BUE/EU JOINT WORKSHOP

EU-Egypt Workshop on Sustainable Multifunctional Materials and Structures: Innovations Across Automotive, Aerospace, Energy, and Water Sectors

30 June –2 July 2025

Science & Innovation Park, The British University in Egypt, Cairo, Egypt.

SALIENT has received funding from the Horizon EU Programme under grant agreement No. 101069600 and UKRI grant agreements No. 10047227 and No. 10047305.

GIANCE has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101119286 and UKRI under Grant Agreement No 10090645 and No 10101683.

BIOntier project is supported by the Circular Bio-based Europe Joint Undertaking and its members under grant agreement No 101155925 and UKRI grant agreement No 10137600.

Hosted by: The British University in Egypt (BUE), Cairo
Led by: Prof. Yehia Bahie-El-Din (The British University in Egypt), and Prof. Ahmed Elmarakbi (Northumbria University, UK)
Place: Cario, Egypt

Period: 3 days (from June 30th to July 2nd, 2025)

Workshop Background and Summary: This collaborative workshop is organized to foster knowledge exchange between EU and Egyptian researchers, industry representatives, and academia, focusing on the dissemination of key research outcomes from three EU-funded projects: SALIENT, GIANCE, and BIOntier. Each project offers innovative advancements across critical sectors such as automotive, aerospace, energy, and water treatment, enhancing sustainability, circularity, and multifunctionality of materials and structures. Participants will engage through structured technical presentations, interactive workshops, hands-on training sessions, and dedicated networking activities. The goal is to leverage EU research excellence, build local capacity, and initiate new collaborative partnerships, ultimately contributing towards sustainable and resilient economic growth in Egypt and the broader MENA region.

Workshop Objectives:

- Disseminate significant findings and innovations from the SALIENT, GIANCE, and BIOntier projects.
- Facilitate in-depth dialogue between EU and Egyptian stakeholders on sustainable and multifunctional materials.
- Deliver specialized training to strengthen local technical and research capacities.
- Identify future opportunities for joint EU-Egypt research proposals and industry collaborations.

Expected Outcomes:

- Enhanced understanding of sustainable, multifunctional materials and their sectorial applications.
- New collaborative partnerships between EU and Egyptian institutions.
- Clear pathways for future EU-Egypt joint funding proposals.
- Capacity building through practical training and knowledge transfer.

Benefits:

- Egyptian institutions gain direct insights and expertise from leading EU researchers.
- Increased potential for Egyptian stakeholders to participate in EU research funding schemes.
- Strengthened academia-industry linkages to drive innovation.
- Alignment with sustainability goals, promoting economic resilience through knowledge-based growth.

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Detailed Project Dissemination

1. SALIENT: Novel Concepts for Safer, Lighter, Circular, and Smarter Vehicle Structures

- **Sector:** Automotive
- **Coordinator:** CTAG, Spain; **Academic Lead:** Northumbria University, UK
- **Key Highlights:** Adaptive lightweight vehicle structures; enhanced crashworthiness; circular economy approaches.
- **Use Cases:** Advanced automotive front-end structure designs; circular vehicle lifecycle strategies.

2. GIANCE: Graphene Alliance for Sustainable Multifunctional Materials to Tackle Environmental Challenges

- **Sectors:** Automotive, Aerospace, Energy, Water Treatment
- **Coordinator:** EURECAT, Spain; **Academic Lead:** Northumbria University, UK
- **Key Highlights:** Scalable graphene-based multifunctional materials; high-performance composites, coatings, membranes; circular manufacturing processes.
- **Use Cases:** Lightweight automotive and aerospace structures; membranes for water purification, and energy management systems.

3. BIOntier: Breaking Frontiers in Sustainable and Circular Bio-based Composites

- **Sectors:** Automotive, Aerospace, Energy, Water Treatment
- **Coordinator:** FORTH, Greece; **Academic Lead:** Northumbria University, UK
- **Key Highlights:** Sustainable bio-based composites; high-performance multifunctional materials with superior mechanical, thermal, and chemical properties.
- **Use Cases:** Structural components in aerospace and automotive; advanced materials for energy applications; filtration solutions for water treatment.

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