

3D Bricks Project

Newsletter

2026

Overview of the Project

The **3D Bricks** – *3D Biofabricated high-performance dna-carbon nanotube digital electroniCKS* is a 36-month project, which started in May 2023 (project number 101099125).

3D-Bricks provides a novel platform for next-generation electronic nanodevices, including logic gates, digital circuits, and memory systems. Hybrid DNA nanostructures and carbon nanotubes (CNTs) are being developed to realize high-density, three-dimensional (3D) stacked transistors, alongside a new suite of designs that reproduce all fundamental logic ports—fast, reliable, and easily interconnected through planar (2D) and 3D configurations. The same approach also supports the implementation of CNT-based non-volatile memory circuits. The development of hybrid DNA/CNT systems marks a paradigm shift in nanoelectronics and computing, where the demand for new devices increasingly outpaces the capabilities of conventional semiconductor technologies.

Partners:

The 3D-BRICKS consortium was specifically assembled to unite the largely cross-disciplinary expertise that is crucial for the ambitious objectives on 3D CNT nanoelectronics, and to implement the developed technology in industry. The consortium is led by the Italian Institute of Technology (IIT) with the participation of 10 partners



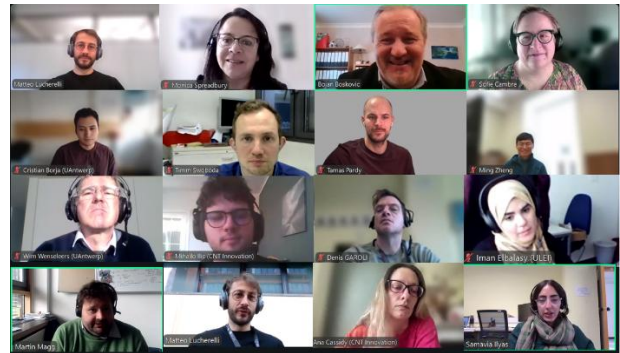
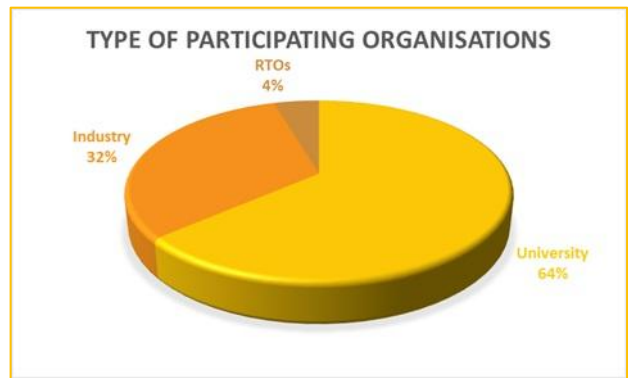
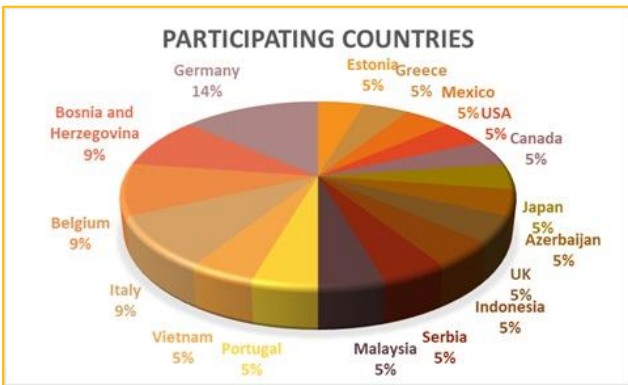
News

3D Bricks Symposium Showcases Advances in Bio-nano Electronics

The 3D Bricks Project hosted its First online **Symposium on Advanced Bio-nano Electronics** on Wednesday, 25 February 2026, bringing together experts and collaborators from across the innovation ecosystem. The session highlighted emerging developments at the interface of biology, nanotechnology, and electronics, reinforcing the project's commitment to fostering cross-sector dialogue.

Participation reflected strong international interest, with 32 attendees representing 17 countries. The audience included a diverse mix of organisations: 64% from universities, 32% from industry, and 4% from research and technology organisations (RTOs), as illustrated in the accompanying diagram. For more information, visit the project website ([events section](#)).

Events



Future Events

2nd Advanced Bio-nano Electronics Symposium – 23 April 2026

The 3D-Bricks Project is delighted to announce its 2nd online **Symposium on Advanced Bio-nano Electronics**, taking place on **Thursday, 26 April 2026**.

Participation is free of charge, but **registration is required**. To register and get more information, please visit the [project website](#).

Some of the topics to be covered are:

- Different strategies for filling of carbon nanotubes to obtain stable p- and n-type doping
- 3D DNA Nanostructures for Hybrid Nanoelectronics
- Upscaling biomanufacturing with microdroplets - from cell factory design to DNA nanotechnology
- DNA as an Engineering Material
- Scalable Bottom-Up Fabrication for Future Electronics



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