Monday, 18 May 2009

08:30 - 09:00 GROSSER SAAL
Opening Ceremony and Welcoming Addresses

09:00 - 10:00 GROSSER SAAL
Keynote Session I

10:00 - 10:30 FOYER
Break

10:00 - 17:00 Saal 4
Posters

10:30 - 12:10 GROSSER SAAL
Gasification Technologies
Siemens fuel gasification / Mr Anton Haberzettl
The CCGicms_reg; technology of CHOREN / Dr. Christoph Kiener
PRENFLO PSG and PDQ - based on decades of gasification lessons learned / Dipl.-Ing. Karsten Rick Radtke
Outline of the waste liquidation possibilities by their gasification / Ph.D. Petr Mika
Lurgi's FBDB Gasification - recent development and Project update / Dr. Holger Schlichting

10:30 - 12:10 SAAL 1
IGCC - Experience and Progress
ELCOGAS: R&D ACTIVITIES TOWARDS ZERO EMISSIONS IGCC PLANTS / Dr. Pilar Coca
Technology advances in IGCC with CCS / Dr. Mark Prins
Towards 2nd Generation of IGCC plants: Nuon Magnum Multi-fuel Power Plant / Robert de Kler
TECO to Today: An IGCC Design Improvement Case Study / Cynthia Coleman
17 YEARS OF EXPERIENCE GAINED FROM THREE GASIFICATION PLANTS OPERATING IN ITALY / Mr. Vincenzo Fabio Ciccotosto

10:30 - 12:10 Saal 2
Carbon Capture Issues
What have we learnt from CCS Demonstration projects / Mr John Gale
Social acceptance of carbon capture and storage in Germany / Dr. Diana Schumann

12:10 - 13:40 Saal 5
Lunch

13:40 - 15:20 GROSSER SAAL
Gasification - Experimental Investigations
Research equipment for coal and ash/slack analyses at the IEC / Dipl.-Min. Mathias Klinger
PERFORMANCE ANALYSIS OF UPDRAFT AIR-BLOWN GASIFIERS FED BY OXYGEN AND CO2 OR RECIRCULATED SYNGAS MIXTURES / Ing Vittorio Tola
The Use of Bench Scale Data in Understanding Coal Performance in a Pilot Scale Gasifier / Dr Daniel Roberts
Investigation of trace compound formation in a partial oxidation process / Dr. Heesemann
The Sotacarbo coal gasification experimental plant / Dr. Alberto Pettinai

13:40 - 15:20 SAAL 1
IGCC - Engineering and Economic Evaluation
EPRI IGCC Engineering and Economic Evaluations / Ronald Schoff
IGCC power plants with and without CCS – developments to meet market needs / Juergen Karg
Large Scale CCS Demonstration – Status and Outlook of RWE’s 450 MW IGCC Project / Werner Renzenbrink
Project results of COORIVA – Constructability investigations on a German Reference IGCC with CO2-Capture for 2015 / Dipl.-Ing. Martin Graebner
Cost and Performance Baseline for Fossil Energy Power Plants Volume 3: Low-Rank Coal to Electricity / Mr. Jeffrey Hoffmann

13:40 - 15:20 Saal 2
XTL Technologies
An alternative route of coal to liquids applying Methanol to Gasoline (MTG) technology / Max Heinritz-Adrian
From coal gas to liquid products - the Topsoe TIGAS Technology / Mr Poul Erik Højlund Nielsen
Technical and economical evaluation on the application of coal-to-liquids (CTL) technologies in South-West Sardinia / Dr. Alberto Pettinai
Programme

Technical and Economic Assessment of a Small Scale Steam Hydrogasification Process with Fischer-Tropsch Liquids Facility with a Coal-Wood Feedstock / Dr. Arun SK Raju
High integrative, CO2 negative, high efficient power generation (ICONE power) from ash rich biomass coupled with production of algae based bio oils as well as biochar at Hainhaus/Odenwald using the BtVb process. / Prof. Dr. Andreas Hornung

gasification processes with carbon capture and storage / PhD Eng. Calin-Cristian Cormos
Technical and economical comparison between different configurations of a zero-emissions plant located in South-West Sardinia / Dr. Alberto Pettinaiu

13:40 - 15:20  
Saal 3
Combustion and Chemical Looping
Combustion characteristics of high-ash South African coal reserves. / Professor Raymond Everson
Combustion simulations of predried Greek lignite at experimental and industrial scale facilities / Michalis Agraniotis
Syngas Combustion by Spray-dried NiO Oxygen Carrier / Mr. Jeom-In Baek
ACTIVATION OF ILMENITE AS OXYGEN CARRIER IN CHEMICAL LOOPING COMBUSTION WITH COAL / Dipl. Ing Ana Cuadrat
Continuous Long-tem Operation Experience with 50kWth Chemical-Looping Combustor / Dr, Ho Jung Ryu

15:20 - 15:50  
Foyer
Break

15:50 - 17:50  
Grosser Saal
Biomass- and Co-gasification
Entrained-flow gasification to convert biomass into synthesis gas / Matthias Rudloff
Syngas production from Biomass / MSc. Ruben Smit
Steam Hydrogasification Based Conversion of Carbonaceous Feedstocks using the Viresco Technology / Dr. Arun SK Raju
CO2 capture through co-gasification of coal, biomass and wastes blends / Dr. Rui Andre
Pressurised gasification of coal and biomass for the production of H2-rich gas / Dr Fernando Rubiera
Status report on investigations for Integrated Grass Gasification Combined Cycle / Johannes Judex

15:50 - 17:50  
Saal 1
IGCC - Concept Studies
The Impact of Concept Simplification on Performance and Economics of IGCC Power Plants with Carbon Capture (IGCC-CC) / Mathias Rieger
Modelling of a base case for future IGCC concepts with CO2 capture / Dipl.-Ing Christian Kunze
Optimum design for an integrated coal gasification combined cycle system with CO2 capture / Mr Yoshinobu Nakao
Hydrogen and electricity co-production schemes based on

15:50 - 17:50  
Saal 2
Carbon Capture - Engineering and Economic Evaluation
Optimized Post Combustion Capture Technology for Power Plants / Sandra Schmidt
Drivers and challenges for flexible operation of pulverised coal power plants with CCS / Ms Hannah Chalmers
Retrofitting Study of a 350MW hard coal fired power plant with post combustion capture; optimal integration pathways for minimizing the energy penalty / Dr. Gerald Kinger
Life cycle assessment of pulverized coal power plants with and without CO2 post-combustion capture, transport and storage / Giovannangelo
Techno-Economic Assessment of Ultra-Supercritical Coal Fired Pulverised Fuel Boilers and IGCC Power Plants with CO2 Capture: A Comparative Analysis / Dr Ye Huang

Tuesday, 19 May 2009

09:00 - 10:00  
Grosser Saal
Keynote Session II

10:00 - 10:30  
Foyer
Break

10:00 - 15:50  
Saal 4
Posters

10:30 - 12:10  
Grosser Saal
Gasification - CFD and Research Requirements
Investigations on high temperature gasification and gas cleaning -
The research project HotVeGas / Prof. Dr.-Ing. Hartmut Spleiethoff
Numerical modelling of partial oxidation processes / Rehm
Two-Dimensional CFD Model of Air-Blown Coal-Fired Updraft Gasifier / Ph.D. Michele Vascellari
„Coupling of ChemApp and OpenFOAM“ / Danny Messig
MATHEMATICAL MODEL OF THE PARTIAL OXIDATION OF COAL PARTICLES FOR THE MODELLING OF SYNTHESIS GAS PRODUCTION: VIRTUCON / Dr. Petr A. Nikrityuk

10:30 - 12:10  
Saal 1
**Programme**

**Gas Treatment - Upgrading**
A compact granular bed particle filter for high temperature synthesis gases / Professor Johan Einar Hustad
Novel Filtration System and Regime for Removing Particulates from Syngas at High Temperatures and Pressures / Dr Sunil Sharma
Valorisation of synthesis gas from biomass gasification. / Dr Esben Lauge Sørensen
Hot Fuel Gas Cleaning in IGCC at Gasification Temperature / Dr. Michael Müller
Experimental investigation and numerical simulation of CO to CO2 conversion for hydrogen enrichment of syngas from an air-blown fixed bed up-draft coal gasifier / Stefano Murgia

10:30 - 12:10  **Saal 2**
**Carbon Capture Technologies (I)**
Overview on 1st and 2nd generation coal-fired membrane power plants (with and without turbo machinery in the membrane environment) / Dr. Ernst Riensche
Steam reactivation of CaO-based natural sorbents applied to a carbonation/calcination loop for CO2 capture / Dr. Gemma Grasa
A preliminary evaluation of post-combustion CO2 capture performance in a pilot plant test using monoethanolamine at a lignite-fired power station in Australia / Dr Yuli Artanto
Integration of a CO2 separation process in a coal fired power plant / Christina Stankewitz

10:30 - 12:10  **Saal 3**
**Oxyfuel Combustion (I)**
Commercial Demonstration of Oxy-Coal Combustion Near Zero Emissions Clean Power Technology / Mr. Kevin McCauley
Current status and development potential of the Oxyfuel process / Prof. Dr.-Ing. Michael Beckmann
The OXYCOAL-AC process: Component behavior and thermodynamic efficiency. / Professor Dr.-Ing Reinhold Kneer
Is Oxyfuel Combustion an Option for Gas Turbines? / Dr. Peter Kutne
Advancement of the CO2 compression and purification plant in the integration of the oxyfuel technology / Dr. Roland Ritter

12:10 - 13:40  **Saal 5**
**Lunch**

13:40 - 15:20  **Grosser Saal**
**Gasification - Special Applications**
Progress with underground coal gasification (UCG) / Mr Gordon Couch
Experimental Study on Running of Underground Coal Gasification Power Generation System / Prof. PhD. Chuantong Li
LATROBE UREA PROJECT- Challenges posed from using Lignite Feedstock / Dr David Craze
The Operational Experience and Market Potential Investigation of Coal Gasification in Taiwan / Wei Cheng Chen
An overview on the COHYGEN (coal-to-hydrogen generation) R&D project / Mr. Enrico Maggio

13:40 - 15:20  **Saal 1**
**Gas Treatment - Desulphurisation**
STEPWISE EXTENSION OF A GAS CLEANUP FOR IGCC APPLICATION / Lars Kirchner
RTI/Eastman Warm Syngas Clean-up Technology: Integration in Power and Chemical Production Applications / Markus Lesemann
Correlation of H2S and COS in the hot coal gas stream and its importance for the high temperature desulphurization / Jianglong Yu
Experimental tests on a high-temperature H2S removal bench-scale plant / engineer Caterina Frau
SULPHUR CAPTURING DURING A FIXED-BED GASIFICATION PROCESS OF COAL / Mr Pat Skhonde

13:40 - 15:20  **Saal 2**
**Carbon Capture Technologies (II)**
Redesigning the cold end of a lignite power station for CO2 capture / Mr Trent Harkin
Laboratory Investigations of Polyamine Solvents for CO2-Scrubbing from Flue Gases / Kevin Brechtel
Carbon adsorbents for post-combustion CO2 capture / Dr Cova Pevida
Integration Studies of Post-Combustion CO2-Capture Process by Wet Chemical Absorption into Coal-Fired Power Plant / Dipl.-Ing. Imo Pfaff
Simulation and integration of a carbonate looping system for CO2 capture in existing power stations / Dr Ramón Murillo

13:40 - 15:20  **Saal 3**
**Oxyfuel Combustion (II)**
The BIOX Plant – a 100 kW CFB test plant for oxyfuel combustion - Design – Erection – 100-hour tests – Next steps / Dr. Ulrich Hohenwarter
Sulphation of calcium-based sorbents in circulating fluidised beds under oxy-fuel combustion conditions / Dr. Francisco Garcia-Labiano
PERFORMANCE OF A FLUIDISED BED GASIFIER UNDER OXY-FUEL CONDITIONS / Nicolas Spiegl
Programme

15:20 - 15:50 Foyer
Break

15:50 - 17:50 Grosser Saal
Gasification - Fixed Bed and Ash Modelling
A simplified model of a fixed bed counter current gasifier / prof. Giampaolo Mura
Thermodynamic Modelling of the BGL-gasification process with particular consideration of alkali metals / Dipl.-Ing. Stefan Guhl
Transient behavior of a fixed bed countercurrent gasifier: one dimensional modeling / Brundu
Thermodynamic equilibrium calculations and simulations of gasification processes with syngas cooling / Dipl.-Min. Katrin Reinke

15:50 - 17:50 Saal 1
Gas Treatment - Upgrading and Applications
Investigation of potential alkali getters for gasification using a new high temperature pressurized STA / Franz Hauk
Development of halide removal sorbent for hot gas cleaning technology / Mr Makoto Nunokawa
Successful Completion of the Development and Testing of a Coal to Fuel Cell Grade Hydrogen Technology Package for New Zealand / Dr Robert S Whitney
Experimental study assessment of mitigation of carbon formation on Ni/YSZ and Ni/CGO SOFC anodes operating on gasification syngas and tars / Mr. Joshua Mermelstein
Analysis of Coal Gasification Processes Integrated with High Temperature Fuel Cells and Microgas Turbines / Ing Vittorio Tola Fluidized Bed Methanation Technology for improved Production of SNG from Coal / Dr. Serge M. A. Biollaz

15:50 - 17:50 Saal 2
Carbon Capture Technologies (III)
Analysis of the attrition of CaO particles in a carbonation/calcination prototype to capture CO2 from combustion flue gases / GONZALEZ
Experimental studies on CO2 desorption from amine solutions / Paula Galindo Cifre
ZeroGen Commercial-scale IGCC with CCS / Ms Heather Brodie

15:50 - 17:50 Saal 3
Oxyfuel Combustion (III)
Evaluation of Integration of Flue Gas Scrubbing Configurations with MEA for CO2 Separation in a Coal-Fired Power Plant / Dipl.-Ing. Elizabeth Heischkamp

15:50 - 17:50 Saal 3
Oxyfuel Combustion (III)
MEM-OXCOAL - Oxygen permeation membranes for coal-fired power plants / Professor Manfred Martin
Ceramic Membranes for Oxyfuel Power Plants / Dr. Stefan Baumann
Module Design for MIEC Membranes in Oxycoal-AC / Dr.-Ing. Ewald M. Pfaff
Oxyfuel combustion by means of high temperature membranes for air separation / Franz Beggl
Dense Ceramic Membranes / Priv.-Doz. Dr. Michael Schroeder

Wednesday, 20 May 2009
08:50 - 10:30 Grosser Saal
International and Regional Perspectives
EPRI Industry Technology Demonstration Projects / Ronald Schoff
E.ON’s strategy to a low carbon future / Dr.-Ing. Christian Folke
China’s coal fired electric power sector challenges and opportunities / DR ANDREW MUNCHENER
Pre-Engineering Study for a 700 deg C high efficient PC-Power Plant / Dipl.-Ing. Hans-Joachim Meier
Development of Clean Coal Technology in Indonesia / Mr.; M.Sc. Slamet SUPRAPTO

08:50 - 10:30 Saal 2
Carbon Capture Technologies (IV)
Novel Concepts for IGCC based power generation with carbon dioxide capture using OMCM technology / Mr Rahul Anantharaman
Modelling of Total Plants Including Gas Washing Using the Simulation Tool EBSILON?Professional / Dr. Reiner Pawellek
Technical Evaluation of CO2 Compression and Purification in CCS Power Plants / Mr. Renzo Castillo

08:50 - 10:30 Saal 3
Oxyfuel Combustion (IV)
Impact of hot CO2 rich gases on steels / Dr. Axel Kranzmann
Numerical Simulation of a 1200 MWth pulversed fuel oxy-firing furnace / Professor Dr.-In Reinhold Kneer
Pyrolysis and Combustion reactivities of an Indonesian low rank coal under oxy-fuel conditions / Jianglong Yu
In-situ observation of the combustion of air-dried and wet brown coal / Dr Eleanor Binner
Programme

A Review on the Fate of Sulphur During Oxy-Coal Combustion for Power Generation with CO2 Capture / Dr. Stanley Santos

10:30 - 11:00  Foyer
Break

11:00 - 12:00  Grosser Saal
Keynote Session III - Outlook

12:00 - 12:30  Grosser Saal
Closing Session

12:30 - 14:00  Saal 5
Lunch

14:00 - 18:00  Technical Visit
TU Bergakademie Freiberg or Dresden University of

Thursday, 21 May 2009

09:00 - 18:00  Technical Visit
Schwarze Pumpe 30 MW oxyfuel pilot plant