

De-Carbonized PE, PP and PET

Addressing Challenges Facing Today

- *Feedstock 4Ever*
- *Global Warming*
- *Land & Ocean Pollution*
- *Micro-Nano Particles in Our Food & Drinks*

April 17 (Wed) – April 18 (Thu) 2024

Marriott-Crystal Gateway

Washington DC, USA

Conference Chair

Dr. Jennifer Mackey, Director of Sustainability, **Bunzl** Distribution NA, USA

Dr. Terry Cooper, CEO-Global Polymer Consultants, **ARGO** Group Intl, UK/USA

WELCOME to InnoPlast Solutions 31st conference; 13th on Re-Invention of Plastics!

After 85 years of unmatched benefits to human life, our Plastics Industry has come under scrutiny due to issues threatening the future, namely, (1) Climate Change (2) Land & Ocean Pollution and (3) Sustainability of Raw-Materials in the distant future, and lately (4) Micro-Nano Plastic Particles & Leached Chemicals in our Food Chain. However, a spirit of “Radical Innovations” in the field of chemicals/polymers is underway; a phenomenon we have not seen in the chemical industry since the 1960’s. Future technologies that take Sustainability & Environmental impact to new heights can be categorized in two areas, for example,

- (1) **Non-Fossil Feedstock:** Transitioning from traditional fossil based raw-materials to Renewable BioMass, Waste(s) and GreenHouse Gas (GHG) Emissions.
- (2) **Value Plastic-Waste:** Cycling into Valued Products in a preferential order such as: Mechanical Recycling of Fossil/BioBased Plastics > Chemical Recycling into Building Blocks > Pyrolysis Oil > BioFuels > Incineration > BioDegradation > Landfil

Re-Shaping of Polymers/Plastics industry has already begun; join us to witness the future!!!

Conference Program @ Glance	
April 17 -Wednesday 8:00 AM-5:00 PM 5:00-7:00 PM 7:00-10:30 PM	<ul style="list-style-type: none"> • De-Fossilization of Plastics-Part-1 Converting Carbon-Emissions into Building Blocks for PE/PP/PET (Compounded Impact on GHG Reduction) • De-Fossilization of Plastics-Part-2 Advances in Commercializing PE/PP/PET from Renewable C-Waste (<i>BioMass</i>) (GHG Reduction ≥ 30%) Cocktail Reception & Networking Networking Dinner by Potomac River/ City Tour – OPTIONAL
April 18 -Thursday 8:00 AM-4:00 PM	<ul style="list-style-type: none"> • De-Fossilization of Plastics-Part-3 Advanced Recycling of Fossil/Renewable C-Waste (<i>BioMass</i>) PE/PP/PET (GHG Reduction ≥ 30%) ▪ Update on Micro-Nano Plastic Particles & Leached Chemicals in Our Food Chain

April 17 (Wednesday) 2024

7:00 - 8:15 AM Registration & Networking Breakfast

8:15 -9:00 AM Welcome and Opening Remarks

(1)

Polymers & Plastics: Great Materials 4Ever But Re-Invention a Necessity !!!

- *Plastics Industry with Un-Matched Benefits over 85 years now Faces Issues, namely, Global Warming, Plastics Pollution, Sustainable Feedstock Availability, and now Plastic Particles in Food-Chain with Unknown Health Effects.*
- *Renewable Agricultural-Waste + GHG Emissions + Recycled Plastics: Key to Reduction of Climate-Land-Ocean Pollution & Independence from Fossil-Feedstock*
- *Pursuit of Fossil-Free PE, PP, PET & other DURABLE Plastics; **Innovations @ Work***
- *Latest Revelations about **Micro-Nano Plastic Particles** in our Food & Drinks*

Dr. Yash Khanna, President, **InnoPlast Solutions**, USA

Brand-Owners

Plans vs TimeLine on Sustainable Goals

9:00 – 9:30

(2)

Addressing Plastic Crisis:

Issues, Strategies and Time-Line from a Brand Owner Perspective

Dr. Bryan Haynes, Sen. Tech. Director-Global NonWovens, **Kimberly-Clark**, USA

9:30 – 10:00

Coffee & Networking

10:00 - 10:30

(3)

Co-Designing Sustainable Packaging with Converters:

Meeting Brand-Owners Goals

Dr. Jennifer Mackey, Director of Sustainability, **Bunzl** NA, USA

10:30 - 11:00

(4)

Multi-Initiatives to Deliver Sustainable Packaging

- (a) *Recycled & Renewable Materials Designed for Recycling & Composting*
- (b) *Plans to Operate Nova Chemical's Upcoming Film Recycling Plant to Produce \$113 Mlbs/Year of Recycled PE Pellets*

Erik Goring, Senior Director of Sustainability, **Novolex**, USA

De-Carbonization of Plastics-Part-1

Converting Carbon-Emissions into Building Blocks for PE/PP/PET

(Compounded Impact on GHG Reduction)

11:00 – 11:30

(5)

Special Presentation !

Captured-Carbon into Building Blocks for PE, PP, PET and more

Dr. Ching Leang, Director-Strain Engineering, **LanzaTech**, USA

11:30 – 12:00

(6)

CO₂ Emissions Conversion into PLGA Polyester and more

Julia Krasovic, VP-Technology & Innovation, **Avantium**, the Netherlands

12:00 - 1:30

Lunch & Networking

De-Carbonization of Plastics-Part-2

Advances in Commercializing PE/PP/PET from Renewable-Waste (BioMass)

(GHG Reduction \geq 30%)

1:30 - 2:00

(7)

Total Sustainability in Action: Executive Overview

- (a) *Non-Fossil Feedstocks: GHGases (CO₂/CH₄) + BioMass + Recyclates*

(b) *Current State-of-the-Activities in Europe, Asia and North America*
Dr. Terry Cooper, CEO-Global Polymer Consultants, **ARGO** Group Intl, UK/USA

- 2:00 - 2:30
(8) **Beyond Green-Polyethylene: Advances Reported in Media-2023**
(a) *Wood-Based Renewable Naphtha as Feedstock (Dow / UPM Biofuels)*
(b) *Corn Stover as Feedstock (Dow / New Energy Blue)*
(c) *Multi-Sourced Bio & Plastic Waste as Feedstock (Neste & Partners Blue)*
Dr. Yash Khanna, President, **InnoPlast Solutions**, USA
- 2:30 – 3:00 Coffee & Networking
- 3:00 - 3:30
(9) **BioRefinery to Produce BioMEG for BioPET; update on other Advances**
Marving Struffing, Sales Director, **UPM Biochemicals**, Germany
- 3:30 - 4:00
(10) **BioForming Process Enables 100% Biobased PET**
(a) *Prototype 100% Biobased PET Bottles*
(b) *Jacket based on 100% Biobased PET*
Brendan Ihde, Business Development, **Virent**, USA
- Special Plastics-Fossil-Free:**
BioDegradable and/or Durable
- 4:00-4:30
(11) **The Aventa™ Advantage:**
Uncovering the Need for Biodegradable and Compostable Materials
Mounir Izallalen, Strategic Alliance Manager, **Eastman**, USA
- 4:30-5:00
(12) **The World of PHA Plastic:**
Durable or Marine Biodegradable/Compostable; All You Need to Know !
Dr. Anindya Mukherjee, Board Member, **Go!PHA**, USA
- 5:00-7:00 *Cocktail Reception* & Networking
- 7:30-10:30 *Networking Dinner* by Potomac River – OPTIONAL

April 18 (Thursday) 2024

7:00-8:15 AM Breakfast & Networking

A Challenge for Plastic Packaging !!! **Micro-Nano Plastic Particles & Leached Chemicals in our Food-Chain & Drinks**

- 8:15-8:45
(13) **Micro-Plastic Particles in our Food-Chain**
(a) *Qualitative & Quantitative Detection*
(b) *Process Monitoring & Countermeasures*
Dr. Gabriele Eder, Senior Researcher, **OFI-Testing/Research Institute**, Austria
- 8:45-9:15
(14) **Microplastics in Products: Fragmentation Release and Chemical Additives**
Dr. Joana Sipe, Post-Doctoral Associate, **Duke Univ**, USA

9:15 – 9:45
(15) **Challenges in the Safety Assessment of Recycled Plastics**
(a) *Risk Assessment of Food Contact Materials*
(b) *DNA Reactive Contaminations*
Dr. Christian Kirchnawy, Mgr-Microbiology, *OFI-Testing/Research Institute*, Austria

9:45-10:30 Coffee & Networking

10:30-11:00
(16) **Legal Aspects: Chemicals & Safety Aspects of Sustainable Packaging**
Emily Lyons, Partner, *Husch Blackwell LLP*, USA

De-Carbonization of Plastics-Part-3

Advances in Recycling Fossil/BioMass Derived PE/PP/PET

(GHG Reduction \geq 30%)

11:00-11:30
(17) **A Breakthrough in PET Recycling: Mono-Material Bottle & Cap Package**
Rachel Hess, Senior Engineer, *Origin Materials*, USA

11:30-12:00
(18) **State-of-the PP Recycling:**
(a) *General Overview of Plastic Recycling*
(b) *Commercial Update on Virgin-Like Recycled PP*
Tamsin Ettefagh, Chief Sustainability Officer, *PureCycle*, USA

12:00-12:30
(19) **Preventing Ocean Plastic Pollution:**
(a) *Sourcing*
(b) *Certification*
(c) *Reusing Recovered Materials*
Ryan Schoenike, Co-founder and President, *OceanCycle*, USA

12:30-1:30 Lunch & Networking

1:30-2:00
(20) TBA

2:00-2:30
(21) TBA

2:30-3:30

Panel Discussion

Path Forward for Safer Materials for a Circular Future