Workshop

Aerogel insulation for aerospace and industrial applications

on Thursday, April 24 2025

at Center for Applied Energy Research in Würzburg (Germany)

The objective of the workshop is to present new and innovative solutions for thermal insulation based on aerogels, connect relevant actors and further drive innovation.

Hence, the workshop is aimed at companies that are involved in the aerospace sector as well as other relevant branches in need of high performance thermal insulation materials.

Registration fee: 110.- Euro
CAE-member discount: 20 %
To register for the workshop please send an e-mail to

isba@cae-zerocarbon.de

You will get a confirmation together with more information about the venue.

zero carbon

Schedule of the workshop:

Time	*Title*	*Speaker*
09^{00}	**Start of the workshop**	
	Morning Session	
09^{00} till 09^{10}	**Welcome**	Hans-Peter Ebert *CAE*
09^{10} till 09^{20}	**ISBA project introduction**	Thomas Anklam *DLR*
09^{20} till 09^{45}	**Silica aerogel-based high temperature insulation solutions**	Thomas Anklam *DLR*
09^{45} till 10^{10}	**Reinforced carbon xerogels for extreme high temperature insulation applications**	Frank Lotter *CAE*
10^{10} till 10^{35}	**State of the art insulation solutions for launch and reentry vehicles**	Remi Bertrand *ArianeGroup*
10^{35} till 11^{00}	**Coffee break**	
11 till 11^{25}	**Polyimide and polyamide aerogels for space applications**	Jozsef Kalmar *University of Debrecen*
11^{25} till 11^{50}	**From the envelope to the global insulating system**	Cedric Huillet *Hutchinson*
11^{50} till 12^{10}	**Insulation for satellite applications**	David Velentini *Thales Alenia Space*
12^{10} till 13^{10}	**Lunch break**	

Time	*Title*	*Speaker*
	Afternoon session	
13^{10} till 13^{35} (25 min)	**High performance space structure systems**	Peter Lindenmaier *HPS*
13^{35} till 14^{00}	**Silica aerogel composite for thermal insulation**	Kanda Philippe *KEEY Aerogel*
14^{00} till 14^{25}	**New aerogel materials**	Marc Fricke *Aerogel-it*
14^{25} till 14^{50}	**Aerogel insulation for industrial applications**	Stephan Möller *Armacell*
14^{50} till 15^{15}	**Thermophysical characterization methods**	Jochen Manara *CAE*
from 15^{15}	**Close of the workshop and networking**	
from 15^{30}	**Lab Tours upon request**	

The project 101082573 ISBA receives funding from the European Union's HORIZON2020 programme.

ArianeGroup · keey AEROGEL · Air Liquide · ThalesAlenia Space · HUTCHINSON · DLR · tecnalia · University of Debrecen · zero carbon

Workshop

Aerogel insulation for aerospace and industrial applications

on Thursday, April 24 2025

at Center for Applied Energy Research in Würzburg (Germany)

In a world demanding greater energy efficiency and advanced thermal solutions, aerogel-based insulation emerges as a critical technology for tackling extreme temperatures and reducing energy consumption in aerospace and industrial applications.

The event will focus on the latest innovations in aerogel-based thermal insulation for aerospace and other relevant industrial sectors. The presented insulation solutions cover a wide temperature range — from cryogenic to ultra-high-temperature applications (>2000 K). The workshop is particularly aimed at aerospace and industrial companies interested in aerogel-based insulation solutions.

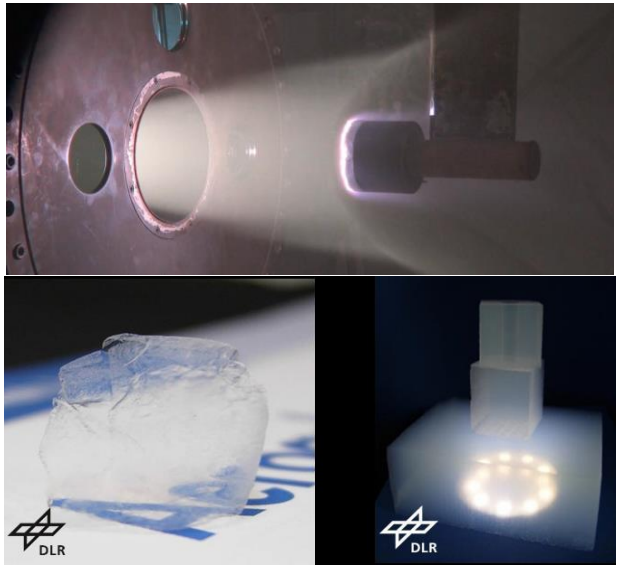
Contact and venue

E-Mail: **isba@cae-zerocarbon.de**

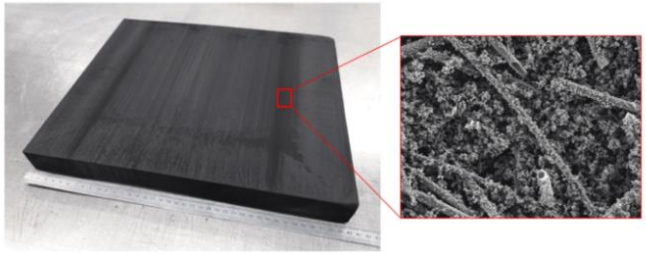
Center for Applied Energy Research (CAE)
Magdalene-Schoch-Str. 3, 97074 Würzburg, Germany

Scope of the workshop

The workshop brings together industry experts and researchers to explore the latest advancements and challenges in thermal insulation solution for aerospace and industrial applications.



In the scope of the event, the current and future role of aerogels in state-of-the-art thermal insulation solutions will be presented. This includes multiple use cases for different space applications and a wide range of application temperatures.
With energy efficiency and thermal management at the forefront of today's challenges, aerogel insulation offers a game-changing solution across industries. This workshop will also dive beyond aerospace and industry staples, uncovering new frontiers where high-performing thermal insulation can revolutionize sectors like renewable energy, construction and automotive.



Scope of the project ISBA

The project ISBA (Insulation Solutions Based on Aerogels), funded under the Horizon 2020 framework, Europe's leading research groups develop aerogel-based thermal insulation solutions for use cases ranging from satellites to launch vehicles to re-entry vehicles that are presented by the end users Thales Alenia Space and Ariane Group. The applications are divided into two categories: low- to moderate-temperature applications and high-temperature applications.
Aerogels are extremely lightweight nanoporous materials with porosities up to 99.98 % resulting in very low bulk densities, thermal conductivities and acoustic velocities. Novel solutions based on inorganic and hybrid aerogels and aerogel composites, as well as polyimide-based alternatives to multi-layer-insulations (MLIs) will be developed for low- to moderate-temperature applications, while solutions based on carbon aerogels as well as other hybrid aerogel composites will be developed for high-temperature applications.