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## REVOLUTIONISING PLASTICS WITH SUSTAINABLE INNOVATION FOR GLOBAL IMPACT

TECHNICAL CONFERENCE

CALL FOR PAPERS





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EGYPT PLAST
2024



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### **OVERVIEW**

New for 2026, the PLASTEX Conferences are set to shape the future of the plastics industry, unlocking sustainable growth opportunities and advancing eco-conscious practices.

#### STRATEGIC CONFERENCE

The strategic programme will explore the critical need for sustainable manufacturing models, regulatory alignment, and cross-sector partnerships to position Egypt as a leader in sustainable plastics.

#### **TECHNICAL CONFERENCE**

The technical programme will offer deep insights into groundbreaking R&D, production advancements, and material innovations that address industry challenges, from waste reduction to enhancing product performance.

Together, these conferences provide a comprehensive platform for advancing recycling, packaging, and efficiency across the entire plastics supply chain.

# SUBMIT YOUR ABSTRACTS

The growing demand for sustainable and efficient solutions is accelerating transformation across the plastics industry, both strategically and technically.

As the world faces rising environmental pressures, supply chain complexities, and the imperative to minimise waste, the need for innovative production methods and eco-friendly materials has never been greater. Engaging all stakeholders from industry pioneers, engineers, researchers, technology innovators to sustainability advocates, it remains essential to drive advancements in areas such as automation, high-performance plastics, and bio-based alternatives.

By submitting technical abstracts, experts have a unique opportunity to contribute cutting-edge insights and solutions that will shape the future of sustainable plastics.

### **TECHNICAL CATEGORIES**



MATERIAL ADVANCEMENTS IN PVC. PP AND PE



ADVANCED PLASTICS MOULDING, FORMING, AND FILM PRODUCTION TECHNOLOGIES



BREAKTHROUGHS IN HIGH-PERFORMANCE ENGINEERED PLASTICS



EVOLUTION OF ADDITIVE MANUFACTURING TECHNOLOGIES



SUSTAINABLE PLASTIC PRODUCTION METHODS



INNOVATIONS IN PLASTICS FOR THE PACKAGING INDUSTRY



CUTTING-EDGE RECYCLING TECHNOLOGIES



AUTOMATION AND AI IN MANUFACTURING

ABSTRACT SUBMISSIONS DEADLINE
BEFORE MONDAY 5 MAY 2025
plastexegypt.com/CFP

SCAN QR CODE
TO SUBMIT
YOUR
ABSTRACTS





CATEGORY

### MATERIAL ADVANCEMENTS IN PVC, PP AND PE

- Development of UV-resistant polymers for enhanced durability
- High-performance fibre-reinforced composites for structural applications
- Improved thermal and acoustic insulation properties
- Fire-retardant formulations for PVC, PP, and PE
- Innovative lightweight polymer blends for versatile
- Advances in chemical resistance and impact strength
- Incorporation of antimicrobial additives for health and hygiene
- Reinforced PP and PE for high-stress applications



CATEGORY

2

## ADVANCED PLASTICS MOULDING, FORMING, AND FILM PRODUCTION TECHNOLOGIES

- Innovations in moulding processes (injection, blow, and compression moulding)
- Progress in multi-component and micro-moulding processes
- High-precision moulding for medical, automotive, and electronic applications
- Film extrusion and stretching techniques
- Multi-layer and multi-component moulding and film technologies
- Advanced moulding and forming machinery for complex geometries
- Mould cooling and heating technologies for efficiency and part quality
- Advanced film coating and lamination technologies
- Precision engineering for complex geometries and high-quality finishes
- In-line quality control and process monitoring for moulding and film production

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CATEGORY

3

#### BREAKTHROUGHS IN HIGH-PERFORMANCE ENGINEERED PLASTICS

- Development of high-temperature-resistar polymers for industrial applications
- Lightweight, high-strength polymers for automotive and aerospace industries
- Wear-resistant and chemical-resistant materials for harsh environments
- Advances in electrical conductivity and insulation for electronics
- High-performance polymers in medical devices and biocompatible applications
- Emerging trends in nanocomposites and reinforced plastics
- Material characterisation and testing for durability and longevity
- Lifecycle management in high-performance plastic materials
- Innovations in flame-retardant and anti-corrosive plastics



**CATEGORY** 

4

### EVOLUTION OF ADDITIVE MANUFACTURING TECHNOLOGIES

- Innovations in materials for additive manufacturing
- Advances in key additive manufacturing technologies: material extrusion, vat photopolymerisation, powder bed fusion, directed energy deposition, binder jetting, 3D printing, and hybrid approaches
- Leveraging rapid prototyping and small-batch production for customised solutions across sectors
- Enhancing mechanical properties, stability, and durability in additively manufactured components
- Exploring design flexibility and cost efficiencies in producing complex geometries
- Multi-material and multi-process additive manufacturing for enhanced functionality
- Innovations in post-processing techniques for improved surface quality, strength, and reliability
- Integrating additive manufacturing into traditional production workflows to enable hybrid manufacturing systems

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CATEGORY

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### SUSTAINABLE PLASTIC PRODUCTION METHODS

- Energy-efficient machinery and low-emission equipment for plastic manufacturing
- Renewable energy integration in plastic production facilities
- Carbon footprint reduction through optimised production processes
- Lifecycle analysis and environmental impact assessment
- Water and waste management in plastic manufacturing plants
- Process intensification to enhance material and energy efficiency
- Sustainable sourcing and certification of raw materials
- Technologies to enable closed-loop manufacturing
- Transitioning towards zero-emission manufacturing processes
- Bioplastics and eco-friendly additives for lowerimpact production
- Reducing VOCs and other harmful emissions in plastics manufacturing



CATEGORY



### INNOVATIONS IN PLASTICS FOR THE PACKAGING INDUSTRY

- Development of bio-based and biodegradable plastics for packaging
- Lightweight plastics for cost-effective packaging
- Advances in packaging machinery for plastics
- Multi-layer plastics for enhanced barrier properties
- Customisation and design flexibility in packaging
- Sustainability in plastic packaging
- Functional packaging solutions with plastics
- Emerging trends in smart and active packaging



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### CUTTING-EDGE RECYCLING TECHNOLOGIES

- Chemical recycling advances for mixed and contaminated plastics
- Mechanical recycling optimisation to maintain material quality
- Depolymerisation and polymer regeneration techniques
- Innovations in sorting, cleaning, and separation of plastic waste
- Recycling bio-based and biodegradable plastics
- Pyrolysis and gasification technologies for recycling plastics
- Al and robotics in the sorting and recycling process
- Challenges and opportunities in recycling multilayer and composite plastics
- Scaling infrastructure for post-consumer and industrial plastic recycling
- Development of closed-loop systems and circular supply chains



CATEGORY

AUTOMATION AND AI IN MANUFACTURING

- Al-driven predictive maintenance and quality control in plastic production
- Digital twin-enhanced robotics and automation in plastic part assembly and finishing
- Real-time data analytics for process optimisation and efficiency
- Autonomous material handling and logistics in manufacturing plants
- Machine learning for defect detection and yield improvement
- Enhancing safety and precision through collaborative robotics
- Energy optimisation through smart manufacturing systems
- Cybersecurity and data privacy in automated manufacturing processes
- Adaptive manufacturing systems with digital twin flexibility for custom orders
- Automated quality inspection and sorting in plastics production

### **PLASTEX EGYPT 2026**

### CALL FOR PAPERS GUIDELINES

All submitted technical abstracts will undergo review by the PLASTEX 2026 Technical Committee. Early submission is encouraged to allow committee members adequate time for a thorough evaluation. Authors are highly encouraged to submit their abstracts online at: www.plastexegypt.com/CFP before Monday 5 May 2025.

#### **Abstract content**

Your abstract should provide sufficient information for the Technical Committee's review, including:

- Description: Summarise the scope and focus of the work, such as manufacturing data, laboratory findings, original analysis, technological advancements, or innovative solutions.
- Results and Conclusions: Highlight the main findings and key conclusions, indicating any new insights or data that will be shared.
   Specify how the conclusions differ from existing work on the topic, and whether information from field studies, manufacturing facilities, labs, or pilot projects is included.
- Applications: Outline potential applications of the findings presented in the abstract.
- Technical Contributions: Emphasise the relevance of the topic by detailing technical contributions or advancements that enhance knowledge within the plastics and materials industry.

#### **Abstract submissions**

- Abstracts should include up to 500 words and be written in English. Any entry submitted in a different language will not be considered.
- You are welcome to include additional information, such as illustrations, graphs or tables, as attachments.
- Please do not submit the same abstract more than once. If you believe your abstract is relevant to multiple categories, please select one that is the best fit.
- One person can submit multiple abstracts within the same category or across multiple categories. However, please do not submit the same or slightly modified abstracts multiple times, as they will be removed.
- Prior to abstract submissions management clearance must be obtained. Any issues concerning clearance should be outlined when the abstract is submitted.
- If you have presented this abstract previously, you can still submit but you will need to provide details of when and where it was presented before and look to include updated material since original presentation.

#### **Technical categories**

There is a choice of 8 different technical categories, all of which have multiple technical descriptions. We encourage you to carefully review all options and select the category that best aligns with your abstracts. Please note that submitting the same abstract more than once is not allowed, as duplicates will be discarded.

### Commercialism

Your abstracts should not use language that is commercial in tone in the title, text or attachments. The use of such terms will result in scrutiny by the Technical Committee and may result in exclusion of abstracts from the evaluation process.

#### **Guidelines for accepted abstracts**

- You will be notified in June 2025 if your abstract has been accepted. All authors who submitted their abstracts will receive an email stating if their abstracts have been accepted or not.
- Authors of accepted abstracts will be required to prepare PowerPoint presentations, detailed instructions on the preparation will be sent to all authors once acceptance to speak has been received.
- PLASTEX does not require authors to submit their technical papers (manuscripts), as we do

- not publish these.
- All the presenters will receive complimentary access to all four days of the Technical Conference sessions. However, any co-authors are required to purchase a pass if they would like to attend.
- The organiser assumes no obligation for expenses by authors for travel and accommodation to attend and speak at the Conference.



### **Important Dates**

Call for Papers Open

**Monday 6 January 2025** 

Abstract Submissions Deadline

Monday 5 May 2025

Author Notifications June 2025 PLASTEX 2026 OPENS

9 - 12 January 2026





#### **CONNECT FOR ASSISTANCE** WITH YOUR ABSTRACT **SUBMISSIONS**

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#### **DELEGATE REGISTRATION**

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