

# My international route at the forefront of DNA Nanotechnology and Synthetic Biology

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The rapid advancements in DNA nanotechnology and synthetic biology have opened new frontiers for scientific innovation, from the manipulation of genetic materials to the creation of complex nanoscale devices. In this lecture, I will trace my journey across multiple countries, leading international research initiatives and exploring the cutting-edge intersections between these two disciplines. Key topics include the use of synthetic DNA for engineering nanosensors, the integration of biological molecules for novel functional systems, and the potential applications of synthetic biology in healthcare and biotechnology. Through collaborative efforts with leading institutions, I have navigated global research ecosystems to address some of the most pressing scientific challenges. Recently, I have received an ERC Starting Grant from the European research Council for my project “Synthetic nucleic acid co-transcriptional networks as diagnostic and therapeutic tools” that combines the advantageous features of the forefront research fields of DNA nanotechnology and synthetic biology. This lecture will provide insights into both the scientific breakthroughs achieved and the importance of the collaborative nature of international research.