

Use of Super Cool Materials for Efficient Building Ventilation and Heat Mitigation

Tuesday, November 29th, 2022

09:00-10:45 (Brussels, BE)

08:00-09:45 (London, UK)

10:00-11:45 (Athens, GR)

19:00-20:45 (Sydney, AU)

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Registration is required: A link to join the webinar will be included in the email confirmation

Ventilation represents a very high part of the building's energy load. Increased envelope protection combined with the significant increase of the ambient temperature, turn ventilation into one of the major energy consuming uses requiring the development and use of innovative and efficient new technologies to minimise the ventilation energy load. In parallel, the increase of the ambient temperature induced by global and local overheating increases the cooling load of buildings and decreases the cooling potential of ventilation

The recent development of super cool materials, exhibiting up to 20 C sub ambient surface temperature under the summer sun, offers new opportunities for the building sector. Super cool materials including photonic, fluorescent, and caloric devices, can provide free cooling or even heating to buildings when used as passive components integrated to building envelope, or active devices to provide free precooling and ventilation.

The specific webinar aims to inform designers, engineers, architects, researchers and building professional on the potential of super cool materials, their potential use for ventilation and mitigation purposes, and the future implementation path to be followed.

This webinar is organized by the Air Infiltration and Ventilation Centre - [AIVC](#) in collaboration with [venticool](#) & the University of New South Wales - [UNSW](#). The webinar is facilitated by [INIVE](#).

Programme (Brussels time)

09:00	Urban Overheating. Impact and mitigation Mat Santamouris, UNSW, AU	09:50	Recent developments of Super Cool Materials Jie Feng, UNSW, AU
09:15	Results of the Cool Roofs Study in Australia Riccardo Paolini, UNSW, AU	10:10	Recent developments on Fluorescent super cool materials Samira Garshasbi, Arup, AU
09:35	Questions and answers	10:30	Questions and answers
		10:45	End of the webinar



Cost and registration

Participation to the webinar is free but requires you to register for the event. The webinar will be limited to a maximum of 1000 persons. To register, please click on the "Register now" button above.

What is a webinar?

A webinar is a conference broadcasted on internet. To follow a webinar you must have a computer with a sound card and speakers or headphones. Once logged in the "conference room", you will be able to see the slides of the presentation and to hear the panellists' comments. You will also be able to ask written questions to the speakers, and to answer on-line surveys.

Hardware, software

Our webinars are powered by WebEx. The only thing you need is a computer with a sound card and speakers. Before you can log in the "webinar room", WebEx will install the required application. If you are not a WebEx user, please visit <https://help.webex.com/en-us/landing/ld-7srjxs-WebexWebinars/Webex-Webinars#Join-Webinars> to check the system requirements and be informed on how to join a webinar. Please also join the event at least 10 minutes in advance.

About AIVC

Created in 1979, the Air Infiltration and Ventilation Centre (www.aivc.org) is one of the projects/annexes running under the International Energy Agency's Energy in Buildings and Communities (IEA-EBC) Programme. With the support of its member countries as well as key experts and two associations (REHVA, IBPSA, ISIAQ), the AIVC offers industry and research organisations technical support aimed at better understanding the ventilation challenges and optimising energy efficient ventilation. The AIVC activities are supported by the following countries: Australia, Belgium, China, Denmark, France, Greece, Italy, Ireland, Japan, Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, UK and USA.

About venticool

The platform for resilient ventilative cooling, venticool (<http://venticool.eu/>) supports better guidance for the appropriate implementation of resilient ventilative cooling strategies as well as adequate credit for such strategies in building regulations. The platform philosophy is to pull resources together and to avoid duplicating efforts to maximise the impact of existing and new initiatives. venticool has been initiated by the International Network for Information on Ventilation and Energy Performance (INIVE EEIG) with the financial and/or technical support of the following partners: Agoria-NAVENTA, Reyaners Aluminum, Velux and WindowMaster.

About the University of New South Wales

The University of New South Wales (UNSW) is a public research university based in Sydney, New South Wales, Australia. It is one of the founding members of Group of Eight, a coalition of Australian research-intensive universities.

UNSW Sydney is a world leading university across research, teaching and innovation. Established in 1949, its diverse community includes 64,000 students from over 130 countries and a global alumni community of over 300,000.

The [High Performance Architecture](#) research cluster of the UNSW School of Built Environment is active in developing novel solutions to mitigate urban overheating and enhance building performance, especially in response to extreme heat periods. From supercool materials to ventilative cooling, the research group investigates the development of materials and technical solutions - and their performance assessment - in the wide range of Australian climates, which encompass temperate, dry-arid, and tropical conditions.

About INIVE

INIVE (International Network for Information on Ventilation and Energy Performance) was created in 2001. The main reason for founding INIVE was to set up a worldwide acting network of excellence in knowledge gathering and dissemination. At present, INIVE has as member organisations BBRI, CETIAT, CSTB, eERG, Ghent University, IBP-Fraunhofer, KU Leuven, NKUA, SINTEF, and TNO (www.inive.org)

INIVE is coordinating and/or facilitating various international projects, e.g. AIVC (www.aivc.org), TightVent Europe (www.tightvent.eu), venticool and Dynastee (www.dynastee.info). INIVE has also coordinated the ASIEPI project dealing with the evaluation of the implementation and impact of the EU Energy Performance of Buildings Directive, the QUALICheck project aiming towards improved compliance and quality of the works for better performing buildings, BUILD UP the European portal on Energy Efficiency and the EPBD feasibility study 19a.

