2nd Advanced Bio nano Electronics Symposium	
Venue:	*ZOOM (online)*
Date & Time:	23 April 2026 **10:00 – 13:00 (CET)**
Registration:	https://3d-bricks.eu/events

The ***3D Bricks*** **project**, launched in May 2023 with support from the European Commission, EIC Pathfinder programme, is exploring groundbreaking ways to build the future of electronics. By combining DNA nanostructures with carbon nanotubes, the team is developing new platforms for ultra-compact circuits and memory systems. This approach opens the door to faster, more reliable, and highly interconnected devices, paving the way for next-generation computing technologies.

The 3D-BRICKS Project is supported by eleven partners from research institutes, universities and companies based in five European countries.

Partners

This international event will bring together experts and stakeholders to explore the latest developments in bio nano electronics

Advances in nano- and bio-engineered materials are driving new approaches to future electronics, from developing stable p- and n-type doping in carbon nanotubes to creating 3D DNA nanostructures for hybrid devices. Microdroplet-based biomanufacturing and the use of DNA as a programmable engineering material are enabling scalable, bottom-up fabrication methods that support next-generation electronic technologies.

Preliminary Programme

	2nd Advanced Bio-Nano Electronics Symposium
Type of Event	Online (book your space here)
Date:	**23 April 2026** 10:00 – 13:00 - CET

Welcome to the Symposium and Online Partners' Exhibition

10:00 CNT INNOVATION	**Introduction to the Symposium** **Round table introduction of all participants** *Dr Bojan Boskovic, CEO, CNT Innovation, Belgium - Event Organiser*	
10:30 UNIMORE ISTITUTO ITALIANO DI TECNOLOGIA	**Introduction to the 3D-Bricks Project** *Dr Denis Garoli, Universitá degli Studi di Modena e Reggion Emilia - Istituto italiano di Tecnologia, Italy – Project Coordinator*	 
11:00 TAL TECH	**Upscaling biomanufacturing with microdroplets - from cell factory design to DNA nanotechnology** *Dr Simona Bartkova, Senior Researcher & Dr Tamas Pardy, Assistant Professor, TalTech - Tallinn University of Technology, Estonia.*	
11:30 Universität Hamburg DER FORSCHUNG | DER LEHRE | DER BILDUNG	**A novel instrument for transport, dynamics and spectrometry studies on the nano-scale** *Dr. Stefan Krause, Department of Physics, University of Hamburg*	

12:00 CNT INNOVATION	**Bio-Nano Innovation Ecosystem Development** *Ana Bankovic Cassidy, Senior Innovation Manager, CNT Innovation, Belgium*	
12:30	*Open Discussion:* *Moderator: Dr Bojan Boskovic –Participants: All*	

Advanced Bio nano Electronics Symposium – Speakers

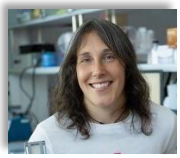
Prof. Denis Garoli – Project Coordinator
Associate Professor
University of Modena and Reggio Emilia
Senior Researcher
Italian Institute of Technology
Italy

Denis Garoli is associate professor at University of Modena and Reggio Emilia and senior researcher at the Italian Institute of Technology where he works on the fabrication of plasmonic nanopores for enhanced spectroscopies. Prof. Garoli obtained his PhD degree from the University of Padova (2008). His main interests are nanophotonics, plasmonics, DNA nanotechnology, nanoscopy, single-molecule techniques and sensing. During the period 2016-2019, he co-coordinated the FET-Open ProseqO project on Single-molecule sequencing by means of the plasmonic nanopore. Now, he is the co-coordinator of the H2020-FET Open DNA-Fairylight project and coordinator of Horizon EU Marie-Curie Network "DYNAMO". He is the coordinator of 3D-BRICKS.

Dr Bojan Boskovic (Organiser)
CEO,
CNT Innovation
Brussels,
Belgium

Dr Bojan Boskovic is the Founder, Managing Director, and Principal Consultant of CNT Innovation and the sister company, Cambridge Nanomaterials Technology Ltd (CNT Ltd). He has more than 20 years of hands-on experience with carbon nanomaterials and composites from industry and academia in the UK and Europe. Previously, he worked as a R&D Manager at Nanocyl, one of leading carbon nanotube manufacturing companies in Europe. He also worked on carbon nanotube synthesis and applications as a Principal Engineer-Carbon Scientist at Meggitt Aircraft Braking Systems, as a Research Associate at the University of Cambridge, and as a Senior Specialist at Morgan Advanced Materials. During his PhD studies

at the University of Surrey he invented low temperature synthesis method for production of carbon nanomaterials that has been used as a foundation patent for the start-up company Surrey Nanosystems. He was a member of the Steering and Review Group for the Mini-IGT in Nanotechnology that advised the UK Government on the first nanotechnology strategy policy document. Dr Boskovic was working as an advisor for the European Commission (EC) on Engineering and Upscaling Clustering and on setting up of the European Pilot Production Network (EPPN) and European Materials Charaterisation Cluster (EMCC). He has experience in exploitation and dissemination management on a number of FP7 and H2020 European projects, including UltraWire, NanoLeap, OYSTER, M3DLoC, Genesis and nTRACK. Also in UK Government InnovateUK funded projects, such as UltraMAT and GRAPHOSITE He is also a leader of two private membership based consortiums: Nano-Carbon Enhanced Materials (NCEM) and Advanced Materials for Additive Manufacturing (AMAM).



Dr Simona Bartkova (Project Partner)
Senior Researcher
TalTech - Tallinn University of Technology
Estonia

Simona Bartkova Ph.D. Researcher at Tallinn University of Technology, Department of Chemistry and Biotechnology. Part of the microfluidics group lead by Prof. Ott Scheler. Main expertise include droplet microfluidics, micro-and molecular biology, micro-and nanoplastic, imaging, and image analysis via software. Research background is highly international and interdisciplinary, involving bachelors in the united states, masters in Sweden, and PhD in Denmark. Have worked in many different areas such as microbial pathogens and infections, microfluidics systems, microplastics, DNA extraction and sequencing, PCR and qPCR primer design, fluorescence imaging, image analysis, aquaculture, tick borne diseases, and environmental toxicology. Speak seven languages (four fluently).

Dr Stefan Krause (Project Partner)
Principal Investigator
Universität Hamburg
Germany

Stefan Krause received his diploma and PhD in physics at the University of Hamburg in Germany. He is senior researcher and principal investigator in the group of Prof. Roland Wiesendanger at the University of Hamburg. His research focuses on the study of the fundamental microscopic processes that drive the magnetization dynamics and spin transport in atomic-scale structures, utilizing time-resolved spin-polarized scanning tunneling microscopy (SP-STM) and spectroscopy (SP-STS) at ultralow temperatures, in external magnetic fields and under ultrahigh vacuum conditions. Within the framework of the 3D-Bricks project, a novel multi-probe STM instrument is developed with dedicated protocols that

allow for the detailed characterization of electronic nanodevices in terms of transport, dynamics and spectrometry.

Dr Ana Bankovic Cassidy (Project Partner & Organiser)
Senior Innovation Manager.
CNT Innovation
Brussels
Belgium

Dr Ana Bankovic Cassidy is a Senior Innovation Consultant. She joined CNT team in February 2021. Ana graduated from the Faculty of Physics, University of Belgrade Serbia, winning the award for the best BSc (Honors) Thesis of the year 2007. The main aim of her PhD study and further research was to identify and explain specific kinetic phenomena that occur in positron transport in electric and magnetic field due to non-conservative nature of positronium formation. Ana applied the basic phenomenology of charged particle swarms to study the interaction of positrons with biologically relevant molecules, in order to develop and establish a benchmark for Monte Carlo codes used in positron emission tomography (PET) modelling. Her research activities were undertaken in Centre for Non-Equilibrium Processes at the Institute of Physics in Belgrade, Serbia, a large interdisciplinary group with interests ranging from theoretical, numerical and experimental studies of low temperature plasmas to studies of positron swarms and their applications, modelling particle detectors and conducting experiments at applying plasma physics methodologies to medicine and biological applications. As a Visiting Researcher at the Open University, Milton Keynes in 2014/15, she worked on quantum chemistry treatment of positron interactions with atoms and molecules using the UKRmol quantum chemistry software.

Advanced Bio nano Electronics Symposium – Partner organisations

Istituto Italiano di Tecnologia (IIT)

Web: www.iit.it

The **Istituto Italiano di Tecnologia (IIT**) is a scientific research center established by law in 2003 by the Italian Ministry of Education, University and Research, and the Ministry of Economy and Finance. Its mission is to promote excellence in both basic and applied research and to facilitate national economic development. IIT began its scientific activities in 2006 at its Central Research Laboratory in Genoa (IIT headquarters), with additional research conducted at 11 satellite centers across Italy and two outstations in the U.S., at MIT and Harvard University.

IIT employs 1880 people, with about half of the researchers coming from abroad: 31% are scientists from more than 70 countries, and 20% are Italian researchers who have returned after professional experiences abroad. IIT has extensive experience in managing and supervising research projects, with a portfolio of over 860 externally funded projects, including those financed by EU funding programs and the European Research Council (ERC). IIT has produced more than 20400 publications, 421 inventions, and 34 start-up companies.

Currently, IIT is implementing its 2024-2029 strategic plan, which prioritizes artificial intelligence as a fundamental tool in addressing two of the most pressing social challenges of our time: health (Healthcare) and sustainability (Earthcare).

Please visit our virtual expo booth at: IIT – MedlocExpo

Leipzig University

Web: www.uni-leipzig.de/en

Universität Leipzig was founded in 1409 and is thus the second oldest university in Germany where teaching has continued without interruption. Today it offers a wide spectrum of academic disciplines at 14 faculties with more than 150 institutes.

From A for African Studies to W for West Slavic Studies, Universität Leipzig is a classic university with the whole range of subjects from natural sciences through law, human and veterinary medicine to numerous arts degrees. 28,000 young people from all over the world are currently studying on more than 140 courses. A variety of co-operation programmes with foreign partner universities and an internationally oriented choice of subjects make Leipzig attractive for students world-wide. The University has exchange programmes with over 350 ERASMUS partner universities in some 150 European cities and with more than 60 universities outside Europe.

Please visit our virtual expo booth at: UniFRI – MedlocExpo

Universität Hamburg

Web: www.nanoscience.de

The Nanoscience group of Prof. Dr. Roland Wiesendanger from the **University of Hamburg** is working on the 3D-Bricks project. This group is part of the Interdisciplinary Nanoscience Center Hamburg (INCH), the Center for Optical Quantum Technologies (ZOQ), the Cluster of Excellence *"Advanced Imaging of Matter"* and the Sonderforschungsbereich 925 *"Light induced dynamics and control of correlated quantum systems"*. In 2007 the group became partner of the NSF funded excellence network "The Spin triangle". In 2008 the group was awarded with one of the first ERC Advanced Grants (FURORE), followed by a second ERC Advanced Grant (ASTONISH) in 2013 and a third ERC Advanced Grant (ADMIRE) in 2018.

Please visit our virtual expo booth at: Hamburg – MedlocExpo

University of Antwerp

Web: www.uantwerpen.be/

The **University of Antwerp** is a *young, dynamic and forward-thinking university* with a strong mission and vision. It occupies a special place within the university landscape in Flanders, and it integrates the assets of its historical roots with its ambition to contribute positively to society. Let's define the future! This slogan is what drives UAntwerp to bring about positive change and take on challenges within society.

Please visit our virtual expo booth at: Antwrep – MedlocExpo

Karlsruhe Institute of Technology - KIT

Web: www.kit.edu

Being "**The University in the Helmholtz Association**", **KIT** creates and imparts knowledge for the society and the environment. It is the objective to make significant contributions to the global challenges in the fields of energy, mobility, and information. For this, KIT employees cooperate in a broad range of disciplines in natural sciences, engineering sciences, economics, and the humanities and social sciences. KIT prepares its students for responsible tasks in society, industry, and science by offering research-based study programs. Innovation efforts at KIT build a bridge between important scientific findings and their application for the benefit of society, economic prosperity, and the preservation of our natural basis of life. KIT is one of the German universities of excellence.

Please visit our virtual expo booth at: KIT – MedlocExpo

KERR S.R.L.

Web: www.kerr-italy.it

KERR S.R.L. was founded in 2008 in Bolzano, Italy. It is sales representative for FarEast companies for microelectronic and lighting applications, with high capability in ASIC and FPGA design. Based on 10 years' experience engineers it supports developments of ASIC, PCBA, FPGA Design.

Capabilities extend from low power design to mix analog/digital asic implementation to security IP.

Please visit our virtual expo booth at: KERR – MedlocExpo

www.3d-bricks.eu/
www.medlocexpo.net/3d_bricks_expo/

Institut Català de Nanociència i Nanotecnologia – ICN2

Web: https://icn2.cat/en/

The **Institut Català de Nanociència i Nanotecnologia (ICN2)** is dedicated to the development of knowledge, materials and devices in the wide field of health, energy, environment and the technologies of computers and communications. Its experience is in the nanoscale where new properties and interactions, as well as ways of using them in daily life, are constantly being discovered. Amongst its goals is reuniting scientific personnel with different competences in the look for a better science, better teaching and a higher impact on society, at the same time it explores new ways of interacting with local and global industries.

The institute was credited as a Centro de Excelencia Severo Ochoa in 2014 and the Ministerio de Ciencia, Innovación y Universidades renovated this prize in 2018 and 2023. Amongst its patrons are the Generalitat de Catalunya, the Consejo Superior de Investigaciones Científicas (CSIC) and the Universitat Autònoma de Barcelona (UAB), where the institute is located. ICN2 is a CERCA center and one of the founding members of the Barcelona Institute of Science and Technology (BIST).

Please visit our virtual expo booth at: ICN2 – MedlocExpo

University of Fribourg

Web: www.unifr.ch/home/en/

At the **University of Fribourg**, we are committed to excellence in research and teaching and we take pride in our truly interdisciplinary spirit. We continue to further develop our international focus and above all we put humanity at the centre of our endeavours.

www.3d-bricks.eu/
www.medlocexpo.net/3d_bricks_expo/

We are Switzerland's only bilingual university, offering a full academic curriculum both in French and German. A number of Master programmes are taught in English and the University offers a wide range of opportunities for PhD and doctoral studies as well as international Exchange and Summer School Programmes.

The **University of Fribourg** encompasses six faculties where people study, teach and research. These are Arts and Humanities, Science and Medicine, Management, Economics and Social Sciences, Education, Law and Theology. As well as these there are numerous interdisciplinary institutes and centres of excellence. The approximately 10,000 students in the Bachelor, Masters and PhD programs receive first-class personal support from over 800 professors, lecturers and research assistants.

Please visit our virtual expo booth at: UniFRI – MedlocExpo

TalTech - Tallinn University of Technology

Web: https://droplets.taltech.ee

The **TalTech Lab-on-a-Chip & Microfluidics (LoC) team** is a multidisciplinary research group at Tallinn University of Technology (TalTech), composed of biologists, chemists, and electrical engineers. We are dedicated to making advanced droplet-based biotechnology widely accessible by applying a synergy of biological and technological expertise to droplet and other microfluidic technologies.

Our proprietary **CogniFlow® platform** is a modular droplet biotechnology automation platform, which takes care of droplet encapsulation, imaging and sorting in a single pipeline, and can be configured to the demands of the workflow at hand.

Please visit our virtual expo booth at: TalTech – MedlocExpo

CNT Innovation

Web: www.cnt-innovation.com

The **CNT Innovation** team is formed of experts with a vast experience in innovation management support of multinational companies, SMEs and research institutions, individually or in European funded consortiums, especially related to commercialisation of nanomaterials.

Through the work that have been carried out at the sister company CNT Ltd in Cambridge, we have been involved in many European funded projects.

Please visit our virtual expo booth at: CNT Innovation – MedlocExpo

Universitá degli Studi di Modena e Reggion Emilia – UNIMORE

Web: www.unimore.it/en

Since its origins dating back to 1175, the University represented the cornerstone of scientific, cultural and social life and, albeit with alternating fortunes linked to local political changes over the centuries, the University has gradually expanded to become a multidisciplinary, active and dynamic university.

With around 30,000 students enrolled in Level I, II and III courses of study and over 1,400 teaching, research and technical-administrative staff**,** **Unimore** is one of the largest universities in the world. It is organised as a network of sites (Modena and Reggio Emilia) and consists of 13 Departments and 2 Faculties/Schools, in addition to the cities of Mantua and Carpi (accredited degree course sites), as well as interdepartmental centres located in the two provinces of Modena and Reggio Emilia, where teaching, research, third mission and related support activities and technology transfer services are carried out.

www.3d-bricks.eu/
www.medlocexpo.net/3d_bricks_expo/

Please visit our virtual expo booth at: [UniMoRe – MedlocExpo]

Advanced Bio nano Electronics Symposium – External participating organisations

ThyssenKrupp Uhde

Web: www.thyssenkrupp-uhde.com

With more than 3,000 chemical plants to its credit, **thyssenkrupp Uhde** is one of the world's leading engineering companies in the design and construction of chemical, refining and other industrial plants. We offer leading technologies plus EPC competence from a single source, and complete value chains for green chemicals utilizing green hydrogen for green ammonia, green methanol, green SNG, and more. We have subsidiaries and associates in all four corners of the globe. This worldwide network with over 4,000 employees is active in a number of different fields: fertilisers, gas technologies, gasification e.g. of residues and biomass, refining technologies, organic intermediates, polymers and synthetic fibres as well as coke plant and high-pressure technologies. We offer our customers not only cost-effective high-tech solutions in industrial plant construction and the entire range of services associated with an EPC contractor but also comprehensive service packages for the entire life cycle of their plants.

Nagaland University

Web: https://nagalanduniversity.ac.in/

Nagaland University, the 13th Central University and the only Central University in Nagaland was established based on the Act of Parliament of India and received the assent of the President of India on 20th October 1989 as THE NAGALAND UNIVERSITY ACT 1989 (No. 35 of 1989) and came into force as notified in THE GAZETTE OF INDIA EXTRAORDINARY PART-II SECTION-1 in October 1989 published by the Ministry of Law and Justice (Legislative Department), New Delhi.

Indore Institute of Science and Technology Indore

Web: https://indoreinstitute.com/

Indore Institute of Science &Technology (IIST) was established in the year 2003, is amongst the Top 5 Engineering Colleges of Indore. The Engineering Institute is approved by AICTE New Delhi and affiliated to RGPV Bhopal, offering Bachelor's degree (B.Tech) in Computer Science (CS), Information Technology (IT), AI & ML, Robotics & AI, Data Science (DS), Electronics & Computer Science (ECS), Electronics & Communication (EC), Mechanical and Civil Engineering. The Institute offers Master's Degrees (ME/M.Tech) in Computer Science (CS), AI & ML and Data Science (DS).

Indore Institute of Pharmacy Institute (IIP) is approved by AICTE and Pharmacy Council of India (PCI), New Delhi, Affiliated to RGPV Bhopal, offering Bachelor's degree (B.Pharm), Integrated program Doctor of Pharmacy (Pharm D) and the Master's Degree (M.Pharm) in Pharmaceutics & Quality Assurance.

ShanghaiTech University

Web: https://www.shanghaitech.edu.cn/eng/

Founded in 2013, **ShanghaiTech** is a young, resource-rich university with a modern campus in the heart of Shanghai Pudong's Zhangjiang Hi-Tech Park. With the backing and support of Shanghai Municipal Government and the Chinese Academy of Sciences, we are committed to tackling the challenges that China and the world are facing in the fields of energy, materials, environment, human health, data science, AI and electrical engineering. ShanghaiTech University is committed to serving the national development strategy and emphasizes cross-disciplinary and innovative research. ShanghaiTech is building up a strong faculty of 1000 professors including 500 tenure-track/tenured professors from global recruitment and 500 distinguished professors-in-residence from CAS institutes and other prestigious universities or institutes.

Institute of Space Technology, Islamabad

Web: https://ist.edu.pk/

The only institute in Pakistan offering programs in Space Science & Technology Launched ICUBE-Qamar (The historic Lunar Mission of Pakistan).

University of Bern

Web: www.unibe.ch/index_eng.html

The **University of Bern**, based in the Swiss capital, was officially founded in 1834 - although it can trace its roots back to the 16th century, when it became compulsory for monks to be educated in a higher education institution.

It was in the 1800s, however, that the university was officially founded, growing in size throughout the 19th and 20th centuries in line with the city of Bern's own booming fortunes.

The university played a key role in the evolution of women's studies. Even in 1870, the the institution had a female student -Catharina Gontscharoff - registered. In 1899, the institution's Female Students' Society was established, representing women's interests. Its motto was: "Same Rights, Same Duties".

The university has some prestigious former faculty members. Albert Einstein taught theoretical physics at Bern in 1908, and the following year the Russian philosopher Anna Tumarkin became a professor (and the first European lecturer to accept PhD students).

BITS Pilani & La Trobe University

Web: www.bits-pilani.ac.in

www.bits-pilani.ac.in/opportunities/joint-phd-program-at-bits-pilani-and-la-trobe-university-australia/

The **Birla Institute of Technology & Science**, BITS Pilani, is an all-India Institute for higher education. The primary aim of BITS is to "train young men and women able and eager to create and put into action such ideas, methods, techniques, and information". The Institute is a dream come true of its founder, the late Mr G.D. Birla, an eminent industrialist, a participant in the Indian freedom struggle, and a close associate of Mahatma Gandhi. What started in the early 1900s as a small school has blossomed into a set of colleges for higher education, ranging from the humanities to engineering. In 1964, all of these colleges amalgamated to form a unique Indian university of international standing, christened the Birla Institute of Technology and Science, Pilani, known to many as BITS, Pilani.

Budapest University of Technology and Economics - BME

Web: www.bme.hu/en

Budapest University of Technology and Economics (BME) is a leading institution in technical and economics higher education in Hungary with significant international relations and

appreciation. BME excels in RDI and its education is supported by over 1200 faculty and research fellows, teaching over 20 000 students from all over the World. Institutum Geometrico-Hydrotechnicum, the legal predecessor of Budapest University of Technology and Economics (BME) was founded in 1782, and it was the first institute in Europe to train engineers at university level.

Ludwig-Maximilians-Universität München - LMU

Web: www.lmu.de/en/

LMU is one of Europe's most prestigious universities. It stands for outstanding research combined with a demanding curriculum. Nearly 53,000 students, 17 percent of whom are international, currently take advantage of the broad range of subjects offered, with 150 programs and numerous combination options – from the humanities and cultural studies to law, economics, and social sciences, as well as medicine and the natural sciences.

The expertise and creative intelligence of approximately 700 professors and 3,600 research associates form the basis for LMU's excellent research record and ensure its consistently high rankings in national and international assessments.

University College Dublin

Web: www.ucd.ie

University College Dublin is one of Europe's leading research-intensive universities; an environment where undergraduate education, masters and PhD training, research, innovation and community engagement form a dynamic spectrum of activity. With over 33,000 students drawn from 144 countries, including almost 4,000 students based on overseas campuses, UCD is not only Ireland's largest university but also its most globally engaged. UCD is ranked 118 in the world, according to the QS World University Rankings It is the 'university of destination' for international students coming to Ireland; UCD's international students make up 25% of its student body, while international academics make up 32% of faculty. The international standing of UCD has grown in recent years too; it is currently ranked within the top 1% of higher education institutions world-wide. UCD is Ireland's leader in graduate education with over 9,900 graduate students; almost 20% of whom are graduate research students. Over 1,660 PhD students benefit from the University's structured PhD programmes, as well as its research-led education culture. The UCD Horizons scheme of modern, modularised education based on learning outcomes sees 50% of students take modules outside their subject areas. As Ireland's largest university, with its great strength and diversity of disciplines, UCD embraces its role to contribute to the flourishing of Ireland through the study of people, society, business, economy, culture, languages and the creative arts, as well as through research and innovation.

University of Belgrade - Faculty of Biology

Web: https://bio.bg.ac.rs/en/

The Faculty of Biology celebrated its 170th anniversary in 2023. Today, the faculty consists of three institutes, with 14 departments and 16 centers, and many of our students are established scientists at the most famous universities and scientific centers around the world.