

***Expert Workshop: Energy & Resource Requirements in Building Lifecycle
Workstream Sustainable Building and Living, Focus on Plastics***

Atlanta, USA, November 22nd, 2019

The International Sustainable Chemistry Collaborative Centre (ISC₃) is organising a series of international expert workshops within its workstream Sustainable Building and Living with the focus on Plastics.

The workshop in Atlanta is devoted to the topic Energy and Resources in the Building Lifecycle. It is taking place during the Conference Green Build 2019 on November 22nd, 2019. It will bring together diverse stakeholders from universities, industry, civil society, international organisations and politics.

The participants will discuss how to drive the construction products and especially plastics towards sustainability in sense of SDGs looking at the requirements for energy, water and other resources during the whole lifecycle of a building. The round table will have a look at the most relevant innovations in the field of plastics and its alternatives for construction, building and living.

The ISC₃ will present the preliminary study on plastics in construction, which was initiated by the workstream. The key questions for the workshop concentrate on:

- What applications and properties do plastic products bring? What are their advantages and disadvantages?
- How can the environmental performance of the building materials be evaluated over their life cycle?
- What additional requirements for energy should be considered in case of plastic materials?
- What life-cycle expectation have plastics in comparison to other materials?
- What happens to the plastic and non-plastic products after their lifecycle?
- What are the main issues for recycling of plastic building products?
- Which attempts towards recycling of plastics from buildings are made at present / planned in future?
- What should be improved to achieve more recyclability for plastics?
- How can cost reduction be achieved in the building lifecycle?
- How to save energy and avoid carbon emissions using plastic materials?
- How to substitute hazardous additives?
- What are the most important regulations in your country managing energy efficiency and life-cycle of the building materials?
- Which materials are normally recovered from sites and which are recycled in your country?
- Which materials are or will be short in future in your region? Are there plastic substitutions for them?
- Which (green) building assessment systems are used? Are there any recommendations for the application of polymers in construction and buildings?
- Which key point is the most important for the choice of materials: e.g. price, convenience, durability?
- Do plastic materials support or hinder Sustainability in building and living sector? How exactly?
- What should be changed to achieve more building sustainability?



The results of the workshop will give input to the corresponding topics in the report that is being drafted by an experts' board and presented at the Sustainable Chemistry Week in Spring 2020.

As a new and independent organization, the ISC₃ aims to accelerate the global breakthrough of sustainable chemistry by promoting innovation, assessing processes and products and stimulating the international debate on the future of chemistry.

- Objectives**
- To identify and examine the innovative fields in building products with focus on plastics.
 - To identify the substances of concern, the required substitution and the health and environmental issues such as indoor emission and toxic waste
 - To collect expert feedback on the crucial questions in workstream shaping the input for the final report and setting agenda for policy makers and industry.

Participants Stakeholders from academia, industry, NGOs, international organisations and politics international participants from global companies and institutions relevant to the subject:

- Chemistry and materials manufacturers: polymer and construction chemical producers
- Construction engineers, architects, building craft
- Facility Managers
- Housing Associations
- Recycling and waste sector
- Ministries (Construction, Environment) and subsequent agencies
- NGOs (Consumer Protection)
- International Organisation
- Academics (relevant researchers and scientists)

Date/Time November 22nd 2019, 8:00 am – 13:00 pm

Venue TBC: one of the hotels hosting guests of Green Build 2019, Atlanta, Georgia, USA

<https://www.greenbuildexpo.com/en/home.html>

<i>Contact and further information</i>		
<i>Thematic contributions & organisation</i>	<i>Oleg Ditkovskiy</i> oleg.ditkovskiy@isc3.org	<i>Clara Martinez</i> clara.martinez@isc3.org
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Agenda

Friday, November 22nd 8 am – 1 pm

Welcome and Introduction

- 08:00 Registration & Welcome, short survey on a pinwall
- 08:10 Introduction of ISC₃, C.Cinquemani, Director Science & Innovation, ISC₃
- 08:20 Workstream Plastics in Sustainable Building & Living, O.Ditkovskiy, Workstream Manager, ISC₃
- 08:30 Preliminary Study Plastics in Construction, O.Ditkovskiy, Workstream Manager, ISC₃
- 08:40 Introductory round for participants

Session 1: Presentations by the guest Speakers

- 08:50 Sustainable Chemistry and SDGs, Prof. Joel Tickner, Lowell University (tbc)
- 09:10 Plastics & Environment, D. Russo, CEO, Think Beyond Plastic (tbc)
- 09:30 Green Chemistry and Sustainability in Building, Prof. Paul Anastas USGBC, Yale University (tbc)
- 09:50 LEED Green Building Assessment Introduction, Christopher Schaffner, USGBC (tbc)
- 10:10 Tarqett, Roxane Spears, Vice President

10:30 Networking Coffee Break

Session 2: Round Table Discussion on Key Questions in Workstream

- 10:50 Discussion with participants on the key questions, moderated by ISC₃ (Ditkovskiy, Cinquemani)
 - Advantages and disadvantages of plastic construction products
 - Properties of plastic products contributing to Sustainability
 - Energy efficiency and reduction of emissions for plastic products and alternatives
 - Evaluation and assessment of performance and Sustainability of the buildings
 - Costs and benefits of plastic products
 - Lifecycle of the buildings/ Recycling, Reuse
 - Regulations in building sector
 - Environmental issues (e.g. plastic waste)
 - Drivers for the selection of building materials
 - Potential for improvement (recycling, environment, health)
 - Innovations in building and chemistry
 - How to drive construction products towards more Sustainability?
- 12:45 Summarizing the discussion, ISC₃
- 13:00 End of the workshop