Sessions

**POSTER SESSION A**
Monday  4:30pm – 5:30pm
Tuesday  7:30am – 8:30 am

- **A1** Capture: Post Combustion
- **A2** Transporting CO2
- **A3** Integrated Systems
- **A4** Geologic Storage: Capacity and Regional Assessments
- **A5** Geologic Storage: Trapping Mechanisms and Long-Term Fate
- **A6** Geologic Storage: Well Bore Integrity
- **A7** Geologic Storage: Monitoring

**POSTER SESSION B**
Monday  5:30pm – 6:30pm
Wednesday  7:30am – 8:30 am

- **B1** CO2 Capture Project
- **B2** Capture
- **B3** Capture: Pre-Combustion
- **B4** Capture: Oxyfuel
- **B5** Membranes
- **B6** Geologic Storage
- **B7** Geologic Storage: Site Characterization
- **B8** Geologic Storage: Storage Engineering
- **B9** Geologic Storage: Development of Modeling Tools
- **B10** Geologic Storage: Environmental Impact
- **B11** Geologic Storage: Risk Assessment and Management
- **B12** Policy
- **B13** Training, Education, Outreach
- **B14** Mineral Carbonization
- **B15** Ocean Storage
Session A

A1 Capture: Post Combustion

19 CO2 Absorption by Low Concentration Ammonia Liquor
Je Young Kim, (RIST)

20 Retrofitting Coal Fired Power Plants using Low Cost Solvent Technology
Minh Ho, (University of New South Wales); Guy Allinson, Dianne Wiley

57 Electrochemical CO2 Capture and Storage with Hydrogen Generation
Greg Rau, (University of California Santa Cruz)

58 Solubility of N2O in Aqueous Monoethanolamine and 2-(2-Aminoethyl-amino) ethanol Solutions from 298K to 343K
Sholeh Ma'mun, (Norwegian University of Science and Technology); Hallvard Svendsen

59 Kinetics of Primary and Secondary Amine Group in Aqueous Solution of Diethylenetriamine (DETA) with Carbon Dioxide
Ardi Hartono, (NTNU); Hallvard F Svendsen

60 Templated Polymeric Materials as Adsorbents for the Post-combustion Capture of CO2
Trevor Drage, (University of Nottingham); Cova Pevida, Colin Snape

61 Developing Strategies for the Regeneration of Polyethylenimine based CO2 Adsorbents
Trevor Drage, (University of Nottingham); Karl Smith, Ana Arenillas, Colin Snape

62 Development of Solid Adsorbent Technologies for Post-combustion CO2 Capture
Trevor Drage, (University of Nottingham); Colin Snape

95 Post Combustion Carbon Capture – Laboratory Studies of Monoethanolamine (MEA) and Alternative Solvent Systems for Cost Reduction
Raymond Davy, (RMIT University)

96 CO2 Capture from Flue Gas of Power Plants Running with Natural Gas (NGCC) and Pulverized Coal (PC): Assessment of a New Chemical Solvent based on Aqueous Blends of N-methyldiethanolamine and Triethylenetetramine
Chakib Bouallou, (Centre Energetique et Procédés); Jean-Marc Amann

97 Use of CFD for CO2 Absorbers Optimum Design: from Local Scale to Large Industrial Scale
Ludovic Raynal, (IFP); Fares Ben Rayana, Yacine Haroun, Aude Royon-LeBeaud

98 CO2 Capture by Blended Alkanolamines in a Rotating Packed Bed
Chung-Sung Tan, (National Tsing Hua University); Hsu-Hsiang Cheng

99 Absorption of Carbon Dioxide in Aqueous Ammonia/ethanol Solutions
Shujuan Wang, (Tsinghua University); Jinzhao Liu, Bo Zhao, Huiling Tong, Changhe Chen

100 Vapour Liquid Equilibria Data for a Range of New Carbon Dioxide Absorbents
Graeme Puxty, (CSIRO Energy Technology); Andrew Allport, Moetaz Attalla

133 CO2 Capture by Aqueous Amines and Aqueous Ammonia – A Comparison
Narendra Dave, (CSIRO Energy Technology); Thong Do, Allport Andrew, Puxty Graeme, Paul Fenon, Attalla Moetaz

134 A Carbon-13 NMR Study of Carbon Dioxide Absorption and Desorption with Aqueous Amine Solutions
Qi Yang, (CSIRO Australia); Abdelhamid Ali, Mark Bown, Moetaz Attalla

135 A Rigorous Thermodynamic Model for CO2-H2O-alkanolamine Systems
Erik Trofjøen Hessen, (NTNU); Hallvard F Svendsen

136 Amino Acid Salts as Potential Solvents for CO2 Capture from Flue Gases
Magdalena E. Majchrowicz, (Twente University); D.W.F. (Wim) Brilman, Michiel J. Groeneveld

165 In situ Fourier Transform-Infrared (FT-IR) Analysis of Carbon Dioxide Absorption and Desorption in Aqueous Ammonia and Amine Solutions
Moetaz Attalla, (CSIRO Energy Technology); Graeme Puxty, Andrew Allport

189 Kinetics of Carbonate based CO2 Capture Systems
Hanna Knuutila, (NTNU); Hallvard F Svendsen, Olav Juliussen

190 Solvent Selection for Carbon Dioxide Capture
Ugochukwu E Aronu, (Norwegian University of Science and Technology); Hallvard F Svendsen, Karl A Hoff, Olav Juliussen

219 Thermochemical Models and Analyses for the Carbon Capture with the Chilled Ammonia Process (CAP)
Gianluca Valenti, (Politecnico di Milano – Dipartimento di Energia); Davide Bonalumi, Ennio Macchi

220 NanoGLOWA
Paul Raats, (KEMA Nederland BV); Theo Bosma, Arthur Starn

221 Evaluation Method of Novel Absorbent for CO2 Capture
Kazuya Goto, (RITE); Hiromichi Okabe, Shinkichi Shimizu, Masami Onoda, Yuichi Fujioka

222 Coal-fired Power Plants with Calcium oxide Carbonation for Post-combustion CO2 Capture
Matteo Romano, (Politecnico di Milano)

223 A Comparison of Two Approaches for Preparing Effective CO2 Capture Adsorbents
Covadonga Pevida Garcia, (INCAR-CSIC)

224 Effect of Flue Gas Impurities on CO2 Capture Performance from Flue Gas at Coal-fired Power Stations by Vacuum Swing Adsorption
Jun Zhang, (Monash University); Penny Xiao, Gang Li, Paul Webley

225 Competition of CO2/H2O in Adsorption Based CO2 Capture
Gang Li, (Monash University); Penny Xiao, Jun Zhang, Ranjeet Singh, Paul Webley

258 Mass Transfer in a Small Scale Post-Combustion Flue Gas Absorber, Experiment and Modeling
Patrick JG Huttenhuis, (Procede Gas Treating); Edwin P van Elk, Geert F Versteeg
259 CO2 Capture by Dry Sorbents in a Pressurized Fluidized Bed System
Adina Bosoaga, (Cranfield University); Ondrej Masek, John Oakey

260 Liquid Distribution of MEA in Random and Structured Packing in a Square Column
Stephen James Marcia, (University of Regina); David deMontigny, Paitoon Tontiwachwuthikul

261 Adsorption and Desorption Rates of Carbon Dioxide with Monoethanolamine and Piperazine
Ross Dugas, (University of Texas at Austin); Gary Rochelle

262 CO2 Binding Organic Liquids (CO2BOLS) for Post-Combustion Capture
David Heldebrant, (Pacific Northwest National Laboratory); Clement Yonker

295 Solvent Reclaiming by Crystallization of Potassium Sul Ph X, (University of Texas at Austin); Gary Rochelle

296 Dissociation Constants and Thermodynamic Properties of Amines
Espen Steinseth Hamborg, (Procede Gas Treating B.V.); Espen Steinseth Hamborg, (Procede Gas Treating B.V.); Geert Versteeg

320 Electric Swing Adsorption as Emerging CO2 Capture Technique
Carlos Grande, (LSRE — Laboratory of Separation and Reaction Engineering); Rui Ribeiro, Alirio Rodrigues

333 Long-Term Operation of Carbon Dioxide Capture System from a Coal-Fired Flue Gas using Dry Regenerable Potassium-based Sorbents
Young Cheol Park, (Korea Institute of Energy Research); Sung-Ho Jo, Chong Kul Ryu, Chang-Keun Yi

334 Development of Novel Tertiary Amine Absorbents for CO2 Capture
Firoz Alam Chowdhury, (Research Institute of Innovative Technology for the Earth); Hiromichi Okabe, Shinichiro Shimizu, Masami Onoda, Yuichi Fujioka

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374 Modelling Gas Adsorption in Metal Organic Frameworks
Brad A Wells, (CRC for Greenhouse Gas Technologies); Alan L Chaffee

376 Separation and Recovery of Carbon Dioxide by a Membrane Flash Process
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377 A Simulation Study of Alternative Process Configurations for a CO2 Absorption Plant using CO2SIM
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378 Analysis of Retrofitting Coal-fired Power Plants for Carbon Dioxide Capture
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401 Study on a Coal-Fired Power Plant with CO2 Flue Gas Scrubbing
Elizabeth Heischkamp, (University of Duisburg-EssenLUAT); Özgur Korkmaz

403 Environmental Impact of Amines
Ingvald Eide-Haugmo, (Norwegian University of Science and Technology); Hallvard Svendsen, Odd Gunnar Brakstad, Karl Anders Hoff, Kristin Rist Sørheim, Eirik da Silva

404 CO2 Capture from Flue Gas Using Dry Regenerable Sorbents
Chong Kul Ryu, (Korea Electric Power Research Institute); Jeom-In Baek, Tae Hyeong Eom, Ji Hyun Lee, Won Sik Jeon

405 The Dry Carbonate Process: Carbon Dioxide Recovery from Power Plant Flue Gas
Thomas Nelson, (RTI International); Luke Coleman, David Green, Raghubir Gupta, Jose Figueroa

406 Development of a Commercially-Viable Regenerable Solvent Absorption Technology for Coal-Fired Power Plants
George Farthing, (Babcock & Wilcox Power Generation Group); Purusha Bonnin, Stephanie Miksche, Lisa Rimpf, Ruyu Zhang, Kevin McAuley

407 Feasibility Study on the Carbonate Looping Process for Post-Combustion CO2 Capture from Coal-Fired Power Plants
Jochen Strohle, (Technische Universität Darmstadt); Alexander Galloy, Bernd Eppl

408 Techno-Economic Evaluation of a Power Plant with CO2 Capture and Storage Considering Part-Load Performance
Colin Aile, (University of Waterloo)

409 Amines Immobilized on a Solid Support for Postcombustion CO2 Capture — A Preliminary Analysis of the Performance in VSA or TSA Process based on the Adsorption Isotherms and Kinetic Data
Gerhard Pirmgruber, (IFP-Lyon); Michele Maricar-Pichon, Jean-Pierre Courcy, Alexandra Chaumonnot, Sylvain Louret

410 Simplified Solvent Equilibrium Modelling using both Equilibrium and Calorimetric Measurements for Post Combustion Capture
Thor Mejdell, (SINTEF Materials and Chemistry); Karl Anders Hoff, Inna Kim, Hallvard F Svendsen

425 Novel Adsorption Process for Post-Combustion CO2 Capture
Ravi Jain, (InnoSepa LLC)

426 Comparison of Solvents for Post-Combustion Capture of CO2 by Chemical Absorption
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427 Highly Efficient Absorbents for Post-combustion CO2 Capture
Jae-Goo Shim, (Korea Electric Power Research Institute)

428 Post-Combustion CO2-Capture in Coal-fired Power Plants: Comparison of Integrated Chemical Absorption Processes with Piperazine Promoted Potassium Carbonate and MEA
Jochen Oexmann, (Hamburg University of Technology); Alfons Kather

429 Enabling Post Combustion Capture Optimization — The Pilot Plant Project at Niederaussem
Peter Moser, (RWE Power AG); Sandra Schmidt, Georg Sieder, Hugo Garcia, Ilaria Ciattaglia, Harald Klein

430 CO2 Chemical Absorption by using Membrane Vacuum Regeneration Technology
Mengxiang Fang, (Zhejiang University); Zhongyang Luo, Shuiping Yan, Kefa Cen

445 Simulation of the Carbonate Looping Power Cycle
Paula Galindo Cifre, (University of Stuttgart); Craig Hawthorne, M Troßmann, Günter Scheffknecht

446 Cost Effective Post-combustion CO2 Capture from Industrial Combined Heat and Power Plants in 2020
Takeshi Kuromochi, (Utrecht University); André Faaij, Andrea Ramírez, Wim Turkenburg

463 CO2 Capture Pilot Test at a Pressurised Coal Fired CHP Plant
Mårten Bryngelsson, (KTH School of Chemical Science and Engineering Sweden); Mats Westermark

464 Capture-Ready Supercritical Coal-fired Power Plants and Flexible Post-combustion CO2 Capture
Mathieu Lucquiaud, (Imperial College London); Hannah Chalmers, Jon Gibbins, Nail MacDowell

475 Simulation of Absorption Processes for CO2 Capture
Jian Chen, (State Key Laboratory of Chemical Engineering); Liwei Zhao, Lihu Dong, Guanghua Gao

476 Can We Improve Upon MEA as a Solvent for CO2 Capture?
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Nikolaos Koukouzas, (Centre for Research and Technology Hellas); Ioannis Typou

240 Options for Transporting CO2 from Coal Fired Power Plants in Denmark
Hans Aksel Haugen, (Tel-Tek); Nils Henrik Eldrup, Christian Bernstone, Stefan Liljemark, Marius Noer, John Holland, Per Arne Nilssen, Georg Hegelund, John O Pande

241 Experiments and Modelling of Two-phase Transient Flow during CO2 Pipeline Depressurization
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242 CFD and Gaussian Atmospheric Dispersion Models: A Comparison within Leaksages from Carbon Dioxide Transportation and Storage Facilities
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277 Transmission of CO2 in Submarine and Onshore Pipelines
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279 The Impact of Uncertainties in the Quantitative Risk Assessment of CO2 Pipelines
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281 Economic Modelling of CO2 Integrated Pipeline Network for Enhanced Oil Recovery and Geologic Sequestration in the Texas Gulf Region
Joseph Essandoh-Yeddu, (Gulf Coast Carbon Center); Gürcan Gülen

282 A Scalable Infrastructure Model for Carbon Capture and Storage: simCCS
Richard Middleton, (Oak Ridge National Laboratory); Jeffrey Bielicki

301 Algorithm to Create a CCS Lowest Cost Pipeline Network
Chris Hendriks, (Ecofys); Ruut Brandsma, Filip Neele

302 Economics of Transporting CO2 for Long Term Geological Storage
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304 A Cost and Energy Efficient Concept for Combined Production and Transport of LNG and LCO2
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305 Thermodynamic Behaviour of the CO2+SO2 Mixture: Experimental and Monte Carlo Simulation Studies
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306 Thermo- and Fluid-dynamical Modelling of Two-phase Multi-component Carbon Dioxide Mixtures
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67 CAPRICE Project — Engineering Study on the Integration of Post Combustion Capture Technology into the Power Plant Gas Path and Heat Cycle
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69 Simulation and Optimization of Coal-Fired Power Plants
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70 Towards Large-scale Co-production of Electricity and Hydrogen via Decarbonisation of Fossil Fuels Combined with CCS (Geological Storage)
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105 ECOO — European Value Chain for CO2
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106 Carbon Mitigation in the Indian Coal-power Sector: Options and Recommendations
Ananth Chikkatur, (Harvard University); Ambuj Sagar

107 BIGCCO R&D Platform — Closing the Knowledge Gaps of the CO2 Chain
Grethe Tangen, (SINTEF Energy Research); Mona J Mølnvik, Nils A Rokke

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145 CO2 Capture Retrofit Options for a Gasification-based Integrated Bitumen Extraction and Upgrading Facility
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146 CO2 Storage in Marine Geological Structure: A Review of Latest Progress and its Application in Korea
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147 Integrated Economic Model for CO2 Capture, Transport, ECBM and Aquifer Injection
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148 Reducing CO2 Emissions from the European Power Generation Sector — Scenarios to 2030
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1 Classification of CO2 Geologic Storage: Resource and Capacity
Scott Frailey, (Illinois State Geological Survey); Robert Finley

2 Methods for Estimating CO2 Storage in Saline Reservoirs
Scott Frailey, (Illinois State Geological Survey)

3 Estimation of CO2 Aquifer Storage Potential in Japan
Toshihiro Takahashi, (IGJ, Inc); Takashi Ohsumi, Kazuo Nakayama, Kazuo Koide, Hideaki Miida

4 The Plains CO2 Reduction (PCOR) Partnership: Developing Carbon Management Options for the Central Interior of North America
Edward Steadman, (Energy & Environmental Research Center)

5 Assessment of the All Island Potential for Geological Storage of Carbon Dioxide in Ireland
Michelle Sarah Bentham, (British Geological Survey); Karen Kirk, Andrew Chadwick, Deirdre Lewis, Nick O’Neill, David Hilditch, Karsten Michael, Guy Allinson, Tom Cleary, Richard Vernon

6 Assessing European Capacity for Geological Storage of Carbon Dioxide — the EU GeoCapacity Project
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39 CO2 Storage Capacity of Deep Aquifers and Hydrocarbon Fields in Poland — EU GeoCapacity Project Results
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40 Comparative Evaluation of the CO2 Aquifer Storage Capacities across Regions: CO2 Aquifer Storage Capacity Assessment in Japan
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42 Evaluation of CO2 Aquifer Storage Capacity in the Vicinity of a Large Emission Area in Japan: Case History of Osaka Bay
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44 Role of Pressure in Storage Integrity for Large Volume CO2 Injections
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77 Evaluation of Deccan Continental Flood Basalt Province, India for Environmentally Safe Sequestration of CO2
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79 Carbon Capture and Storage in South Africa
Anthony David Surridge, (South African National Energy Research Institute); Martinus Cloete

80 Economic Dimensions of Geological CO2 Storage: An Assessment of Sub-Seaﬂoor and Continental Sequestration Options
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81 Possibilities for Geological Storage and Mineral Trapping of Industrial CO2 Emissions in the Baltic Region
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120 Review of CO2 Geological Storage Opportunities in the Gunnedah Basin, NSW, Australia
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156 CO2 Storage Capacity Estimates for Stacked Brine-Saturated Formations in the North Dakota Portion of the Williston Basin
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Olivier Bildstein, (CEA Cadarache); Michel Jullien, Anthony Crédoz

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