

Preliminary Program

Wednesday, June 17						
08:00	Check-in					Auditorium
08:30	Welcome and conference opening, Dr. Nils A. Røkke, Chair, TCCS-8					Chair: Nils Røkke R1
08:40	"Norway's strategy for CCS deployment", Mr. Kåre Fostervold, State Secretary, Ministry of Petroleum and Energy					R1
09:00	Keynote 1: "European position and activities on CCS", Dr. Vassilios Kougionas, European Commission, DG Research & Innovation					R1
09:20	Keynote 2: "Korea's CCS RD&D activities for climate change mitigation", Dr. Hwansoo Chong, Policy Team Leader, Korea CCS R&D Center					R1
09:40	Keynote 3: "CCS is live and well; Bringing the latest news from Saskatchewan", Mr. Max Ball, Manager, Clean Coal Technology, and Sr. Business Advisor to President, CCSI, SaskPower					R1
10:00	Coffee Break					
10:30	Keynote 4: "Global climate challenges", Dr. Kikki (Helga) Flesche Kleiven, Associate Professor, Bjerknes Centre for Climate Research, University of Bergen					R1
10:50	Keynote 5: "Betting on negative emissions", Dr. Sabine Fuss, Head of "Resources and International Trade", Mercator Research Institute on Global Commons and Climate Change					R1
11:10	Keynote 6: "Doing what it takes in Europe – Excellent R&I collaboration across borders" Dr. Marie Bysveen, Vice President Research, SINTEF Energy Research					R1
11:30	Keynote 7: "Scaling of CO2 storage to enable a carbon-negative future", Mr. Frederic Hauge, President, The Bellona Foundation					R1
11:50	Lunch					Realfag Restaurant
13:00	Session A1 (Auditorium R1) Solvent developments Chair: xx	Session B1 (Auditorium R5) Membranes Chair: xx	Session C1 (Auditorium R2) CCSU Chair: xx	Session D1 (Auditorium R9) Oxy-fuel capture Chair: xx	Session E1 (Auditorium S2) CO2 EOR Chair: xx	Session F1 (Auditorium S3) Remediation and contingency planning Chair: xx
13:00	Amine selection for post combustion capture (Gary Rochelle)	Can energy efficient membrane technology be an alternative for CO2 capture? (Xuezhong He)	Acid gas removal in geothermal power plant in Iceland (David Berstad)	Gas switching technology for cost effective CO2 capture chemical looping processes (Abdelghafour Zaabout)	Evaluation for CO2 geo-storage potential and suitability in Dagang Oilfield (Bo Peng)	MiReCOL: Developing corrective measures for CO2 storage (Filip Neele)
13:20	Evolutionary design of absorbents for CO2 capture (Vishwesh Venkatraman)	Membrane properties required for post-combustion CO2 capture at coal-fired power plants (Simon Roussanaly)	Assessing the potential techno-environmental performance of CO2 utilisation via dry reforming of CO2 for the production of dimethyl ether (Wouter Schakel)	The potential benefit of using CLC in industrial boilers (Kristin Jordal)	Large scale tertiary CO2 EOR in mature water flooded Norwegian oil fields (Erik Lindeberg)	First field example of remediation of unwanted migration from a natural CO2 reservoir: the Bečej field, Serbia (Dusan Karas)
13:40	Strong bicarbonate forming solvent for CO2 capture (Ardi Hartono)	An atomistic structure of carbon membranes from genetic algorithm and reactive force field study (Thuat T. Trinh)	Poly(amidoamin) for CO2-free H2 production (Ikuo Taniguchi)	Ash and deposition behaviour in air and oxy-fuel combustion (Reinhold Spörl)	Midterm injection phase results for the Midwest Regional Carbon Sequestration Partnership Large-Scale Test (Neeraj Gupta)	The use of polymer-gel solutions for CO2 flow diversion and mobility control within storage sites (Sevket Durucan)
14:00	Session A2 (Auditorium R1) Solvent properties, degradation and corrosion Chair: xx	Session B2 (Auditorium R5) Membranes, membrane contactors and adsorption Chair: xx	Session C2 (Auditorium R2) Transport Chair: xx	Session D2 (Auditorium R9) Oxy-fuel capture Chair: xx	Session E2 (Auditorium S2) Site characterization Chair: xx	Session F2 (Auditorium S3) Remediation and contingency planning Chair: xx
14:00	Novel piperazine-based amine solvents for flue gas CO2 capture (Yang Du)	CO2 capture using a membrane pilot process at cement factory, in Brevik Norway - lessons learnt (May-Britt Hägg)	Effects of impurities in a CO2 transport experimental installation. First results and experiences at CIUDEN. (Ruth Diego)	Testing of an oxy-fuel burner for gas turbine applications (Mario Ditaranto)	Hydraulic characterization tests at Hontomin Technology Development Plant for CO2 Storage. Experiences with brine, CO2 and tracer injection (Daniel Fernandez-Poulussen)	Diversion of CO2 to nearby reservoir compartments for remediation of unwanted CO2 migration (Daniel Loeve)
14:20	Enthalpy of CO2 absorption in DEEA/MAPA calculated from theoretical reaction equilibrium constants at infinite dilution (Mayuri Gupta)	Compatibility of solvent/membrane systems for high performance CO2 capture using membrane contactors (Luca Ansaloni)	CO2 research rig for advanced compressors (CORA): experiences and test results (Kolja Metz)	Radial effects in packed bed chemical looping combustion (Antoine Sevillano)	An open-source toolchain for simulation and optimization of aquifer-wide CO2 storage (Odd Andersen)	MiReCOL – Flow diversion and pressure management as mitigation and remediation options for CO2 leakage and the CO2 venting experiment at the Ketzin site, Germany (Bernd Wiese)

14:40	Study of degradation products at different MEA based capture pilot plants (Dinah Dux)	Investigation of an intensified CO2 capture process – reactive and enzymatic capture in membrane contactors (Mathias Leimbrink)	Medium scale CO2 releases (Jerome Hebrard)	Performance and operability of a 150 kW Chemical Looping Combustion reactor system for gaseous fuels using CMT type oxygen carrier (Øyvind Langørgen)	Storage capacity estimation for selected formations in the Nordic countries using reservoir and basin modelling approaches (Ane Lothe)	MiReCOL: Remediation of shallow leakage from a CO2 storage site (Mark Wilkinson)
15:00	Corrosion evaluation of MEA solutions by SEM-EDS, ICP-MS and XRD (Georgios Fytianos)	Adsorbent characterization for the development of carbon capture processes (Max Hefti)	Phase equilibria measurements of CO2-N2 and CO2-O2 system (H. G. Jacob Stang)	Effect of iron substitution on redox kinetics of CaMn0.875-xFexTi0.125O3-δ (Vincent Thoréton)	Perturbative studies to calculate the permeability and porosity of a CO2 storage formation (Antonio Hurtado Bezos)	Feasibility of foam injection for remediation of CO2 leakage through fractures and faults (Dag Wessel-Berg)
15:20	Coffee Break (R9)					
15:20	Poster Session					In front of R7, R8, R9
15:20	Session A3 (Auditorium R1) Kinetics and mass transfer Chair: xx	Session B3 (Auditorium R5) Novel technologies Chair: xx	Session C3 (Auditorium R2) Transport Chair: xx	Session D3 (Auditorium R9) Oxy-fuel capture and Pre-combustion capture Chair: xx	Session E3 (Auditorium S2) Site characterization Chair: xx	Session F3 (Auditorium S3) Geophysical monitoring Chair: xx
16:00	Reaction enhancement of post-combustion carbon capture using carbonic anhydrase (Maria Gundersen)	The development of synthetic CaO-based sorbents for post-combustion CO2 capture (Agnieszka Kierzkowska)	Discussion and experimental validation of two-phase flow models for CO2-rich mixtures in pipes (Svend Tollak Munkejord)	Turbulent premixed flames at high Karlovitz numbers under oxy-fuel conditions (Yang Chen)	Numerical modelling of physicochemical effects of discrete CO2-SO2 mixtures; potential cost effects for injection and storage of impure CO2 in a sandstone aquifer (Svenja Waldmann)	Volumetric bounds on subsurface fluid substitution using 4D seismic time-shifts with an application at Sleipner, North Sea (Peter Bergmann)
16:20	Kinetic modeling of carbamate formation in concentrated 2-piperidineethanol (2PE) (Brent Sherman)	Reversible light driven CO2 capture (Robert Bennett)	Measurements of CO2-rich mixture properties: Status and CCS needs (Sigurd Weidemann Løvseth)	Processing and evaluation of perovskite Mn-based oxygen carrier for chemical looping combustion (Frank Snijkers)	Fractures and faults analysis for site characterization applied to a CCS project in Italy: the Sulcis basin (Maria Chiara Tartarello)	Surface-downhole geoelectrics for post-injection monitoring at the Ketzin pilot site (Dennis Rippe)
16:40	Combined heat and mass transfer phenomenon in CO2 absorption: effect of water condensation/evaporation on mass transfer (Koteswara Rao Putta)	Influence of moisture on multi-walled carbon nanotubes with polyaspartamide for CO2 capture (Jacob Masiala Ngoy)	Validation of a coupled fluid-structure model for fracture propagation control in CO2 pipelines (Håkon Nordhagen)	Effect of the presence of water-soluble amines on the carbon dioxide (CO2) adsorption capacity of amine-grafted poly-succinimide (PSI) adsorbent during CO2 capture (Tafara Chitsiga)	Multiphase flow and residual trapping of CO2-brine systems at CO2 storage reservoir conditions (Sam Krevor)	Forensic analysis of a carbon-dioxide layer at Sleipner from time-lapse 3D seismics (Andy Chadwick)
17:00	Experimental determination of mass-transfer coefficients and area of dumped packing using alkanolamine solvents (Diego Pinto)	CO2 separation and utilization via dual-phase high-temperature membranes (Wen Xing)	CCS system modelling: Enabling technology to help accelerate commercialization and reduce technology risk – A case study on the operation of CCS networks (Mario Calado)	Determining the potentialities of PSA processes for CO2 capture in Integrated Gasification Combined Cycle (IGCC) (Luca Riboldi)	Revisiting Sleipner: An improved approach to Sleipner reservoir history matching (Jacob Bensabat)	Time-lapse seismic modeling for a carbon capture and storage project in Canada: a poroelastic approach (Shahin Moradi)
17:20	End of Day 1					Busses to hotel
19:30	Conference Dinner					Scandic Nidelven Hotel
Thursday, June 18						
08:30	Opening address: "The need for continued focus on CCS ", Dr. Hallvard Svendsen, Professor, NTNU					R1
08:40	Keynote 8: "How TCM plays a central role in progressing carbon capture globally ", Mr. Roy Vardheim, CEO, TCM DA					R1
09:00	Keynote 9: "Implementing ECCSEL, the pan-European CCS research infrastructure", Dr. Sverre Quale, Project Director, NTNU					R1
09:20	Keynote 10: "Thermodynamic properties for CO2 transport and storage – The challenge of a consistent description", Dr. Roland Span, Professor, Ruhr Universität Bochum					R1
09:40	Award winner's lecture					R1
10:00	Coffee Break					
10:20	Session A4 (Auditorium R1) Process and solvent comparison Chair: xx	Session B4 (Auditorium R5) Desorber performance and transient operation Chair: xx	Session C4 (Auditorium R2) Public acceptance/communication and International R&D, pilots and large-scale Chair: xx	Session D4 (Auditorium R9) Pre-combustion capture Chair: xx	Session E4 (Auditorium S2) Storage site integrity Chair: xx	Session F4 (Auditorium S3) Storage Capacity II Chair: xx

10:20	Multivariable optimization of piperazine CO2 post-combustion capture process (Jozsef Gaspar)	Pilot plant results for 5 m piperazine with the advanced flash stripper (Eric Chen)	Factors of acceptance for CO2 storage in Germany (Diana Schumann)	Thermodynamic analysis of reforming processes (Shareq Mohd Nazir)	Impacts of thermally induced stresses on fracture stability during geological storage of CO2 (Victor Vilarrasa)	Continuous monitoring of near surface gases at a natural CO2 emission site near Rome – lessons for low-level CO2 leakage detection (David Jones)
10:40	Process modeling of post combustion carbon capture with an AMP/PZ solvent blend: model development and validation, and modeling of commercial size plant (Mijndert van Der Spek)	Development of compact CO2 capture technology with a rotating desorber (Gelein de Koeijer)	European CCS demonstration project network: Status and developments (Zoe Kapetaki)	Experiments on coal chemical looping gasification based on a dual fluidized bed reactor with in-situ CO2 capture (Qinhui Wang)	Analysis of in-situ stress and fault reactivation potential for a major candidate storage aquifer (John Williams)	Operationally relevant outcomes for CCS from a controlled sub-sea floor CO2 release. The QICS experiment (Jerry Blackford)
11:00	Experimental investigation of CO2 capture by aqueous (AMP+PZ) and MEA solvents (Lucyna Wieclaw-Solny)	Heat-integrated liquid–desorption exchanger (HILDE) for CO2 desorption (Leen van Der Ham)	10 years with CLIMIT- R&D&D within geological storage: Achievements and future challenges (Aage Stangeland)	A new adsorbent material that can simplify simultaneous H2 production and integrated CO2 capture (Carlos Grande)	Fluid conducting chimneys: mechanism of formation and implications for fluid injection operations (Viktoriya Yarushina)	Minimizing water production for large-scale pressure management in CCS (Carsten M. Nielsen)
11:20	Comparison of MEA and a novel generic solvent: NGCC efficiency, equipment size and cost (Daniel Perez Clos)	A pilot-scale study of dynamic operating scenarios for flexible post-combustion CO2 capture (Paul Tait)	Carbfix-2 project: solubility and mineral storage of gas mixtures in basalt (Sigurdur Gislason)	Development of agglomerated CO2 sorbent with enhanced chemical and mechanical stability for hydrogen production (Saima Kazi)	Coupled reservoir and geomechanical modeling and hysteresis effects on caprock integrity for CO2 storage projects (Somayeh Goodarzi)	The scale and development timeline of the European CO2 storage industry (Jonas Helseth)
11:40	Lunch Realfag Restaurant					
12:40	Session A5 (Auditorium R1) Environmental aspects Chair: xx	Session B5 (Auditorium R5) Transient operation Chair: xx	Session C5 (Auditorium R2) International R&D, pilots and large-scale Chair: xx	Session D5 (Auditorium R9) Whole system issues Chair: xx	Session E5 (Auditorium S2) Advanced gas turbine cycles and Carbon negative solutions Chair: xx	Session F5 (Auditorium S3) Well integrity Chair: xx
12:40	Micro-encapsulated carbon sorbents (Roger Aines)	Experimental validation of a dynamic model for post-combustion CO2 capture (Nina Enaasen)	CCS in the Nordic region (Ragnhild Skagestad)	Thermodynamic benchmarking of CO2 separation processes – comparison between ideal and real processes (Rahul Anantharaman)	Selective exhaust gas recirculation in combined cycle gas turbine power plants with post-combustion carbon capture (Laura Herraiz)	1:1 scale wellbore experiment for a better understanding of well integrity in the context of CO2 geological storage, Mont Terri underground rock laboratory (Christophe Nussbaum)
13:00	Qualifying amine based capture technologies with respect to health and environmental properties (Laila Iren Helgesen)	Dynamic simulation of natural gas combined cycle power plant with post-combustion CO2 capture (Ruben Mocholi Montañes)	Norcem CO2 capture project (Liv Bjerge)	Comparison of natural gas combined cycle power plants with post combustion and oxyfuel technology at different CO2 capture rates (Jan Mletzko)	Carbon-negative biopower via direct conversion and co-firing: Systemic impacts of capture and storage of CO2 applied to Indonesia (Jens Hetland)	Remediation of leakage through annular cement (Jelena Todorovic)
13:20	Accumulation of absorbed fly ash particulate matter and its impact on the CC process (Bernd Schallert)	Dynamic operation and simulation of post-combustion CO2 capture (Jozsef Gaspar)	Chilled ammonia process operation and results from pilot plant at Technology Centre Mongstad (Barath Baburao)	Flexibility issues and controllability analysis of a post-combustion CO2 capture plant integrated with a natural gas power plant (Evgenia Mechleri)	Pilot-scale demonstration of oxy-SER steam gasification: Production of syngas with pre-combustion CO2 capture (Daniel Schweitzer)	Experimental study of wellbore cement-rock interaction for short and long-term CO2 storage assessment (Qi Liu)
13:40	Aerosols in amine based carbon capture (Jan Mertens)	Dynamic modelling and operation of a state-of-the-art coal-fired power plant integrated with post-combustion CO2 capture system (Stefanía Ósk Garðarsdóttir)	CEMCAP – a Horizon2020 project on CO2 capture from cement industry (Kristin Jordal)	Gas turbine repowering options for carbon capture retrofit (Maria Sanchez Del Rio)	Multi-scale modelling of carbon negative electricity generation in the UK (Niall MacDowell)	Evaluation of coupled geochemical and geomechanical mechanisms controlling CO2-brine leakage along a wellbore (Yue Hao)
14:00	Coffee Break					

14:20	Session A6 (Auditorium R1) Aerosol, emissions and analyses Chair: xx	Session B6 (Auditorium R5) Ammonia and carbonate based systems Chair: xx	Session C6 (Auditorium R2) CCS in energy intensive industries Chair: xx	Session D6 (Auditorium R9) CCS whole system issues Chair: xx	Session E6 (Auditorium S2) Carbon negative solutions Chair: xx	Session F6 (Auditorium S3) Well integrity Chair: xx
14:20	Aerosol measurement technique: Demonstration at CO2 Technology Centre Mongstad (Thomas de Cazenove)	VLE modeling of aqueous solutions of unloaded and loaded hydroxides of lithium, sodium and potassium (Shahla Gondal)	Carbon capture in the pulp and paper industry: A case study of possible development scenarios (Stefanía Ósk Garðarsdóttir)	Legal Instruments – obstacles or incentives for commercialising CCS? (Dag Erlend Henriksen)	Environmental impact assessment of biomass gasification CHP plants with absorptive and adsorptive carbon capture units (Gabriel David Oreggioni)	Effect of eccentric annulus, washouts and breakouts on well cementing quality: Laminar flow (Alexandre Lavrov)
14:40	Counter-measures for aerosol-based emission (Purvil Khakharia)	Solid formation in ammonia-based CO2 capture processes – Thermodynamic analysis of criticalities and implications on process design (Daniel Sutter)	Calcium looping post combustion CO2 capture: A promising technology or emission free cement production (Heiko Dieter)	Identifying operational requirements for flexible CCS power plant in future energy systems (Ruben Mocholi Montañes)	The most promising business case for BIO-CCS in power and CHP production (Antti Arasto)	Cement self-healing as a result of CO2 leakage (Claus Kjølner)
15:00	Round Robin tests on nitrosamines analysis in the effluents of a CO2 capture pilot plant (Isaline Fraboulet)	Thermodynamic assessment of cooled and chilled ammonia-based CO2 capture in air-blown IGCC plants (Davide Bonalumi)	CO2 capture in cement plants by entrained flow reactors calcium looping process (Matteo Romano)	Value chain analysis of CCS from a cement plant: a Norwegian case study (Jana Jakobsen)	High efficiency carbon negative energy production - BIOZEG pilot plant operation (Nicola Di Giulio)	Loss of injectivity and formation integrity due to pressure cycling (Pierre Cerasi)
15:20	A theoretical assessment of the atmospheric fate of amine emissions from post combustion technology and their impacts on the human health (Anna Korre)	A layout for the carbon capture with aqueous ammonia without salt precipitation (Davide Bonalumi)	Use of a chilled ammonia-based process for post-combustion CO2 capture in integrated steelworks (Matteo Gazzani)	Modeling bioenergy with carbon capture and storage - A scenario assessment for Indonesia (Florian Kraxner)	CO2 capture and re-use at a waste incinerator (Andy Roeloffzen)	Three-dimensional visualization of natural convection in porous media (Lei Wang)
15:40	Closing Remarks - Dr. Mona Mølnvik, Research Director, SINTEF Energy Research					R1
16:00	End of Conference					