

Saudi Arabian International Chemical Sciences

ORGANON

Chapter of the American Chemical Society

2021

Issue 2

Focusing on

Vision 2030

Through Community Outreach



INSIDE ISSUE 2

- Chairman Message	2
- Workshop June 2021	3
- Webinar September 2021	4
- Webinar October 2021	5
- Webinar November 2021	6
- National Chemistry Week Hybrid Event October 2021	7
- First workshop: The Chamistry of Ink	9
- Second workshop: The Chamistry of Soft drink and Mentos	10
- Third workshop: The Chamistry of Plastic	11
- Chemathon August 2022	13
- Best Speaker Awards	14
- Gulf Chemistry Association Conference 2022	15

Chairman message

Greetings to all society members,

The last two years were the most challenging year in the history of our society's activities. The COVID-19 pandemic reshaped our world by devastating public health, the economy, and daily life.

We responded to the pandemic in several other ways, and we conducted all our events online. This year we successfully organized seven webinars on various topics with prominent speakers. Two workshops: (i) Liquid chromatography applications in the petroleum industry and (ii) Safety were conducted. More than 100 society members attended these events.

Also, we organized the National Chemistry Week at Jeddah in both face-face and online modes. A one-week chemistry competition was conducted for young children to show them a glimpse of the chemical world by entertaining them and involving in many activities.

Congratulations to Dr. Nahid Siddiqui and myself for being the top 2% research scientist in the Stanford university list published report.

We join with other American Saudi-Chapters to establish a cooperative relationship in interests devoted to preparing, organizing, and managing a conference MEETCON. This conference will be held the following year, 2022, in Saudi Arabia.

Due to travel restrictions, we all learned many vital lessons on how to best handle and cope with the crisis despite limited visibility. Thus, we postponed our First Gulf Chemistry Association International Conference and Exhibition (GCA) in November 2021. This major event has now been shifted to 13 to 17 November 2022 in the same venue. I like to receive the usual support for the success of this conference.

I'd like to conclude this year's message with personal reflection. No matter what emotions we all felt over the past year, we were undoubtedly strong. With the help of the Almighty GOD, we remain optimistic that the grip of the pandemic will ease entirely in 2022.

Thank you again for your support



Dr. Basheer Chanbasha
Chair-SAICSC-ACS



Workshop (June 2021)

Liquid Chromatography: Fundamental and Advanced Applications in Petroleum Industry

Facilitator: Dr. Saroj K. Panda

Moderator: Dr. M. Nahid Siddiqi

Biography:

He has more than 15 years of experience in the characterization of petroleum hydrocarbons, refinery additives, oilfield chemicals and polymers using chromatography and mass spectrometry techniques. He has a PhD from the University of Muelheim, Germany. He has published more than 30 peer-reviewed scientific articles, presented in more than 50 international technical conferences, and has been a reviewer for chromatography, mass spectrometry and petroleum characterization related leading technical journals.

Abstract:

- The liquid chromatography (LC) in a nutshell, history and progress of LC including different modes of separation and use of a variety of detectors for method development.
- The latest important application of LC in the petroleum industry, like speciation of sulfur heterocycles and heavy polycyclic aromatic compounds based on alkyl-chain length and ring-number in petroleum samples will be presented.

A circular portrait of Dr. Amy Baliya, a woman with brown hair and glasses, smiling. The background of the slide features a molecular structure pattern in light blue and yellow.

Webinar (September 2021)

Preparing Biorenewable Polymers for
Removing Organic Pollutants and Detecting
Microplastics in an Aqueous Environment

Speakers: Dr. Amy Baliya

Moderator: Dr. Amani Alhalwani

Biography:

Dr. Amy Baliya received a B.S. Chemistry from Loyola University Chicago and Ph.D. from University of Illinois at Urbana-Champaign. While at the University of Illinois, Amy worked with Professor Steven C. Zimmerman developing triazaadamantane based dendrimers for gene delivery. After a post-doctoral position with Professor Matt Sigman at the University of Utah, Amy began her independent career at Fordham University. Her research focused on synthesizing macromolecules following green chemistry principles and examining their ability to remove organic pollutants from aqueous environments. She then moved to Radford University in 2016. Since 2021, Amy has been the Chair of the American Chemical Society National Women Chemists Committee and has been involved in diversity, equity, inclusion, and respect initiatives.

Abstract:

Organic compounds in aqueous medium adsorb strongly to polymer surfaces. This phenomenon has been exploited to remove unwanted organic pollutants from aqueous environments. But several polymeric systems create more waste during its production than they remove. Our research utilizes green chemistry principles to prepare polymers from renewable resources with no net waste and maintain the adsorption properties of these polymers. Binding organic dyes and polycyclic aromatic hydrocarbons to the polymers was well behaved, allowing for the examination of the kinetic profile and thermodynamic affinity of polymers.

The affinity of organic dyes for polymers also holds the potential to detect microplastic pollution. We exposed Nile Red and I-Dye Poly to plastics of different classifications. Through using easily obtainable instrumentation, dyes that adsorbed to the microplastic surface fluoresced under visible or ultraviolet light. Different plastic types produced distinct staining and fluorescence results, allowing for a qualitative assessment of the type of microplastic present.

Webinar (October 2021)

Financial Tools for Successful
Management of R & D

Speakers: Dr. Ghaithan A. Al Muntasheri

Moderator: Dr. Saleh Al-Haidary



Biography:

Dr. Ghaithan A. Al-Muntasheri is the R&D Director for Aramco Americas based in Houston, Texas. In this capacity, he oversees all the Aramco R&D Centers in the US with an R&D scope that spans all key Upstream and Downstream disciplines. Prior to that, he was the Chief Technologist of Production Technology Team under the Saudi Aramco Upstream R&D Organization, EXPEC Advanced Research Center. Al-Muntasheri has been with Saudi Aramco for the last 20 years. He holds BS and MS degrees in chemical engineering from King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia. He also holds a PhD degree in Petroleum Engineering from Delft University of Technology (TU Delft) in The Netherlands (2008). Dr. Al-Muntasheri served as the Chairman of the SPE Saudi Arabia Section (SPE SAS) for the term 2011/2012. He also served as the Chairman of the 2011 SPE SAS Annual Technical Symposium & Exhibition, in AlKhobar, Saudi Arabia. He is a Distinguished SPE Member, the author/co-author of

one book chapter and around 90 publications. He is the inventor/co-inventor of more than 30 US patents.

Abstract:

Investment in R&D is essential for technological advancement and adding value to the organization in terms of revenue generation, costs reduction and/or efficiency improvements. Sustainability and growth of the oil and gas business are dependent on how fast and effective technology development is. Research has shown that implementation of the right financial tools is a key attribute for a successful research and development (R&D) cycle. Therefore, it is vital for managers, scientists and engineers to be equipped with the right financial tools in order to ensure the budget and all related resources are diverted to the right projects in a timely manner. In general, technology development can be broken down into 4 stages. Namely, proposal stage, project execution, prototyping and commercialization. During this process, there are risks that vary from one stage to another. First, there are technical risks associated with

the R&D project execution phase that vary from one project to another introducing uncertainty to the creation of the final technology product. Moreover, after the technology is successfully developed, there are additional risks associated with the market commercialization process and the competitiveness of the technology. In this presentation, we share a review of available methods that can be used to evaluate an R&D portfolio. This includes making decisions on future projects, evaluation of existing projects and quantifying the impact of completed projects based on the implementation of their technological outcomes and/or commercialization.

Webinar

(November 2021)

Paper Recycling in KSA

Speakers: Mr. Sami Al-Safran

Chief Executive Officer

Middle East Paper Company

Moderator: Mr. Yaser Al-Duailej



Biography:

Sami Al Safran is the CEO of Middle East Paper Company (MEPCO) and holds a BSc. in Industrial Chemistry from King Fahd University of Petroleum & Minerals, Saudi Arabia. He packs a 25+ years of success in specialties including water treatment, waste recycling, and papermaking.

Sami is a visionary who combines sharp strategic skills and well-ordered project management abilities. During his journey with MEPCO and WASCO. He ramped up production capacity from 60,000 tons to 475,000 tons, achieved 700% sales growth and increased market share to exceed 20% of the Saudi market while expanding its export footprint to over 40 countries. He accomplished and exceeded his targets without losing sight of enhancing sustainability metrics, across all levels.

Prior to joining MEPCO in 2012, he was the Technical Manager, then the Project Manager for Saudi Paper Manufacturing Company. Sami started his career as a Water Treatment Consultant in Nalco Saudi Company Ltd in 1992.

He is the Vice Chairman for the Higher Institute for Paper and Industrial Technologies

(HIPIT); a training institute that educates young Saudi professionals in the paper technology. He aims to develop tomorrow's leaders by enabling Saudi's youth to start a career in the paper industry. Through the establishment of HIPIT, he steered the company's vision to align with Saudi Arabia's 2030 vision for talent localization. In 2016, The King Khalid Foundation named Sami as a CSR Ambassador for his strategic view and contribution to sustainability including the environmental awareness campaign through AL NABTA foundation. He is among the 100 best Arab CEOs in 2017 as named by the Arab Best Awards. Waste & Recycling Middle East named him as The Personality of the year, in 2019.

Abstract:

Topic will revolve around the Paper Industry wherein we will discuss a short brief on the History of Paper, How the Paper is made, Types of Paper and Industry Statistics. We will also cover the capacity, consumption and key players in the region. What are the hurdles we overcome and what is our future projections for the industry.

National Chemistry Week Hybrid Event (October 2021)



Saudi Arabian International Chemical Sciences
Chapter of American Chemical Society

FAST OR SLOW
Chemistry Makes It Go!

OCTOBER 21 - 23, 2021
07:30 PM - 08:30 PM (GMT +3)

Hybrid Event
Family Tree Cafe (In-Person)
in King Abdulaziz University, Jeddah
& **ZOOM** (Virtually)

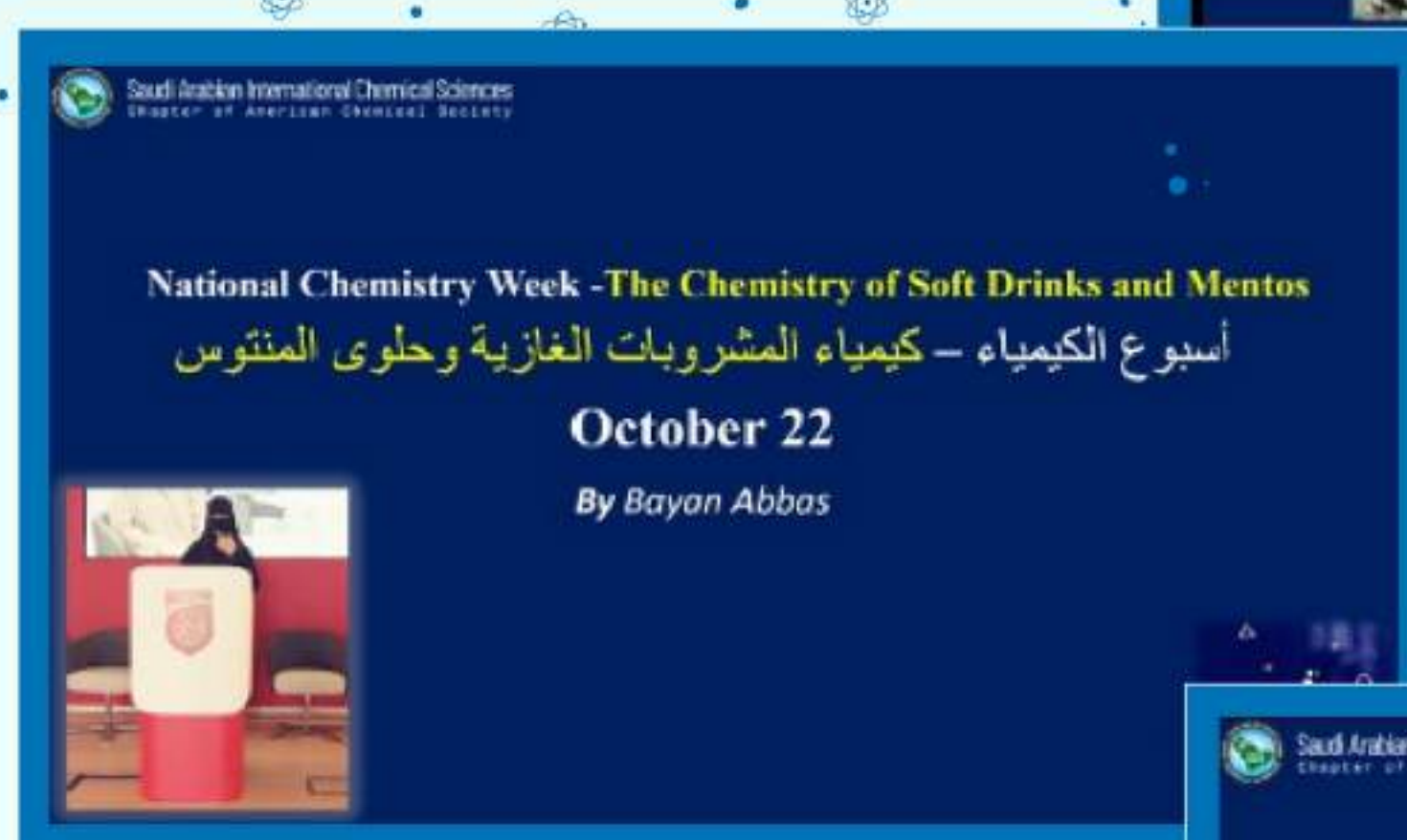
#NCW

For Registration please scan



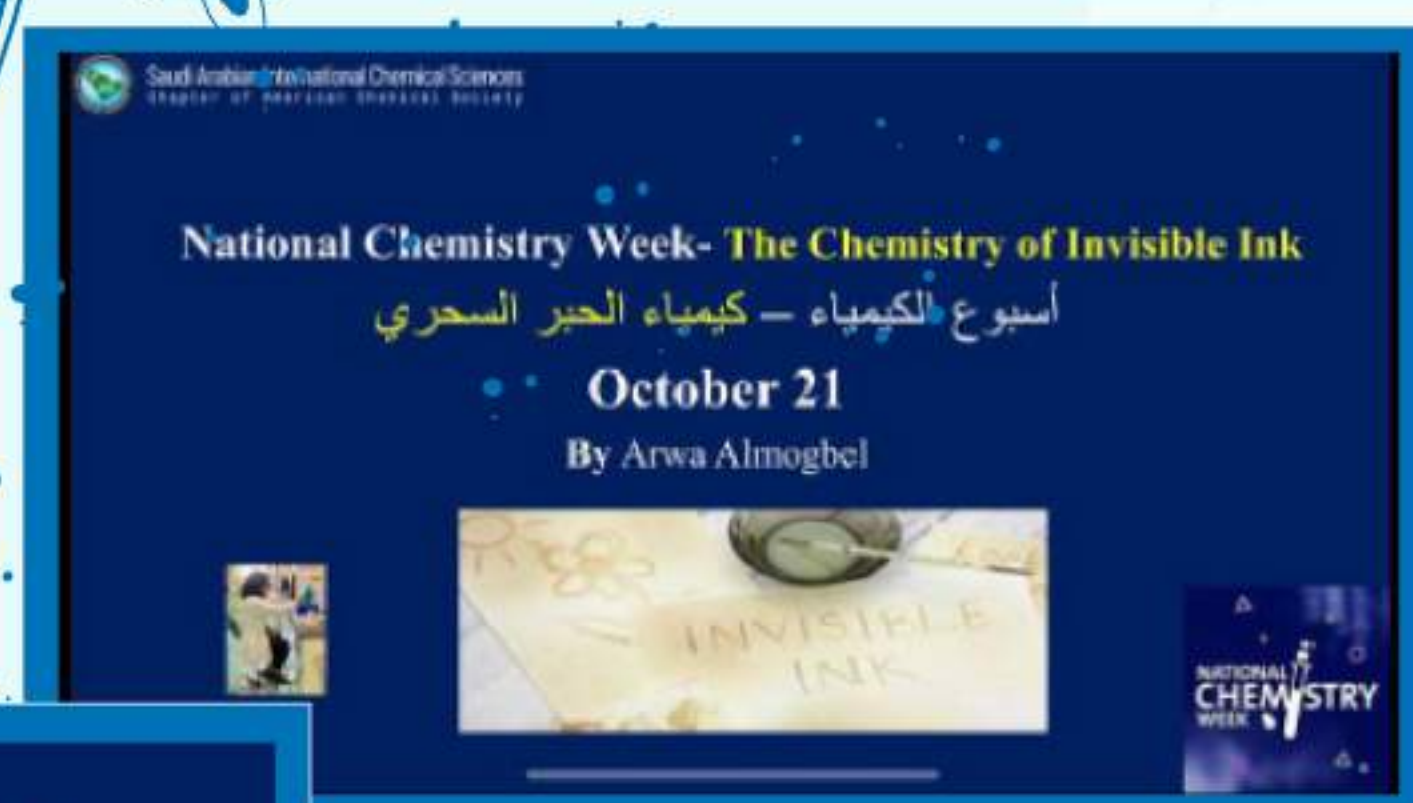
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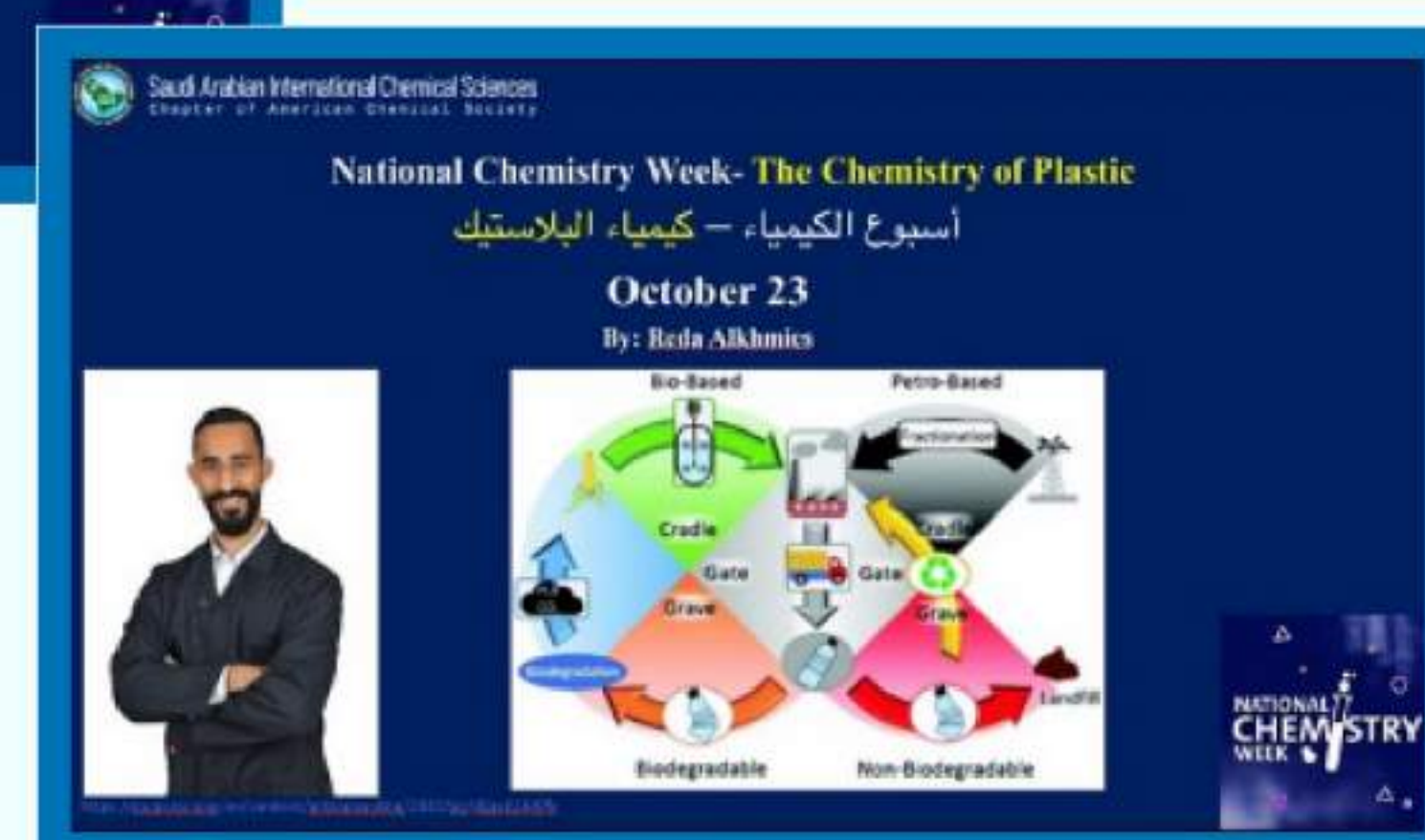
National Chemistry Week - The Chemistry of Soft Drinks and Mentos
أسبوع الكيمياء - كيمياء المشروبات الغازية وحلوى المنطوس

October 22
By Bayan Abbas




National Chemistry Week - The Chemistry of Invisible Ink
أسبوع الكيمياء - كيمياء الحبر السحري

October 21
By Arwa Almogbel



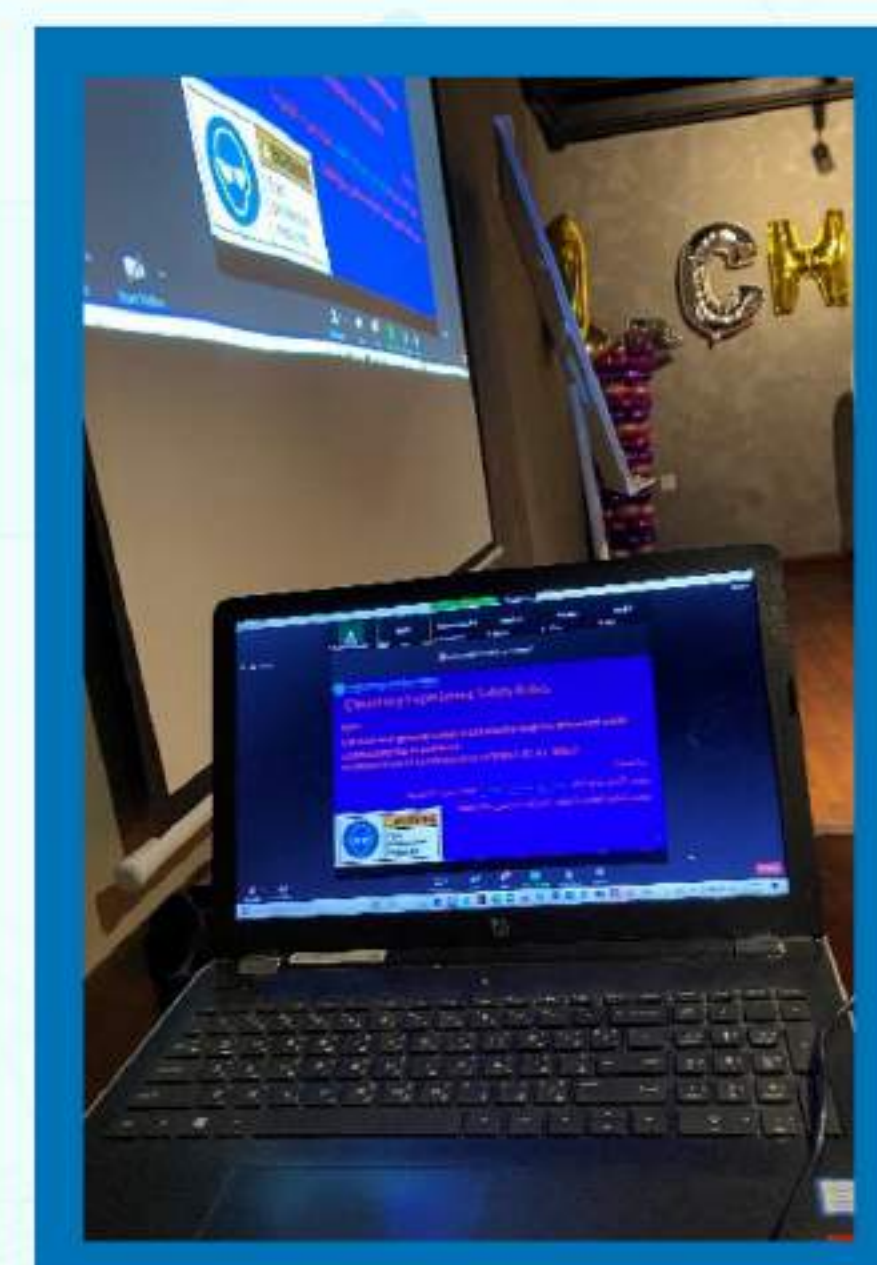
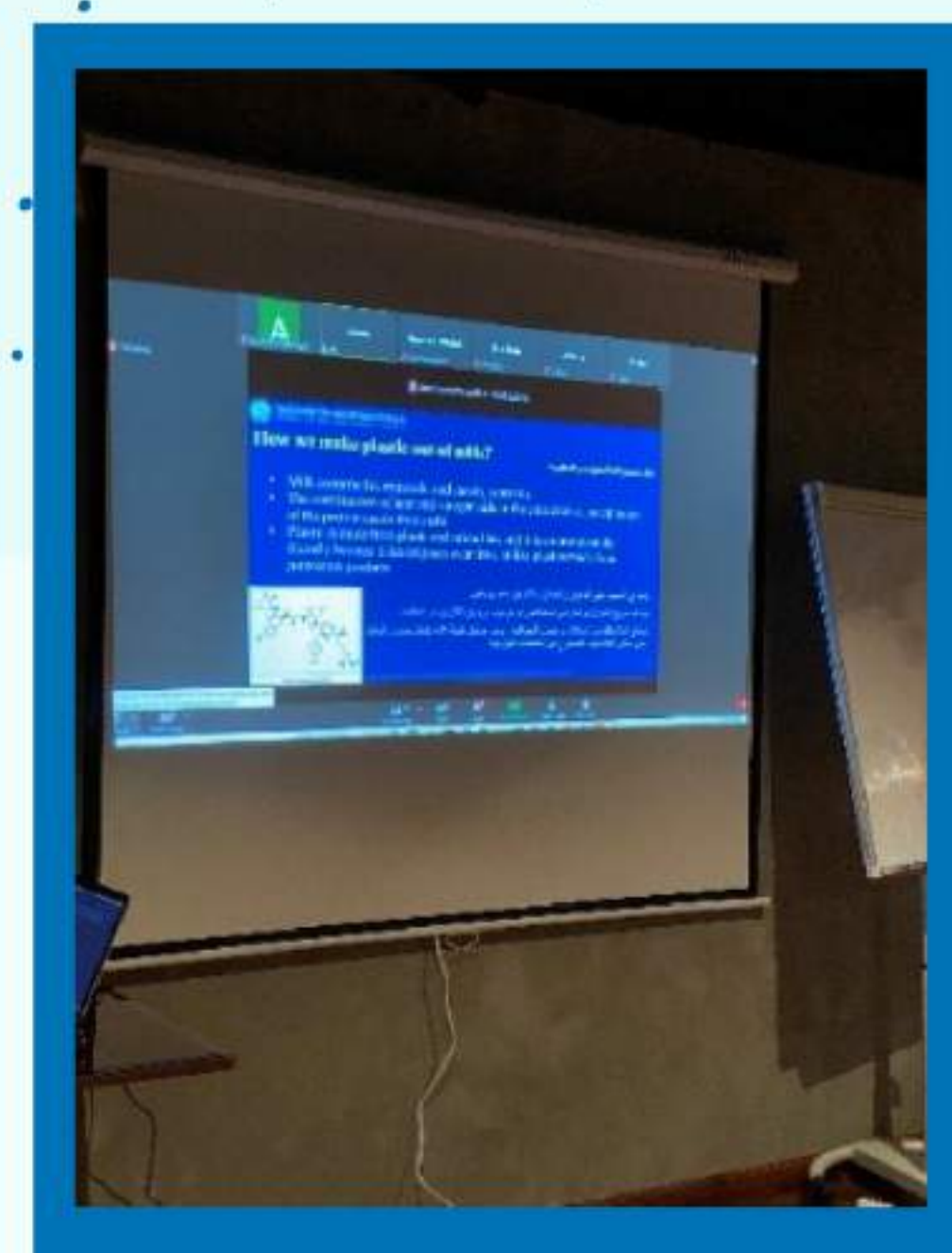
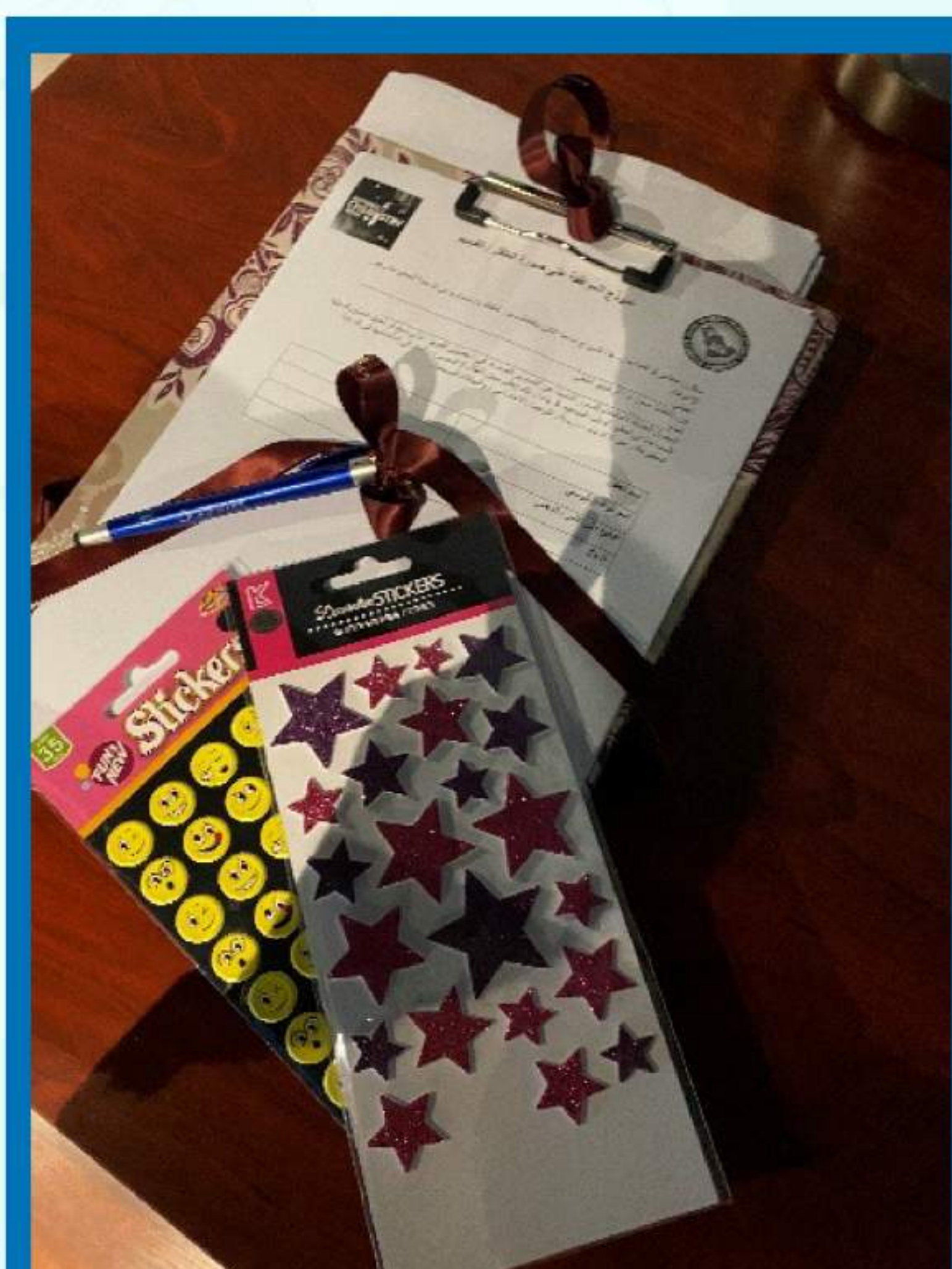
National Chemistry Week - The Chemistry of Plastic
أسبوع الكيمياء - كيمياء البلاستيك

October 23
By: Reda Alkhamies



Several chemistry workshops were coordinated and moderated by Dr. Amani Alhalwani, and sponsored by the SAICSC-ACS in honor of National Chemistry Week (NCW-2021). The event took place at family tree coffee shop at King Abdulaziz University-Jeddah from the 21st to the 23rd of October, 2021. The National Chemistry Week workshops have three goals: to connect kids with chemistry through activities and to show the importance of chemistry in everyday life. These workshops were designed to provide students a glimpse into the world of chemistry by amusing them and immersing them in various activities. The first workshop on October 21st was presented by Ms. Arwa Almoqbel, the workshop was about the chemistry of ink, Ms. Bayan Abbas presented the second workshop on October 22nd, the workshop was about the chemistry of soft drinks and Mentos, and the third workshop was on October 23rd, Mr. Reda Alkhamies, the workshop was about the chemistry of plastic.

Each workshop was performed in-person and virtual through the ZOOM platform and took 40 minutes using Arabic and English. The registration announcement was sent in advance, and a certificate was issued to the volunteers and participants afterward. The workshops were conducted with chemical safety regulation, social distances practice, and precautionary pandemic measures.

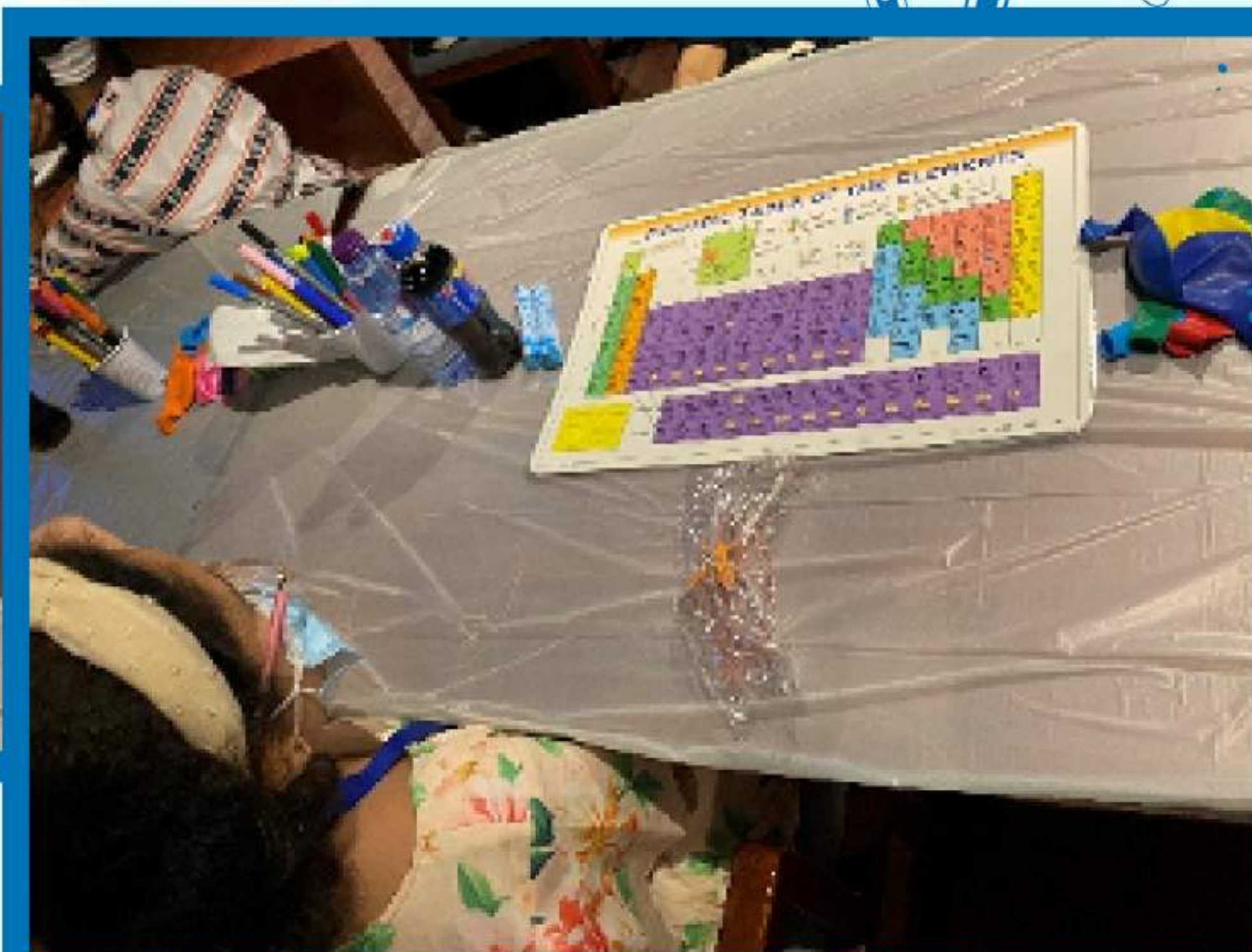


An Overview of First Workshop

The Chemistry Of Ink

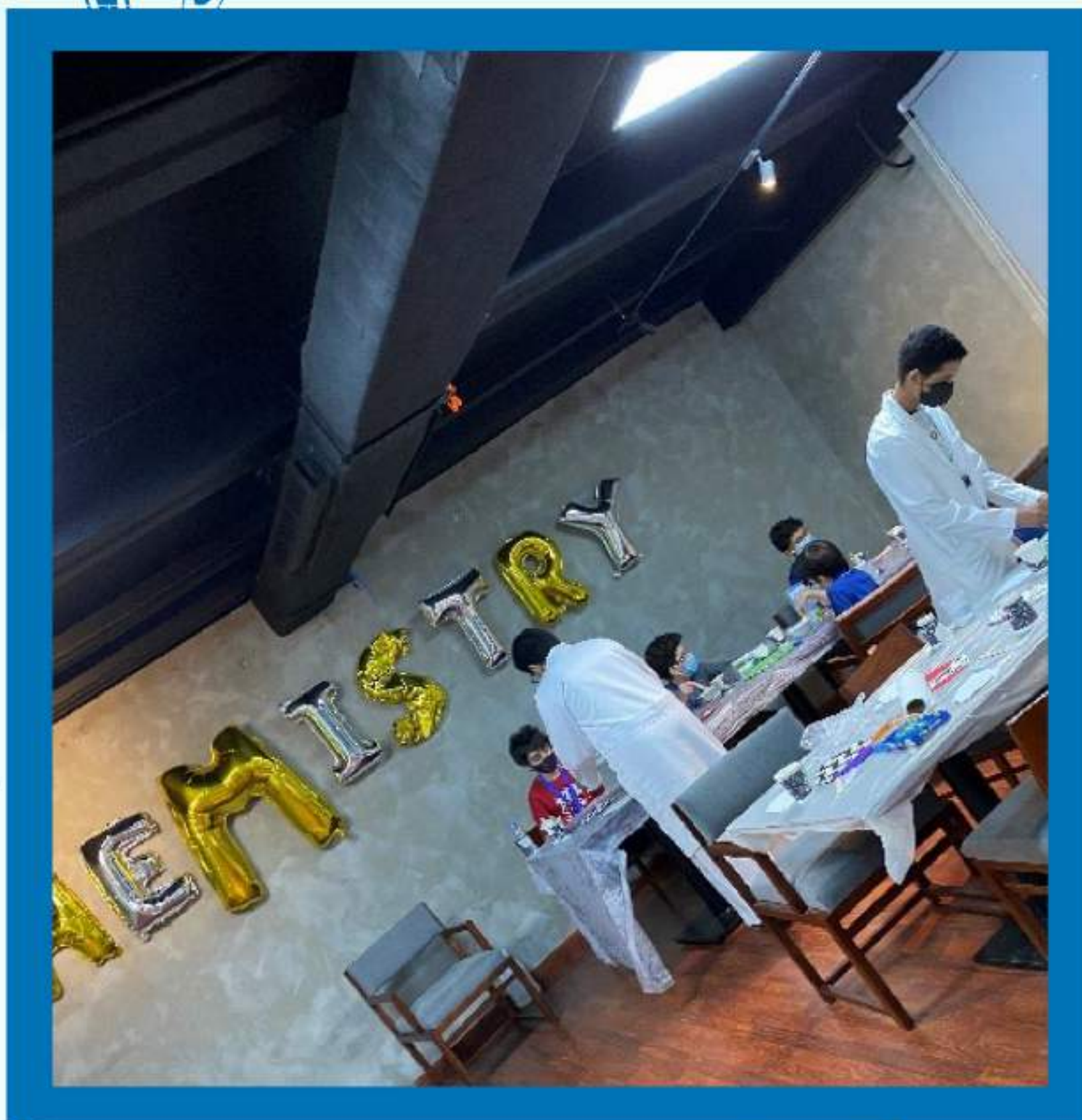


An Overview of Second Workshop The Chemistry Of Soft Drinks And Mentos



An Overview of Third Workshop

The Chemistry Of Plastic



We appreciate all in-person and virtual volunteers who were Ms. Hajer Nasir, Ms. Ghufra Ibrahim, and Ms. Juhina Khalifa, and in-person volunteers who were Ms. Shahad Aljuhani, Mr. Mohammed Aljuhani, Mr. Abdulrahman Abbas, Ms. Bayan Abbas, Mr. Mohammed Alsofi, Ms. Saja Hajib, Ms. Raneem Khojah, and Ms. Raghad Qawas. The participant had a chance to enter a raffle for a chance to win an e-gift card after they shared a picture of their experiment through society Twitter using @SAICSC-ACS and #NCW





Chemathon

Organized by
Saudi Arabian International Chemical Sciences
&
King Fahad University of Petroleum & Minerals
Chemistry Department

**Aug 04th
2022**

Last date
of
submission



Hurry Up!
Register Now



The "Chemathon" talented undergraduate student research competition will be conducted for male/female students all around Gulf countries. Saudi Arabian International Chemical Sciences and the chemistry department at King Fahad University of Petroleum & Minerals are jointly organizing the Chemathon as a part of the technical program of the conference GCA 2022.

Round 1

02 - 04 October 2022

KFUPM

\$800

for 10 best teams

Round 2

17 November 2022

Gulf Hotel, Bahrain

\$5000

for 3 winner teams

****All the selected teams will be notified by 4th September 2022****

Find out more : www.chemathon.gca2022.org | www.gca2022.org

Best Speaker Awards



Professor Omar Yaghi
Young Researchers Awards

**5,300 USD for the best three
graduate student speakers**

Award Eligibility

- 1 The presenter must provide an official letter from the university and/or advisor indicating that he or she is a full-time graduate student (Master or Ph.D.) by research at the prestigious universities.
- 2 Must be below 35 years old
- 3 Must have already published a paper in the field of his or her research with his or her advisor at the peer-reviewed SCOPUS journals, and include the reference of his/her abstracts submitted to GCA2021.
- 4 Must have filed or granted a patent, which is based on his or her Master or PhD research current study.
- 5 Must have delivered concisely and precisely an original research results that fits well with the topics of GCA2021, able to answer the questions from the subject of matters during the allocated 5 minutes Q&A.

Apply now at GCA2022.org/award/



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HE Shaikh Mohammed Bin Khalifa Al Khalifa
Minister of Oil - Kingdom of Bahrain



First Gulf Chemistry Association International Conference and Exhibition

13 - 14 November 2022
Pre-Conference Courses

15 - 17 November 2022
Conference and Exhibition



Executive Keynote Speaker

Ahmad Al Khowaiter
Chief Technology Officer
Saudi Aramco



**Role of Chemistry in Sustainable Energy
for Oil and Petrochemical Industries**



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