



INDUSTRIAL COMBUSTION SYMPOSIUM

SEPT 30 – OCT 3, 2024

**Hilton Garden Inn
Calgary Downtown
Calgary, AB, Canada**

REGISTER:

afrc.net/symposium

AGENDA

MONDAY, SEPTEMBER 30

6:00 – 8:00 PM WELCOME RECEPTION

TUESDAY, OCTOBER 1

7:00 AM – 5:30 PM REGISTRATION OPEN

8:00 – 8:30 AM OPENING REMARKS

8:30 AM – NOON MORNING PRESENTATIONS

Effects of Crosswind Turbulence on the Combustion Efficiency of Non-assist Waste Gas Flares

Experimentally Validated Data Analytics Method for Gas Flare Combustion Efficiency Monitoring

Non-assisted Flare Performance at Low-flow (<100 MSCFD) Conditions

Burner Management Strategies for an Oxy-fired Lime Kiln

Integrated Approach to Efficiency Improvement in Fired Heaters

Field Experience with Extremely Low NOx Burners in High Heat Intensity Heaters

NOON – 1:00 PM LUNCH

1:00 – 3:00 PM AFTERNOON PRESENTATIONS

An IoT-Based Multi-Gas Sensor to Identify Flameout Precursors

Discussion on the Viability and Robustness of VISR: A Mid-wavelength Multispectral IR Imaging Approach

Characterizing Hydrocarbons in Flare Plumes Using a Longwave Infrared Imaging Fourier Transform Spectrometer

Computational Fluid Dynamics Simulation of Combustion Efficiency for Full-size Upstream Flare Experiments

4:00 – 5:30 PM AFRC BUSINESS MEETING

6:30 – 9:00 PM SYMPOSIUM DINNER

WEDNESDAY, OCTOBER 2

7:30 – 8:30 AM CONTINENTAL BREAKFAST

8:30 AM – NOON MORNING PRESENTATIONS

Assessment of Natural Gas Substitution with Hydrogen on Heat Transfer and NOx Emissions

Improved Flare Emissions Monitoring for Plant Operations

Hydrogen Firing in a Tangentially Fired Boiler Burner

Combustion Fuel and Air Control Strategies for Hydrogen and Natural Gas Mixtures

Swiss-roll Combustor: A Low-cost Solution for Addressing the Significant Methane Emissions Problem from Low-production Oil and Gas Sites

A Probabilistic Approach to Cellulose Thermal Depolymerization

12:30 – 1:30 PM LUNCH

1:00 – 4:30 PM AFTERNOON PRESENTATIONS

Advancement in Ultra-Low-NOx-Burner Technology – Next Generation Burner for Hydrogen Firing

Results of a Hydrogen Fueled Extremely Low NOx Burner Test Program

Advanced Hydrogen Burner for Commercial and Industrial Applications

Ammonia Flare Testing for the Hydrogen Production Industry

Low BTU Flare Tip Technology Breakthrough A Key Enable of Net Zero

Regulatory Update for Refinery, Petrochemical, and Upstream Flares

EVENING DINNER ON OWN

Program content as of June 17, 2024.

Review the program at afrc.net/symposium for future program updates.

THURSDAY, OCTOBER 3

7:00 – 8:00 AM CONTINENTAL BREAKFAST

8:00 – 9:00 AM KEYNOTE PRESENTATION
Professor Phillip Smith, Professor Emeritus, University of Utah

9:00 AM – NOON TOTEM SESSION
Green Hydrogen: Advances in CFD Simulations of Industrial Hydrogen Flames

NOON SYMPOSIUM CONCLUDES

REGISTRATION INFORMATION

REGISTRATION FEE: \$645 USD

REGISTRATION INCLUDES:

- Admission to all Symposium sessions
- AFRC Business Meeting
- Topic-Oriented Technical Meeting (ToTEM):
Green Hydrogen: Advances in CFD Simulations of Industrial Hydrogen Flames
- Welcome Reception on Monday evening.
- Refreshment breaks each day.
- Continental breakfast on Tuesday, Wednesday, and Thursday.
- Lunch on Tuesday, and Wednesday.
- Dinner on Tuesday Only.
- Access to papers online after the Symposium concludes.

REGISTER AT [AFRC.NET/SYMPOSIUM](https://afrc.net/symposium)



HOTEL & TRAVEL INFORMATION

**HILTON GARDEN INN
CALGARY DOWNTOWN**

711 4th St. SE
Calgary, AB, Canada T2G 1N3
1-587-352-2020

ROOM RATES

\$199 CAD

RESERVATION REQUIREMENTS

A credit card is required to guarantee individual reservations when booking.

HOTEL RESERVATION CUTOFF

The hotel will offer our discounted group rate until **September 5**. Reservations booked thereafter will be on a space and rate availability basis.

HOTEL CANCELLATION

Reservations must be cancelled at or before 11:00 AM MDT, 72 hours (3 days) prior to arrival to avoid a cancellation penalty.

HOTEL PARKING

Self-parking is available for \$30 CAD per day.

**CLICK HERE TO MAKE A
HOTEL RESERVATION**

AIRPORT

Calgary International Airport (YYC) is approximately 20 km (12.5 miles) from the Hilton Garden Inn Calgary Downtown. Taxis and ride-share options (Uber/Lyft) are the best way to reach the hotel. YYC is serviced by the following airlines:

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|------------------|---------------------|
| • WestJet | • Delta |
| • Air Canada | • American Airlines |
| • Flair Airlines | • Alaska Airlines |
| • Lufthansa | • United |

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