

Impact of Fuel Quality on Power Production and the Environment

September 20-25, 2026, Aspen Grove, Utah, USA

Preliminary Conference Program

Notes:

All presentations and Invited Keynote will be in the Aspen Lodge, Timpanogos Room

All meals will be in the Emerald Lodge, Dining Hall

Sunday 20 September	
4:00 pm – 9:00 pm	Registration / Check-In – Aspen Lodge (bottom floor)
Dinner open 6:00 pm – 7:00 pm – Dining Hall	

Monday 21 September (Day One)		
8:00 – 8:55 am	Breakfast – Dining Hall	
Session 1: Fuel Types & Usage – Brad Adams		
8:55 am	Welcome & Information	Brad Adams
9:00 am	1.1 Thermochemical Valorization of Heavy Metal–Contaminated Biomass: Production of Activated Biochar and Syngas with Environmental Applications	Franz Winter
9:25 am	1.2 Ash-Free Clinkering in Electrified Cement Kilns: Process and Product Implications	Markus Broström
9:50 am	1.3 Torrefaction-Assisted Gasification of Arundo donax for Green Methanol Production	Xuebin Wang
10:15 am	1.4 Numerical Modeling of Biomass Particle Cloud Ignition	Matteo Giesen
10:40 am	Snack Break until 11:10 am	
Session 2: Fuel Impacts – Daniel Bernhardt		
11:10 am	2.1 Impact of Feedstock Properties on Product Gas Quality and Gas Cleaning Efficiency in Dual Fluidized Bed Steam Gasification	Katharina Fürsatz
11:35 am	2.2 Analysis of distribution of heavy metals in a pilot scale BFB combustor	Jan Hrdlička
12:00 pm	2.3 Industrial Test on Biomass Co-firing in a 1000 MW Coal-Fired Unit	Xuebin Wang
12:30 – 1:30 pm	Lunch – Dining Hall	
1:30 – 3:00 pm	Networking; Guided Activity – High Ropes Course	
3:00 – 3:30 pm	Snack Break	
3:30 – 5:00 pm	Ad hoc meetings/Networking	
6:00 – 7:00 pm	Dinner – Dining Hall	
Evening 1 – Aspen Lodge, Timpanogos Room (Brad Adams host)		
7:00 pm	Invited Keynote (Professor Jost Wendt)	
8:00 pm	Adjourn for evening	

Tuesday 22 September (Day Two)		
8:00 – 9:00 am	Breakfast – Dining Hall	
Session 3: Ash Characterization – Markus Broström		
9:00 am	3.1 Sewage Sludge Iron as an Intrinsic Oxygen Carrier in Dual Fluidized Bed Steam Gasification: FactSage Modeling and Validation at 1 MW scale	Julian Bayer
9:25 am	3.2 Ash melting behaviour of hardwood biomass and suppression of molten salt formation by bark blending under gasification conditions	Kenji Koido
9:50 am	3.3 Corundum vs hibonite: exposure to wheat straw and forest residue ashes at high temperature	Markus Carlborg
10:15 am	3.4 Investigating sustainable treatment of industrial and commercial waste with incineration bottom ash in a demonstration-scale high-temperature gasification slagging facility	Jiaye Zhang
10:40 am	Snack Break until 11:10 am	
Session 4: Fly Ash – Katharina Fürsatz		
11:10 am	4.1 Electrostatic Levitation-Based Quantification of Micron Particle Sticking Forces: Implications for Ash Deposition Mechanisms	Yueming Wang
11:35 am	4.2 A new path for the resource utilization of solid waste incineration fly ash: Low-consumption water washing followed by electrolysis	Huimin Liu
12:00 pm	4.3 spICP-TOF-MS characterizations of nano-size single particles generated from coal combustion	Chong Tian
12:30 – 1:30 pm	Lunch – Dining Hall	
1:30 – 3:00 pm	Networking; Guided Activities – Axe Throwing OR Laser Tag	
3:00 – 3:30 pm	Snack Break	
3:30 – 5:00 pm	Ad hoc meetings/Networking (Steering Committee Meeting)	
6:00 – 7:00 pm	Dinner – Dining Hall	
Evening 2 – Aspen Lodge, Timpanogos Room - TBA		
7:00 pm	Panel – State of the Field/Current Trends in Research	
8:00 pm	Adjourn for evening	

Wednesday 23 September (Day Three)		
8:00 – 9:00 am	Breakfast – Dining Hall	
Industry Presentations – Aspen Lodge, Timpanogos Room		
9:00 am	Industry Presentation 1 – Microbeam Technologies, Inc	
9:15 am	Industry Presentation 2 – Explosion Power	
9:30 am	Industry Presentation 3 – Reaction Engineering International	
9:45 am	Industry Presentation 4 – Diamond Power	
10:00 am	Industry Presentation 5 – Electric Power Research Institute (EPRI)	
10:15 am	Industry Presentation 6 – TBA	
10:30 am	Snack Break until 11:00 am	
Industry Discussions – Aspen Lodge, Timpanogos Room		
11:00 - 12:15	Panel Discussion on Industry Trends	
12:30 – 1:30 pm	Lunch – Dining Hall	
Topical Discussion Groups (4) – Locations TBA		
1:30 – 2:10 pm	Session 1 – Topical group discussions (breakouts)	
2:15 – 2:55 pm	Session 2 - Topical group discussions in (breakouts)	
3:00 – 3:30 pm	Snack Break	
3:30 – 4:30 pm	Session 3 - Topical group discussions in (breakouts)	
4:30 – 5:10 pm	Session 4 - Topical group discussions in (breakouts)	
6:00 – 7:00 pm	Dinner – Dining Hall	
7:00 – 8:00 pm	Ad hoc meetings/networking	
8:00 pm	Adjourn for evening	

Thursday 24 September (Day Four)		
8:00 – 9:00 am	Breakfast – Dining Hall	
Session 5: Corrosion – Markus Broström		
9:00 am	5.1 Extended life-time of superheater tubes by dosage of ammonium sulphate when firing demolition wood in a BFB boiler	Håkan Kassman
9:25 am	5.2 A framework for predicting superheater corrosion in waste-fired boilers: Integrating kinetic simulations, oxide microstructure and boiler operation	Hampus Lindmark
9:50 am	5.3 From superheater tubes to oxygen carriers: Enabling high-resolution and statistically relevant oxide analysis through BIB-SEM methodology	M.D. Paza
10:15 am	5.4 TBA	
10:40 am	Snack Break until 11:10 am	
Session 6: CO ₂ Processes – Andrew Fry		
11:10 am	6.1 Oxyfuel process for CO ₂ capture in waste incineration – effects on the operation of waste incineration	Qiu Lu
11:35 am	6.2 Process simulation and pollutant emission analysis of pressurized oxy-biomass combustion power plant towards BECCS	Xuebin Wang
12:00 pm	6.3 Pilot-scale VPSA adsorption of CO ₂ from flue gas	Jan Hrdlička
12:30 – 1:30 pm	Lunch – Dining Hall	
1:30 – 4:30 pm	Activity – Guided hike to Stewart Falls (2.5-3 hrs)	
3:00 – 3:30 pm	Snack Break (if not on hike)	
7:00 – 9:00 pm	Conference Dinner at Sundance	

Friday 25 September (Day Five)		
8:00 – 9:00 am	Breakfast – Dining Hall	
Session 7: Diagnostics, Sensors, Controls – TBA		
9:00 am	7.1 Forensic Diagnostics to Improve Predictive Control of Ash Behavior	Shuchita Patwardhan
9:25 am	7.2 Full-Scale Application of a Multi-Process Monitoring System for Optimizing PC-fired Boilers	Zhonghua Zhan
9:50 am	7.3 Continuous optimization through adaptive boiler cleaning using Shock Pulse Generators	Christian Steiner
10:15 am	7.4 Assistance and Monitoring System for Intelligent Boiler Cleaning	Daniel Bernhardt
10:40 am	Snack Break until 11:10 am	
Session 8: Fuel and Ash Behavior – Franz Winter		
11:10 am	8.1 Optimizing Ash Deposit Strength in Biomass Combustion Using Additives	Andrew Fry
11:35 am	8.2 The Behavior of Potassium in Ash Deposits During Biomass Combustion in a 150 kW Combustor	Andrew Fry
12:00 pm	8.3 Predicted Differences in Entrained-Flow Gasifier Performance Firing Coal and Woody Biomass	Brad Adams
12:30 – 1:30 pm	Lunch + Student Paper Awards – Dining Hall	
1:30 pm	Adjourn Conference	