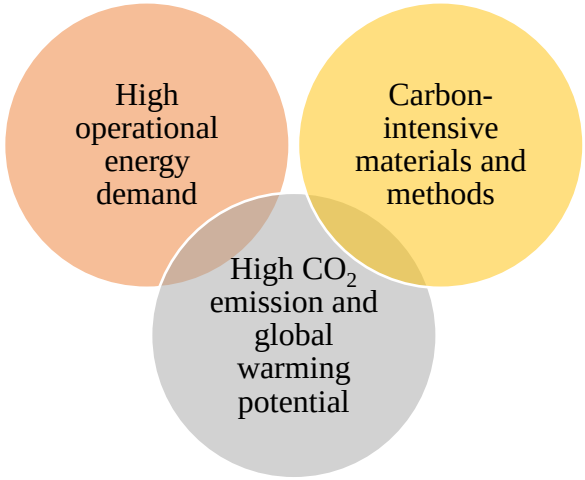
National workshop on low-carbon construction materials and "green" building architecture

22nd - 24th November 2022

Innovative masonry roofing system at IISc's exhibition facility at Challakere

Problems with conventional methods and materials in the Indian construction industry



Aligned with India's target to attain "net-zero" carbon emission by 2070, it is of immediate importance that technologies and materials for low-carbon construction are widely adopted. Several material technologies have been explored in India and abroad to develop low-carbon materials, including resource recovery from locally generated solid wastes to reduce the demand for Portland cement and sand in concrete, development of alternative building materials and sequestration of carbon in cement-based materials. Centre for Sustainable Technologies at the Indian Institute of Science (IISc) is involved in developing and disseminating large number of low carbon building materials since the last four decades.

Concerted effort is needed to design future buildings systems and develop materials that mitigate energy consumption and respond to the local climate without compromising occupant comfort and well-being. There is a demand for the knowledge on low carbon construction materials and "green" building systems. The workshop is aimed at disseminating this knowledge to the construction professionals, architects and engineers focused on the promotion of green building projects and sustainable construction.

The workshop would familiarize participants with green building materials and technologies highlighting the advancements in research and state-of-the-art application of such technologies. The lectures would be supplemented by two round-table discussions focusing on the theme of novel supplementary admixtures for concrete and "green" building architecture respectively. Attendees and participants would learn about scientific advancements in novel construction materials, building systems, their application and potential in the context of Indian construction industry.

CEB/rammed earth building at IISc Challakere campus

Coordinators: Dr. Souradeep Gupta (Asst. Professor, IISc); Professor Monto Mani (IISc);
(Retd.) Professor B.V. Venkatrama Reddy (IISc); Dr. S.N. Ullas, Verdant Building Alternatives (OPC) Pte. Ltd.

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The workshop would be jointly organized by Centre for Sustainable Technologies (CST) and Verdant Building Alternatives (OPC) Private Limited. The workshop comprises of lectures and demonstration of construction techniques focused on the two broad themes:

Conventional and alternative materials for low-carbon constructions

- Low carbon construction materials
- Potential of resource recovery from non-organic solid wastes and utilization in construction
- Advancements in supplementary admixtures for "green" concrete
- Alternative building materials using local materials
- Carbon capture and sequestration in cement-based materials

"Green" building systems and architecture

- Energy, carbon emissions and sustainability of buildings
- Advancements in prefabricated and modular building construction
- Green building concepts
- Climate responsive architecture
- Renewable energy for buildings

The workshop will feature lectures by industry experts and faculties from IISc and overseas, which are designed to inform the participants of the state-of-the-art in research and application fronts. Workshop attendees will be offered a guided tour of the campus buildings where they can experience several examples of low-carbon material implementation, climate responsive building systems and design.

Who can apply?
Building professionals, architects, engineers and final year architecture/engineering students. Certificate of participation would be given after the workshop.

Venue: Centre for Bioenergy and low-carbon Technologies, Indian Institute of Science, Challakere campus, Chitradurga district, Karnataka - 577536

How to register?
Registration can be made by filling in the attached form. The registration form and bank draft shall be sent by to:
Dr. Souradeep Gupta,
Room 209, Centre for Sustainable Technologies, Indian Institute of Science, Bangalore: 560012
E: souradeep@iisc.ac.in | W: https://cst.iisc.ac.in/ | T: 080-22932447

Registration fee and payment: INR 9000 per pax (including two-way transport to workshop venue, accommodation and food). The fee is to be paid by 15th September 2022

Accommodation: Shared accommodation at the IISc Challakere campus dormitory/guest rooms. The campus houses a guesthouse facility near the workshop venue.

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Registration form

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Venue:

Centre for Bioenergy and low-carbon Technologies,
Indian Institute of Science, Challakere campus,
Chitradurga district, Karnataka - 577536

Name: _____

Organization: _____

Qualification: _____

Mailing address: _____

_____

Postal code: _____

Telephone: _____

Email: _____

Place: _____ Date: _____

* Workshop fee of INR 9,000 paid by:

Bank Transfer / Demand Draft only (cheques not accepted)

Bank draft should be drawn in favour of "Verdant Building Alternatives (OPC) Private Limited" payable at Bangalore

Bank Transfer
Name: Verdant Building Alternatives (OPC) Private Limited
A/c No.: 3972 6875 108
IFSC Code: SBIN0002215
State Bank of India, IISc campus branch, Bangalore - 560012

If you are paying by bank draft, please mention the draft number here:

For bank transfer please mention the transaction number here:

Please send the completed form and bank draft to:

Attn: Dr. Souradeep Gupta;
Room 209, Centre for Sustainable Technologies (formerly ASTRA),
Indian Institute of Science, Bengaluru 560012

Coordinators: Dr. Souradeep Gupta (Asst. Professor, IISc); Professor Monto Mani (IISc); (Retd.) Professor B.V. Venkatrama Reddy (IISc); Dr. S.N. Ullas, Verdant Building Alternatives (OPC) Pte. Ltd.