

44TH AFGM

Post Conference Report

TECHNICAL POSTER SESSION

ASEAN Glass Conference
31st October - 3rd November 2022
Dusit Thani Pattaya, Thailand



Technical Poster Session



December 2022
Original: English

Introduction

The ASEAN Federation of Glass Manufacturers (AFGM) was established in 1977 by 19 glass manufacturers from the five ASEAN member countries: Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. Since 1978, AFGM conferences have been held every year, normally in late October or early November. In 1981, the conferences started carrying a theme. Until 2011, Indonesia, Malaysia, the Philippines, and Thailand took turns hosting the annual conferences, which were organized by their respective glass industry associations. In 2012, Vietnam, the newest member, hosted for the very first time an annual conference, the 36th ASEAN Glass Conference in Hanoi, under the theme “Glass for a Safer and Greener Life”, with the participation of nearly 300 producers from 20 countries worldwide. In 2022, the 44th AFGM conference will have the theme “Glass: Sustainable World Solutions”, and will be hosted by the Glass Manufacturers Industry Club, The Federation of Thai Industries (GMFTI). This will be the first conference since 2019 due to the COVID-19 pandemic. The conference will take place between October 31st and November 3rd in Pattaya, Thailand. The technical session of the conference will provide participants with chances to present examples of their best practices in sustainability-related activities. The event has already been promoted through major glass industry websites; for instance, glassworldwide.co.uk, glass-international.com, and glassglobal.com.

The Technical Poster Session

This new initiative session is a part of the technical session of the 44th AFGM Conference. The theme was “Glass Industries-Thailand Best Practice”.

Besides exchanging technological best practices, particularly on sustainability amongst glass manufacturers in Thailand, the activity is to promote the International Year of Glass (IYOG) 2022.



Day 1

Arrival, Airport-Hotel Transfer
Registration & Check-in at the Hotel
Golf Tournament
Welcome Party

Day 2

Opening Ceremony
Business Connection
In-Hotel Activities
Plenary Session

Day 3

Technical Session
Business Connection Session
City Tour
Outside Theme Dinner: A Night in Italian Castle

Day 4

AFGM Grand Tour
Farewell Dinner: A Sparking Night

Key activities



3

Day 3: The Technical Day

On day three, two technical sessions were run in parallel: oral and poster presentations.

The oral presentation provided the conference participants to update themselves on cutting-edge technologies regarding glass manufacturing. There were nine companies presenting new technologies including melting, recycling, as well as climate protection technologies.

For the poster presentation, the session was held for the first time in the ASEAN Glass Conferences' history, with the support of IYOG. Glass manufacturers or individuals including scientists, engineers, educators, and solutions providers working on various aspects of glass manufacturing were invited to participate. The proposed technical paper can cover any aspect of the glass industry. The broad topics of interest are, but are not limited to: glass melting, refractories, process control, and sensors, forming, shaping, inspecting, modeling, energy and emissions, raw materials, batching, and recycling, as well as new topics relevant to glass industries.

“Sustainable World Solution” was promoted as a theme for the event striving for advancement in glass industry sustainability. In addition, the session was held to celebrate the International Year of Glass 2022 (IYOG) along with other parts of the world (pls. see details in the next pages).

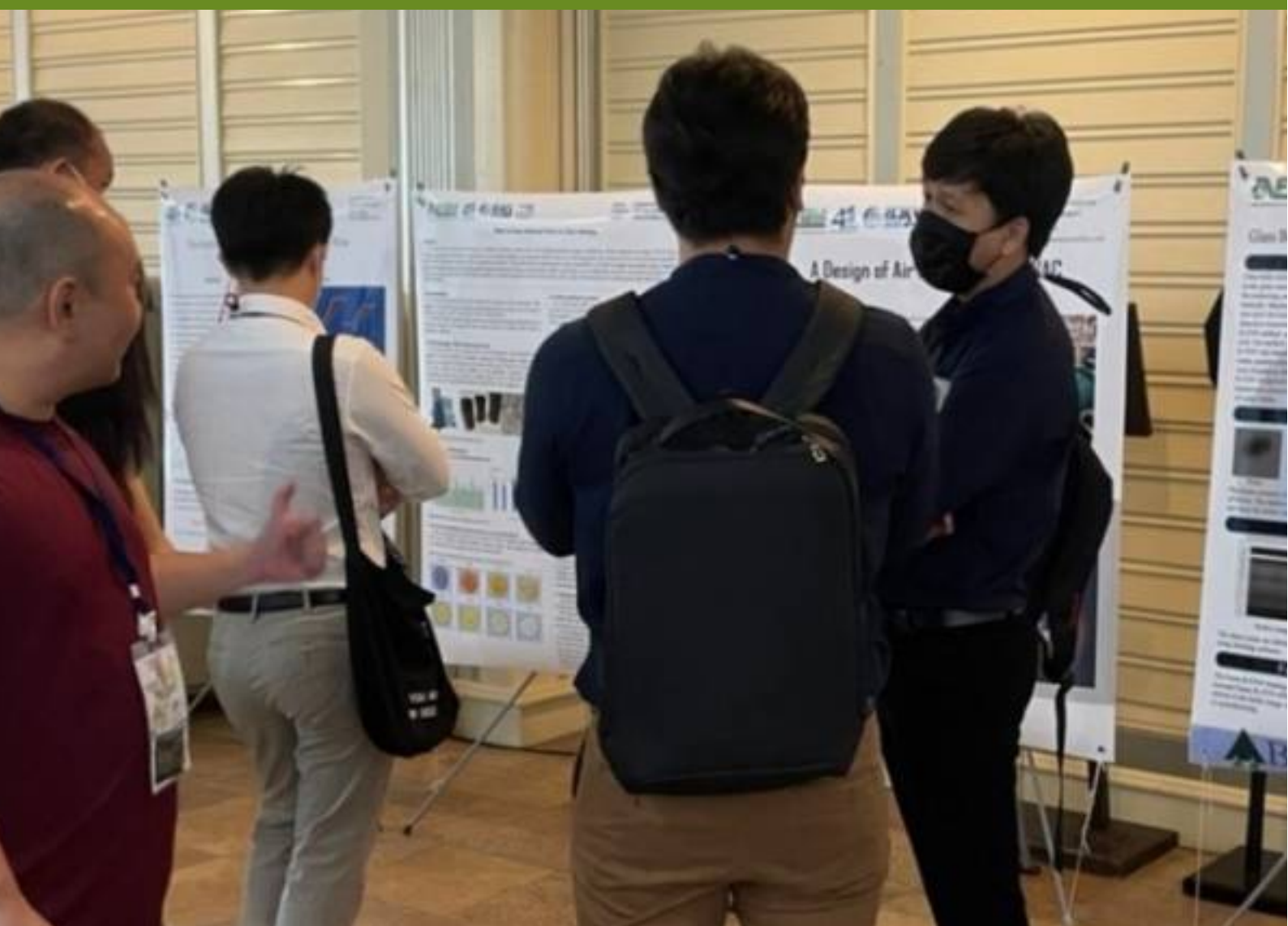
Fig.1 : The atmosphere of the oral presentation session



The Technical Poster Session

The objectives

- I. to exchange technological best practices, particularly on sustainability amongst glass manufacturers in Thailand.
- II. to provide Thai practitioners in glass industries a chance to broaden their networks, as well as socializing opportunities with regional and international glass industry stakeholders.
- III. to promote the International Year of Glass (IYOG) 2022



Quick Facts

- Over 400 participants from 25 countries attended the conference.
- The session is a new session held in parallel with the technical session on the stage.
- The session was officially supported by the International Year of glass (IYOG), providing seed funding for 2022
- There are 8 technical articles submitted in total from glass manufacturers in Thailand.
- The full articles were reviewed by academia from recognized universities, and the winners were selected by voting (from the conference attendee) on 3 topics: “content”, “presentation/design”, and “contribution to glass industries”.

AFGM 44th ASEAN GLASS CONFERENCE INTERNATIONAL YEAR OF GLASS 2022 FTI Glass Manufacturers Industry Club

An activity to promote
**United Nations International
Year of Glass 2022**

The UN General Council approved a joint application by the International Commission on Glass (ICG), the Community of Glass Associations (CGA) and ICOM-Glass that 2022 be declared a United Nations International Year of Glass. The Year will celebrate the essential role glass has in Society.

Please vote us !
bit.ly/voteafgm

The 44th ASEAN Glass Conference
Dusit Thani Pattaya, Thailand
31st October - 3rd November 2022

Technical Poster Session

Fig.2 : The backdrop installed at the conference to promote the International Year of Glass 2022

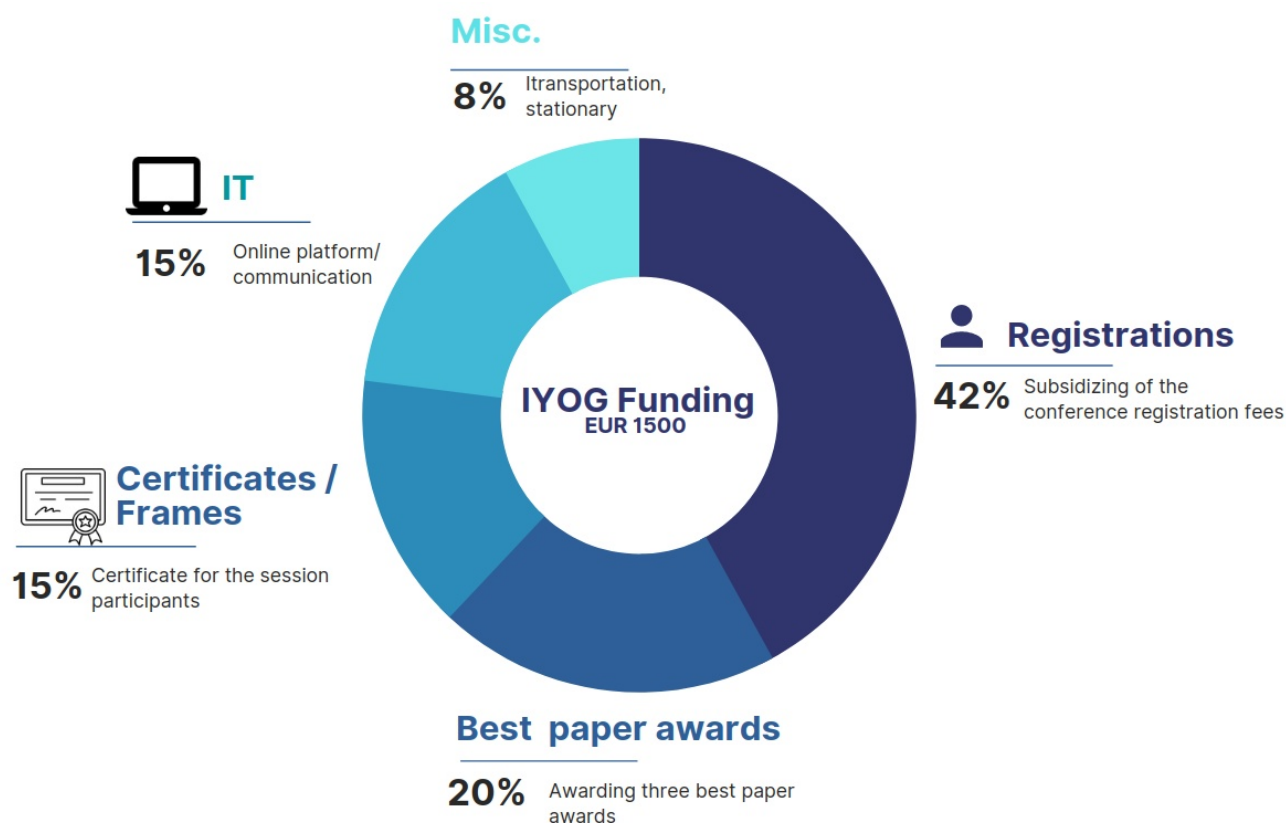
Project Timeline

PROCESS	2022						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Propose the project to the AFGM organizing committee							
Setting up all the important dates							
Setting online platforms for project communication and evaluation							
Inviting article peer reviewers							
Call for papers - announcement							
Collecting submitted articles and send to the peer reviewers							
Informing authors for preparing their posters presentation							
Running the session							
Summarising the project as a report and submit to the IYOG and AFGM							

Funding Support

The event was supported by funding from:

- United Nation International Year of Glass 2022 (EUR 1500)
- Glass Manufacturers - The Federation of Thai Industries



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Peer reviewers

The submitted articles fall into 3 fields of study: materials sciences, mechatronics, AI and computer programming. The qualities of the articles were preliminarily reviewed by qualified academics in these fields as follows:

Asst. Prof. Dr. Bandit Boonkao, Deputy Dean of the Faculty of Engineering, Nakhon Phanom University
(PhD. University of Leeds, UK)

Assoc. Prof. Dr. Suchart Yammen, Former Dean of the Faculty of Engineering, Naresuan University
(PhD. Vanderbilt University, USA)

Asst. Prof. Dr. Komkrit Chooruang, Deputy Director of the Research and Development Institute, Nakhon Phanom University
(PhD. Exeter University, UK)

Asst. Prof. Dr. Prathan Buranasiri, Department of Physics, King Mongkut's Institute of Technology Ladkrabang
(PhD. University of Dayton, USA)



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Poster Voting

" The articles were preliminary reviewed by academics and the winners were selected by the voting (from the conference attendee) on 3 topics:

1. content
2. presentation/design" and
3. contribution to glass industries"



ASEAN FEDERATION OF GLASS MANUFACTURERS

44th ASEAN GLASS CONFERENCE

GLASS 2022

Glass : Sustainable World Solution

INTERNATIONAL YEAR OF GLASS 2022

FTI

Glass Manufacturers Industry Club

Technical Poster Session

Online poster voting

 w.pattanapol@gmail.com (not shared) [Switch accounts](#) 

Example : (check the best one on each topics)

Please select "one best poster" on each topic

TOPIC 1: Content	TOPIC 2: Presentation / Design	TOPIC 3: Contribution to glass industries
☒ The Effect of TiO ₂ on Optical Property of Lead-Free Crystal Glass	☐	☐
☐ On-the-fly Robotics Stacking and Interchanging system for Flat Glass	☐	☐



List of the articles submitted

The Best article:

"The Effect of TiO_2 on Optical Property of Lead-Free Crystal Glass"
by Thamrong Rakthin*, Darunee Khongchana, and Kritsana Pairoj

The 1st Runner up:

"Oxygen Level Monitoring System for Glass Packaging Production Process"
by Phattakon Cheuamak, Potjanaporn Chaengchawi, Damrongsak Jadsadapattarakul, and Saowalak Krungchanuchat

The 2nd Runner up:

"Improvement of the Strength of Lightweight Glass Containers"
by Atorn Yodchan

Other submitted articles

- *"On-the-fly Robotic Stacking and Interlayering System for Flat Glass Sheet"*
by Watidh Poosuwan, Phattakon Cheuamak, Chaimongkon Wongyad, Lutfee Phalawana Hemmarat Kreethatorn

- *"Glass Bottle Defect Detection Using Fast R-CNN and Synthetic Defect Dataset"*
by Niphat Claypoa, Pornsune Khojuangjan

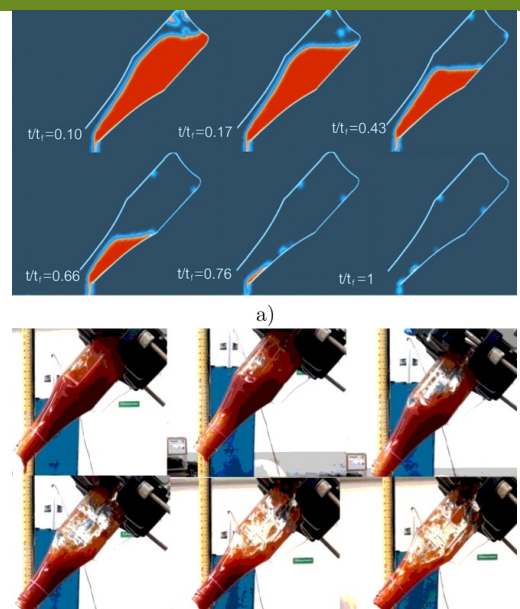
- *"The Effect of Raw Material Form on Glass Melting"*
by Chalermchat Sukthaworn

- *"Numerical Modelling of High Viscosity Flow for Glass Containers"*
by Sunisa Papathe, Chalermchat Sukthaworn, and Wichai Pattanapol

- *"A Design of Air Amplifier for HVAC System"*
by Pakpoom Kotchapom, and Wichai Pattanapol

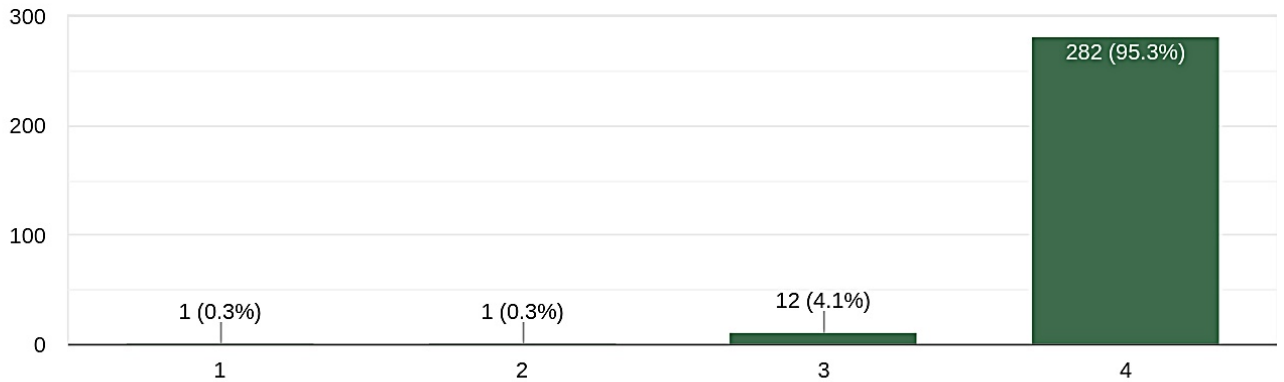


Fig.3 : Examples of the research projects presented in the posters



Evaluation of the session

296 responses



Real-time voting

The Likert rating scale-evaluation of the session held was carried out together with the poster voting as an additional question.

Please rate your satisfaction with our technical poster session



1 2 3 4

Not at all ☐ ☐ ☐ ☐ Very Satisfied



The satisfaction rates for the technical poster session are:

95.3% with “very satisfied”

4.1% with “neutral”

0.6% with “slightly satisfied” and “not satisfied”

Organizing committee

for Technical Session

Committee (Technical Session)



Veerasak Chongcharoenpornchai, BJC Glass
veerasak@bjc.co.th



Dr. Surasak Wannaparhun, BJC Glas
surasaka@bjc.co.th

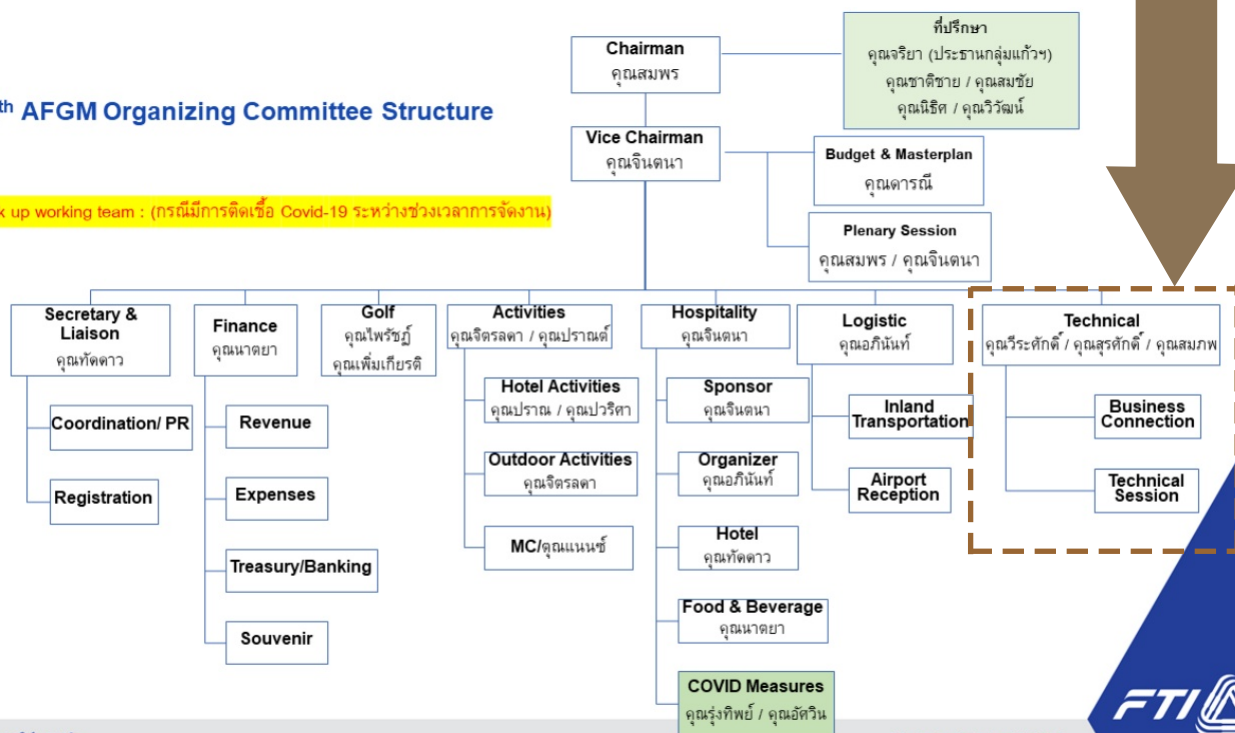
Poster Session Coordinator



Asst.Prof.Dr. Wichai Pattanapol, BJC Glass
wichaia@bjc.co.th

44th AFGM Organizing Committee Structure

Back up working team : (กรณีมีการติดเชื้อ Covid-19 ระหว่างช่วงเวลารจัดการงาน)



www.fti.or.th

Updated 21 April 2022



Fig.4 : 44th AFGM organizing committee structure with sub-committee (in the dash line) for the technical session.

Report compiled at BJC Glass for IYOG 2022
December 5, 2022
from the desk of wp