

Foundations of Nanoscience 16 March - 18 March 2026 Munich, Germany

Monday March 16

7:30-8:45: Registration

8:45-9:00 Introduction: Hao Yan and Fritz Simmel Conference Chairs, and Kurt V. Gothelf, Programme Chair (Lecture Hall 2300)

Track on DNA Nanostructures I. Track Chair: Hao Yan, Arizona State University

9:00-9:40 AM	Keynote	Oleg Gang	Columbia University, New York, NY, USA	Architecting 3D nanoscale matter and its transformations
9:40-10:00 AM	Contributed	Xinxin Jing , Nicolas Kroneberg, Andreas Peil, Benjamin Renz, Longjiang Ding, Tobias Heil, Katharina Hipp, Peter A. Van Aken, Hao Yan and Na Liu	2nd Physics Institute, University of Stuttgart, Germany	DNA Moiré Superlattices
10:00-10:25 AM	Invited	Stefan Howorka	Department of Chemistry, University College London, U.K.	A molecular-scale AFM measures the nanomechanics of biological membranes

10:25-11:30 AM Refreshments and Poster Session Monday GROUP A (Noted on your badge) (Rooms 1345 & 1350) See the list of posters further below

Track on in Vivo and Biomedical Nanotechnology I. Track Chair: Baoquan Ding, National Center for Nanoscience and Technology, Beijing, China,

11:30-12:10 PM	Keynote	Mark Bathe	Department of Biological Engineering, MIT	DNA Origami Vaccines Program Focused Antibody Responses
12:10-12:35 PM	Invited	Dongsheng Liu and Rui Xu	The Hong Kong Polytechnic University	Supramolecularly cooperative dual-targeting strategy to improve specificity of CRISPR-based tools
12:35-1:00 PM	Invited	Björn Högberg	Karolinska Institutet, Sweden	Quantitative Tracking of DNA Origami Integrity In-vivo

1:00-2:00 PM Lunch (TUM Mensa)

Track on Molecular Machinery. Track Chair: Carlos Castro, Ohio State University

2:00-2:40 PM	Keynote	Giuseppe Battaglia	Institute for Bioengineering of Catalonia, Barcelona Institute of Science and Technology, Barcelona, Spain	Mimicking biological emergent properties for biomaterial design
2:40-3:05 PM	Invited	Michael Famulok , Mathias Centola, Nils Walter, Petr Šulc, Julian Valero and Ze Yu	LIMES Program Unit Chemical Biology & Medicinal Chemistry, University of Bonn, Gerhard-Domagk-Strasse 1, 53121 Bonn, Germany	DNA Nanomachines driven by RNA polymerization
3:05-3:25 PM	Contributed	Cai Wood and Damien Woods	Hamilton Institute, Maynooth University	Tethered Tile Bots: Folding Shapes Programmatically

3:25-4:30 PM Refreshments and Poster Session GROUP B (Rooms 1345 & 1350)

Chemical and Synthetic Biology. Track Chair: Elisa Franco

4:30-5:10 PM	Keynote	Hanadi Sleiman	Department of Chemistry, McGill University, Canada	Supramolecular DNA Materials as Precision Therapies
5:10-5:35 PM	Invited	Yuval Elani	Imperial College London	Building a new biology: microfluidics and engineered biomembranes as enabling technologies in synthetic cell design
5:35-5:55 PM	Contributed	Jie Song	Hangzhou Institute of Medicine, Chinese Academy of Sciences	Medical Synthetic Biology Based on Circular Single Stranded DNA

5:55-6:10 Short Break

6:10-7:00 PM: Panel Discussion on the future of Nanotechnology, Chaired by Dominic Scalise, and Erik Alexander Poppleton, (Lecture Hall 2300)

7:15 PM Track Chairs' Meeting (Casa Nostra Monaco, Gabelsbergerstraße 97)

8:00 PM WONDER Networking Event (Restaurant Hans im Glück, Sonnenstraße 24-26)

Dinner (On Your Own)

Tuesday, March 17

Track on Nanophotonics and Superresolution. Track Chair: Philip Tinnefeld

8:30-9:10 AM	Keynote	Vahid Sandoghdar	Max Planck Institute for the Science of Light	Angstrom localization precision in cryogenic microscopy resolves conformational states of membrane proteins
9:10-9:35 AM	Invited	Fernando D. Stefani	Centro de Investigaciones en Bionanociencias (CIBION), Universidad de Buenos Aires	Raster Scanning Single-Molecule Localization with Nanometer Precision: Benchmarking RASTMIN, RASTMAX, and RASTED
9:35-9:55 AM	Contributed	Jaewon Lee , Hayun Ahn, Kyung Hun Rho, Shelley Wickham, William Shih and Seungwoo Lee	KU-KIST Graduate School of Converging Science and Technology, Korea University, South Korea	3D DNA origami-enabled assembly of optical nanocircuits
9:55-10:15 AM	Contributed	Guillermo Acuna	Photonic Nanosystems, Department of Physics, University of Fribourg, Switzerland	DNA-PAINT and DNA origami nanotechnology for mapping temperature at the nanoscale
10:15-10:40 AM	Invited	Sebastien Bidault	Institut Langevin, CNRS, ESPCI Paris, PSL University	Optically Enhancing or Detecting Single Molecules on DNA Origamis

10:40-11:45 AM Refreshments and Poster Session GROUP A (Rooms 1345 & 1350)

Track on DNA Nanosystems: Programmed Function I. Track Chair: Friedrich Simmel, Technical University Munich

11:45-12:10 AM	Invited	Guillaume Gines	Laboratoire Gulliver, UMR 7083, CNRS, ESPCI Paris, PSL Research University, 10 rue Vauquelin, 75005 Paris, France	From switch to neuron: A single-node bistable DNA circuit for ultrasensitive biomarker sensing
12:10-12:30 PM	Contributed	Katerina DeOlivares , Aaron Michelson, Kim Kissinger, Yugang Zhang and Oleg Gang	Department of Chemical Engineering, Columbia University, USA	Ultra strong, lightweight composite nanolattices fabricated through DNA self-assembly
12:30-12:50 PM	Contributed	Christophe Lachance-Brais , Miguel Cantero Reviejo, Johann Fritzen, Petko Stoychev, Andreas Walther, Wouter Roos and Bernard Feringa	Stratingh Institute, RUG, Groningen, NL	Molecular motors as engines powering DNA machines
12:50-1:00 PM	Sponsor	Bruker Dynamic Biosensors		

1:00-2:00 PM Lunch (TUM Mensa)

Track on Protein Nanostructures. Track Chair: Alena Khmelinskaia, Ludwig Maximilian University of Munich

2:00-2:40 PM	Keynote	TBA		
2:40-3:05 PM	Invited	Zhe Li	Department of Biomedical Engineering, Southern University of Science and Technology, China	Modular and Robust De Novo Design of Three-dimensional Protein Crystals
3:05-3:25 PM	Contributed	Veikko Linko	Institute of Technology, University of Tartu, Estonia	Protein coatings for nucleic acid origami

3:25-4:25 PM Refreshments and Poster Session GROUP B (Rooms 1345 & 1350)

Track on in Vivo and Biomedical Nanotechnology II. Track Chair: Baoquan Ding, National Center for Nanoscience and Technology, Beijing, China.

4:25-4:50 PM	Invited	Qiangbin Wang	SINANO, CAS	NIR-II QDs for advanced in vivo fluorescence imaging
4:50-5:15 PM	Invited	Yang Tian	East China Normal University, China	Designing Chemigenetic DNA Nanotrap for Norepinephrine Dynamic Imaging in Organelles
5:15-5:35 PM	Contributed	Jørgen Kjems , Simon Christian Vinther, Antonia Resag, Karina Thao Thu Le, Claudia Christine Zelle-Rieser, Helen Strandt, Mette Malle, Steffen Thiel, Julian Valero and Patrizia Stoitzner	Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark	Targeting antigen-presenting cells in human skin using a glycoconjugated RNA-based scaffold for vaccine delivery

5:35-5:50 Short Break

5:50-6:50 PM ISNSCE Ned Seeman Nanoscience Prize (Lecture Hall 2300)

7:15 PM Dinner L'Osteria Künstlerhaus (Lenbachplatz 8)

Wednesday, March 18

Track on Theory and Computational Tools for Nanotechnology. Track Chair: William Shih, Harvard University, USA

8:30-9:10 AM	Keynote	Benjamin Fry, Kaia Slaw and <u>Nicholas Polizzi</u>	Department of Cancer Biology, Dana-Farber Cancer Institute, Boston, MA, USA	Zero-shot design of drug-binding proteins using neural networks
9:10-9:30 AM	Contributed	<u>Raghavendra Nimiwal</u> , Dan Redeker, Kyle Bishop, Oleg Gang and Sanat Kumar	Department of Chemical Engineering, Columbia University, New York, NY, USA	Optimizing kinetic self-assembly pathways by tuning bond energies using graph theory
9:30-9:55 AM	Invited	<u>Pacome Perotin</u> , Axel Brisse, Joris Picot, Gaëtan Bellot, Julie Finkel and Nicolas Schabanel	CNRS, École Normale Supérieure de Lyon, France	Fast Integrated Relaxation of Biomolecular Structures in ENSnano
9:55-10:15 AM	Contributed	<u>Anthony Vetturini</u> , Jonathan Cagan and Rebecca Taylor	Department of Mechanical Engineering, Carnegie Mellon University, U.S.A.	Automated design of hollowframe DNA origami nanostructures

10:15-11:20 AM Refreshments and Poster Session GROUP A (Rooms 1345 & 1350)

Track on DNA Nanostructures II. Track Chair: Hao Yan, Arizona State University

11:20-11:50 PM	Invited	Seongmin Seo, Alexander Swett, Mallikarjuna Reddy Kesama, Anirudh Madhvacharyula, Ruixin Li, Yancheng Du, Markus Eder, Friedrich Simmel and <u>Jong Hyun Choi</u>	School of Mechanical Engineering, Purdue University	A DNA Nanotransformer
11:50-12:15 PM	Invited	<u>Ye Tian</u>	Nanjing University	Assembly of DNA Origami Frames
12:15-12:35 PM	Contributed	<u>Karol Woloszyn</u> , Simon Vecchioni, Andrew Horvath, Mara Jaffe, Grace Huang, Yoel Ohayon, Nataša Jonoska, James Canary and Ruojie Sha	New York University	Shape Encoding, Encoding Shape
12:35-12:45		TBA		

12:45-1:50 PM Lunch (TUM Mensa)

Track on RNA Nanostructures. Track Chair Ebbe Andersen, Aarhus University

1:50-2:30 PM	Keynote	<u>Zhaoming Su</u>	State Key Laboratory of Biotherapy West China Hospital	Natural RNAs assemble into dynamic nanostructures
2:30-2:55 PM	Invited	<u>Fei Zhang</u>	Department of Chemistry, Rutgers University, Newark, NJ 07102, USA.	Building RNA Nanostructures Inside Human Cells
2:55-3:15 PM	Contributed	<u>Cody Geary</u> , Mai Tran, Erik Poppleton, Alena Taskina and Kerstin Göpfrich	Biophysical Engineering Group, Heidelberg University, Center for Molecular Biology of Heidelberg University	Rational Design of an Edge-to-Edge RNA Connector for Programmable Self-Assembly

3:15-4:25 PM Refreshments and Poster Session GROUP B (Rooms 1345 & 1350)

Track on DNA Nanosystems: Programmed Function II. Track Chair: Friedrich Simmel, Technical University Munich

4:25-5:05 PM	Keynote	<u>Andreas Walther</u>	Department of Chemistry, University of Mainz, Germany	DNA-Based Artificial Cells: From Ballistic Diffusion to Communication
5:05-5:30 PM	Invited	<u>Tania Patiño Padial</u>	Biomedical Engineering Department, Institute for Complex Molecular Systems, Eindhoven University of Technology, The Netherlands	Design Rules for Nanoscale Motility using DNA Origami
5:30-5:50 PM	Contributed	<u>Serge Ravaine</u> , Inseong Jo, Etienne Duguet, Auriane Bagur and Etienne Ducrot	Department of Chemistry, University of Bordeaux	DNA-guided assembly of nanoparticles into exotic structures

5:50-6:00 Short Break

6:00-6:30 PM Robert Dirks Prize (Lecture Hall 2300)

6:30-7:00 ISNSCE Business Meeting (Lecture Hall 2300)

7:30 PM Conference Dinner Löwenbräukeller (Nymphenburger Straße 2)

Thursday March 19

Local program

Posters Monday				
DNA Nanostructures I	Poster	Guangbao Yao	Frontiers Science Center for Transformative Molecules, School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, China	Meta-DNA Catalytic Reconfiguration
	Poster	Yarong Shi , Pierre Marcus, Cendrine Moskalenko and Nicolas Schabanel	Ecole Normale Supérieure de Lyon, CNRS, Laboratoire de Physique, Lyon, France	Random walk on a DNA origami to solve mazes: a biophysical approach based on AFM
	Poster	Simon Chi-Chin Shiu , Marcello Deluca, Wai Hin Chui, Pingping Zhang, Xiaoyong Mo, Ryan Ho Ping Siu, Erqian Dong, Sichao Qu, Calvin Chun Long Cheung, Andrew Kinghom, William Whitehouse, Jingyu Cui, Weisi He, Xue-Yan Wang, Jiahui Li, Areebah Gul Khan, Sophie von Torklus, Tsz Fai Yu, Khuloud Al-Jamal, Edmund C. M. Tse, Gaurav Arya, Nicholas Xuanlai Fang, Keda Zhou and Julian Tanner	School of Biomedical Sciences, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, P.R. China	Acoustic Assembly of Millimetre Scale DNA Tesseract Wires
	Poster	Jonathan Berengut , Rejoy Mathew, Michael Wang, Julian Berengut, Gregory Grason and Lawrence Lee	School of Biomedical Sciences, University of New South Wales, Australia	The Art of WarJi: Warped Jigsaw DNA origami nanobots for self-limiting assembly
	Poster	Anna Baptist, Lasse Guericke , Philipp Mauker, Oliver Thom-Seshold and Amelie Heuer-Jungemann	Department of Chemistry and Chemical Biology, TU Dortmund University, Germany	Customizable silicification of DNA origami nanostructures
	Poster	Jun Mo Kim , Taeyoung Ryu and Do-Nyun Kim	Department of Mechanical Engineering, Seoul National University, Seoul, Republic of Korea	Engineering Steric Hindrance Through Conformational Change Using DNA Origami
	Poster	Andreas Kratzert, Mathilda Pfordt, Christine Schirmer, Ulrich Rant and Nena Matscheko	Dynamic Biosensors GmbH, Munich, Germany	Real-time molecular binding dynamics of nanostructures on cell surfaces
	Poster	Anielica Kucinic , Aurélie Ancelin, Gerrit Wilkens, Julie Finkel, Nesrine Aissaoui, Nicolas Schabanel and Gaëtan Bellot	Centre de Biologie Structurale, INSERM, France	Design and Assembly of DNA spheres
	Poster	Dayoung Gloria Lee , Mingxin He, Kate Jensen, Keanna Luo, Kim Kisslinger, Tobias Dwyer, Timothy C. Moore, Sharon C. Glotzer and Oleg Gang	Department of Chemical Engineering, Columbia University, U.S.A.	Mesoscale core-shell crystalline morphologies through DNA-encoded epitaxy
	Poster	Seohyun Kwon , Jihoon Kim, Kyung Soo Kim and Do-Nyun Kim	Department of Mechanical Engineering, Seoul National University, Republic of Korea	Chemo-mechanical multi-state reconfigurations of DNA origami rings
	Poster	Mingxin He, Dayoung Gloria Lee, Daniel C. Redeker, Dmytro Nykpanchuk, Yugang Zhang, Honghu Zhang, Ruipeng Li, Raghavendra Nimiwal, Sanat K. Kumar, Francesco Sciortino and Oleg Gang	Department of Chemical Engineering, Columbia University, USA	Nanoscale 3D Networks Engineered through DNA Assembly
	Poster	Shogo Hamada , Hayao Hizono, Yuki Ichinoseki, Koki Taniguchi, Satoshi Murata and Jiro Kondo	Department of Computer Science, Institute of Science Tokyo, Japan	Rational Design of 3D DNA Crystals Assembled from T-Motifs
Poster	Enva Engström , Georges Kiriako, Tade Idowu, David F. Bonet, Joel Spratt, Yang Wang, Elena Ambrosetti, Ian T. Hoffecker and Ana I. Teixeira	Department of Department of Physiology and Pharmacology, Karolinska Institutet, Stockholm, Sweden	NanoSITE: Sequencing-based Characterization of Functionalized DNA Nanostructures through Combinatorial Barcoding	
In Vivo and Biomedical Nanotechnology I	Poster	Benjamin Wollant , Steven Yee and H. Tom Soh	Department of Electrical Engineering, Stanford University, United States	Low-abundance intermittent molecular monitoring with a nanoswitch-based single molecule sensor
	Poster	Alexandra Banbanaste and Nako Nakatsuka	Chemistry department, Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland	Aptamer integration via click chemistry into organic electrochemical transistors
	Poster	Chenzhi Shi, Donglei Yang and Pengfei Wang	Institute of Molecular Medicine, School of Medicine, Shanghai Jiao Tong University, Shanghai, 200127 China	Functional Nucleic Acid-based Molecular Sensors for In Vitro Detection of sncRNAs towards Cancer Diagnosis
	Poster	Xiao Chen , Dunfang Liu and Yang Yang	Institute of Molecular Medicine, Renji Hospital, Shanghai Jiao Tong University School of Medicine, China	DNA Framework Captors Enable TGFβ1 Sequestration and Clearance for Tumor Immune Modulation
	Poster	Leo Sala , Tomas Perecko, Jan Pankrac and Jaroslav Kocišek	Department of Dynamics of Molecules and Clusters, J. Heyrovský Institute of Physical Chemistry of the CAS, Dolejškova 3, 18200, Prague, Czechia	Radiotherapeutic and Drug Delivery Applications of Cisplatin-Cross-Linked DNA Nanoblocks
Chemical and Synthetic Biology	Poster	Emily Tsang , Simon Jørgensen, Kurt Rasmussen, Yonglun Luo, Minke Nijenhuis and Kurt Gothelf	Department of Chemistry and Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark	DNA Curvature and Poloidal Angle Determine Cas9 Cleavage Efficiency
	Poster	Mor Moshe Snoyman , Or Willinger and Roei Amit	Nanoscience and Nanotechnology, Technion	Granule Gelation as a Biomimetic RNA Delivery Platform for Human Cells
	Poster	Riva Nair , Johann M. Weck, Merve Z. Kesici, Xiaoyue Shang, Svetozar Gavrilović, Cornelia Monzel and Amelie Heuer-Jungemann	Faculty of Chemistry and Chemical Biology, TU Dortmund, Germany	Effects of DNA Origami-Based Nanoagent Design on Apoptosis Induction in a Large 3D Cancer Spheroid Model
	Poster	Simona Ranallo	Department of Chemical Science and Technologies, University of Rome Tor Vergata, Italy	Reprogramming cellular machinery with synthetic gene networks for molecular sensing
	Poster	Miriam Quattrocchio , Erica Del Grosso and Francesco Ricci	Department of Chemical Sciences, University of Rome Tor Vergata, Italy	DNA-based dimerization networks to control in-vitro transcription
	Poster	William Verstraeten , Kerstin Göpfrich, Franziska Giessler, Mai P. Tran, Alena Taskina, Pranay Jaiswal and Christoph A. Weber	Heidelberg University Center for Molecular Biology of Heidelberg University (ZMBH)	Genetically encoded phenotype and function in RNA droplets
Poster	Honglu Zhang, Chunhai Fan and Huan Zhang	No. 800 Dongchuan Road, Minhang	DNA Engineered Liquid-like Materials	

	Poster	Francesca Miceli , Sara Bracaglia, Daniela Sorrentino, Alessandro Porchetta, Simona Ranallo and Francesco Ricci	Department of Chemical Sciences and Technologies, University of Rome, Tor Vergata, Italy	MAIGRET: a CRISPR-based immunoassay that employs antibody-induced cell-free transcription of CRISPR guide RNA strands
	Poster	Saikat Saha , Cécile Monteux and Damien Baigl	Department of Chemistry, École Normale Supérieure - PSL University, Paris, France	Genetically-encoded interfacial properties
	Poster	Kate Collins , Claire Stanley and Thomas Ouldridge	Department of Bioengineering, Imperial College London, UK	A versatile method to pattern microfluidic channels
Molecular Machinery	Poster	Jing-Bing Chen and Shelley Wickham	School of Chemistry, University of Sydney, Australia	Dynamic three-dimensional snapology origami at the nanoscale
	Poster	Xue-Yan Wang , Simon Chi-Chin Shiu, Hannah Talbot, Marcello Deluca, Jonathan Piland, Xiaoyong Mo, Edmund Chun Ming Tse, Gaurav Arya, Arun Richard Chandrasekaran and Julian A. Tanner	School of Biomedical Sciences, Li Ka Shing Faculty of Medicine, The University of Hong Kong	A DNA Mazzocchio Rotary Gear
	Poster	Pablo Porraças Paseiro , Lukas Aufinger, Alfred Kick, Tereza Jahodova, Veronica Hamer, Ulrich Rant and Wouter Engelen	Dynamic Biosensors GmbH, Munich, Germany	A Novel Biophysical Tool for Screening Ligand-Induced Protein Conformational Changes
	Poster	Lennart J.K. Weiß , Esther Schmid, Florian Rothfischer, Christoph Karfusehr, Niccolò Tedeschi, Petr Sulc and Friedrich C. Simmel	Physics of Synthetic Biological Systems, Department of Biosciences, School of Natural Sciences, Technical University of Munich, Garching, Germany	Structural anisotropy enables ensemble-level rectification of Brownian motion in DNA origami rotors
	Poster	Sarah Haggemueller , Petr Sulc and Michael Matthias	School of Natural Sciences, Technical University Munich, Germany	Controlled 3D Shape Switching in DNA Origami
	Poster	Pei Yang , Tommy Anderson, Liangxiao Chen, Winna Siti, Shihwen Zhu, Keshao Tong, Zekai Zheng, Hao Yan, Thorsten Wohland and Zhisong Wang	Department of Physics, National University of Singapore, Singapore.	Autonomous DNA rotary nano-robotic system driven by the concerted action of DNA motors
	Poster	Lennart J.K. Weiß, Luca Hasekamp , Andrea Mückl and Friedrich C. Simmel	Physics of Synthetic Biological Systems, School of Natural Sciences, Technical University of Munich, Garching, Germany	High-precision 2D path tracing using DNA spring actuators combined with enzymatic printing
	Poster	Abraham Kipnis , Elsa Kankkunen, Xuan-Hung Pham, Kosti Tapio and Anton Kuzyk	Department of Neuroscience and Biomedical Engineering, Aalto University	Electrically actuated DNA-based plasmonic switches
	Poster	Amit Nelkin , Sarah Goldberg and Roei Amit	Department of Biotechnology and Food Engineering, Technion Israel Institute of Technology, Israel	In Situ Forensic Detection of Human DNA by a Strand Displacement System
	Poster	Kun Wang , Laura Bourdon and Damien Baigl	Department of Chemistry, École Normale Supérieure, France	Isothermally fast-transforming DNA origami: dynamic scaffolds for programmable morphing and protein repositioning
Poster	Petko Stoychev , Ben L. Feringa and Christophe Lachance-Brais	Stratingh Institute, RUG, Groningen,	Light-Driven DNA-Motors: An Organic Chemistry Approach Towards DNA-Nanomachines	

Posters Tuesday				
Nanophotonics and Superresolution	Poster	Marco Capuzzo , Claudia Corti, Nicolas Triomphe, Gabriel Vazquez, Annette Delices, Sylvie Marguet, Mona Tréguer-Delapierre, Gaétan Bellot and Sébastien Bidault	Institut Langevin, CNRS, ESPCI Paris, PSL University, Paris, France	Enhancing and accelerating single photon emission in DNA origamis using plasmonic nanocube dimers
	Poster	Minke Nijenhuis , Martin Frandsen, Kurt V. Gothelf, Iben Caroline Stoltze, Malthe Hansen Bruhn, Line D. R. Nielsen and Victoria Birkedal	Dana-Farber Cancer Institute, Harvard University, U.S.A.	Ligand-Induced Fluorescence Enhancement and Quenching
	Poster	Laura Teodori, Elisabeth Asta Sørensen , Ali Shahrokhtash, Xialin Zhang, Mette Galsgaard Malle, Duncan S. Sutherland and Jørgen Kjems	Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark	Nanoscale Precise Stamping of Biomolecule Patterns Using DNA Origami
	Poster	Wolfgang Fritzsche , Florian Seier, Anne-Kathrin Dietel, Stephan Kastner, Matthias Urban, Tomas Lednický and Andrea Csaki	Nanobiophotonics Department, Leibniz Institute of Photonic Technology (IPHT), Germany	Multiplexed, label-free DNA sensing with plasmonic nanoparticles
	Poster	Xin Yin , Gregor Posnjak and Tim Liedl	Faculty of Physics and CeNS, Ludwig-Maximilians-University Munich, München, Germany.	Cubic diamond, hexagonal diamond and clathrate photonic crystal assembly controlled via tuneable particle bonds
	Poster	Qian Shi, Qiulan Yang and Yang Yang	Shanghai Jiao Tong University School of Medicine affiliated Renji Hospital	Resolving membrane fusion with programmable DNA framework vesicles
	Poster	Edward B. Pimentel , Grace M. Maddocks, Steven Yee, Sasha S. Bronovitskiy and H. Tom Soh	Department of Radiology, Stanford University, USA	Decoupling redox reporters from aptamer strands to enable performance engineering of aptamer-based electrochemical sensors
	Poster	Miao Xie , Andreas Walther, Weixiang Chen and Maria Vonk-de Roy	Department of Chemistry, University of Mainz, Germany	Constructing synthetic nuclear architectures via transcriptional condensates in a DNA protonucleus
	Poster	Barbara Sacca	Center for Medical Biotechnology, University of Duisburg-Essen, Germany	Multivalent ligand-protein interactions in DNA-confined spaces
	Poster	Ali Asakereh , Christoph Drees and Andreas Walther	Department of Chemistry, University of Mainz, Germany	Mechanistic Investigation of DNA Nanotubes Disassembly: Diffusion Barriers as a Mechanism for Controlled Fragmentation
	Poster	Kutay Sesli , Yue Zhao, Natalie Kalish and Dominic Scalise	Department of Chemical Engineering and Bioengineering, Washington State University, USA	Adverse Effects of UV Exposure on DNA Strand Displacement Reactions
	Poster	Taehoon Kim , Junho Sim, Woojin Kim and Yeongjae Choi	Graduate School of Engineering Biology, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea	Reset-free DNA logic circuits for real-time input processing and memory

DNA Nanosystems: Programmed Function I	Poster	Sayantlan De, Barbara Saccà and <u>Timo Ramilo Sánchez</u>	Center for Medical Biotechnology, University of Duisburg-Essen, Germany	Programmable DNA-based nanocompartments for spatiotemporal control of signal processing and actuation
	Poster	<u>Ivan Grishchuk</u> and Barbara Saccà	Center for Medical Biotechnology, University of Duisburg-Essen, Germany	DNA origami nanocompartments as programmable models of confined nanospaces
	Poster	<u>David Daniel Ruiz Arce</u> , Markéta Benešová, Václav Protiva, Jaroslav Kočíšek, Alexandr Jonáš and Leo Sala	1Dept. of dynamics of molecules and clusters, J. Heyrovský Institute of Physical Chemistry of the CAS v. v. i.,	Hybrid microsystems assembled by DNA origami scaffolds
	Poster	<u>Aura Cencini</u> , <u>Alessandro Ceconello</u> , Graziano Rilevo, Mirco Zerbetto, Mary Bortoluzzi, Federica Tonolo, Fabio Vianello and Massimiliano Magro	Department of Comparative Biomedicine and Food Science, University of Padova, Italy	Plasmonic Nano-bolas Hunt DNA-Targets
	Poster	Naoki Kokubo, Keita Abe, Shin-Ichiro M. Nomura and Satoshi Murata	Department of Robotics, Tohoku University, Japan	Propagating wave formation through the generation and degradation of nucleic acid coacervate
	Poster	<u>Manar Elnagar</u> and Amelie Heuer-Jungemann	RG DNA Nanohybridmaterials, Max Planck Institute of Biochemistry, Germany.	Proteolytic activity of chymotrypsin in silicified DNA origami
	Poster	<u>Keshao Tong</u> , Zhisong Wang, Winna Siti, Zekai Zheng, Pei Yang, Liangxiao Chen and Hao Yan	Department of Physics, National University of Singapore, Singapore	A Miniaturized Single-Stranded DNA Motor and Its High-Density Integration into a DNA Origami Nano-Muscle
	Poster	Anirban Samanta, <u>Mette Malle</u> , Emily Tsang, Marjan Omer, Mads Skaanning, Sarah Youssef, Jørgen Kjems and Kurt Gothelf	Interdisciplinary Nanoscience Center (iNANO), Aarhus University, 8000 Aarhus C, Denmark	Bacteriophage-Mimetic DNA Origami Needle for Targeted Membrane Penetration and Cytosolic Cargo Delivery
	Poster	<u>Nesrine Aissaoui</u> , Arnaud Chovin, Christophe Demaille, Sandy Rizk, Quentin Cece, Fatma Ben Trad and Gaëtan Bellot	Faculty of Pharmacy, University Paris City, France	Modular Engineering of an Integrated Redox-Enzymatic System on DNA Origami
	Poster	<u>Laura Bourdon</u> , Gerrit David Wilkens, Ayako Yamada, Gaëtan Bellot and Damien Baigl	Department of Chemistry, CPCV, Ecole Normale Supérieure, PSL University, Paris, France	Ultra-Fast in situ Formation of DNA Nanostructures: Application to DNA Origami Assembly with Living Cells
	Poster	<u>Gerrit Wilkens</u> , Anjelica Kucinic, Laura Bourdon, Julie Finkel, Aurélie Ancelin, Juliette Prothon, Patrick Chames, Damien Baigl and Gaëtan Bellot	Centre de Biologie Structurale, University Montpellier, CNRS, Inserm	Programmable isothermal self-assembly of hybrid DNA-protein 3D nanostructures
	Poster	<u>Natalie Kallish</u> and Dominic Scalise	Chemical Engineering and Bioengineering, Washington State University, U.S.	Emulating analog RLC electronic circuits with reversible chemical reaction networks
	Poster	<u>Hassan Habib</u> , Yue Zhao and Dominic Scalise	Department of Chemical Engineering and Bioengineering, Washington State University, USA	Occlusion-Free DNA Strand-Displacement Timer Circuits
	Poster	Sing-Ming Chan, Anastasiya Malysheva, Wooli Bae and <u>Thomas Ouldridge</u>	Imperial College London	Associative Handhold-mediated Strand Displacement Mechanisms for Data Manipulation in DNA Nanostructure-Based Data Storage Devices
	Protein Nanostructures	Poster	<u>Lea Duttenhofer</u> , Aritra Sarkar and Andreas Walther	Department of Chemistry, University of Mainz, Germany
Poster		Elena Georgiou, Javier Cabello-Garcia, Alexia Rottensteiner, Miguel Paez-Perez, <u>Momo Zandieh</u> and Stefan Howorka	Department of Chemistry, University College London, UK	Programmable interactions of DNA origami nanostructures with lipid bilayers
Poster		<u>Fangzhou Zhao</u> and Hanadi Sleiman	Department of Chemistry, McGill University	DNA-Scaffolded Assembly of Protein-Mimics
In Vivo and Biomedical Nanotechnology II	Poster	<u>Qiangbin Wang</u>	SINANO, CAS	Micron-scale 2D antibody arrays for HER2 signaling blockade and cancer therapy
	Poster	<u>Jesus Ortiz-Saucedo</u> and Amando Hernandez-Garcia	Department of Biomacromolecules Chemistry, Institute of Chemistry, National Autonomous University of Mexico, Mexico	Chemically-induced Polymerization of CRISPR-Cas12a-DNA Hybrids into Nanostructures
	Poster	<u>Eddie Guillermo Sanchez Rueda</u> , Amando Hernandez Garcia and Wouter Roos	Molecular Biophysics, University of Groningen, Netherlands	Engineering Self-Assembling Protein Nanoparticles with Antimicrobial Activity
	Poster	<u>Dunfang Liu</u> , Xiao Chen and Yang Yang	Institute of Molecular Medicine, Renji Hospital, School of Medicine Shanghai Jiao Tong University, China	Ligand-ratio tuning of DNA nanocarriers enables cooperative tumor delivery for ultralow-dose intravesical chemotherapy
	Poster	<u>Zhilei Ge</u>	State Key Laboratory of Synergistic Chem-Bio Synthesis, School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, China	Differentiating Reactive Oxygen Species with DNA Framework Monitors
	Poster	<u>Adrian Keller</u>	Technical and Macromolecular chemistry, Paderborn University, Germany	Vancomycin-Modified DNA Origami Nanostructures for Targeting Bacterial Pathogens
In Vivo and Biomedical Nanotechnology II	Poster	<u>Simone Brannetti</u> , Jhalak Sethi, Serena Gentile, Erica Del Grosso, Tambat Teesalu and Francesco Ricci	Department of Chemical Sciences and Technologies, University of Rome, "Tor Vergata", Rome, Italy.	Reconfigurable DNA scaffolds for cell imaging via tumor-penetrating peptides
	Poster	<u>Luping Wang</u> and Yongzheng Xing	Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University, Hong Kong SAR, China	Silicified DNA Self-Assembled Hydrogels
	Poster	<u>Jinqlin Fu</u> and Qiaochu Zhang	Department of Chemistry and Center for Computational and Integrative Biology, Rutgers University-Camden, USA	Switchable Nucleic Acids Nanoparticles for Enhancing Cell Uptake and Drug Delivery
Poster	<u>Guoliang Ke</u>	College of Chemistry and Chemical Engineering, Hunan University, China	Size-Selective Molecular Recognition Probes	

Posters Wednesday

Theory and Computational Tools for Nanotechnology	Poster	Niccolo Tedeschi , Dominik Schiwietz, Michael Matthies, Petr Sulc, Lennart J. K. Weiß and Friedrich C. Simmel	Department of Bioscience, TU Munich, Germany	Free Energy Profiling of a Bistable DNA Origami Structure Using Two Independent Computational Approaches
	Poster	Taeyoung Ryu , Dongsik Seo and Do-Nyun Kim	Department of Mechanical Engineering, Seoul National University,	Design optimization of hybrid DNA-RNA nanostructures driven by multiscale analysis
	Poster	Elina Heikkilä , Abraham Kipnis, Taru Lautamatti and Anton Kuzyk	Department of Neuroscience and Biomedical Engineering, Aalto University, Finland	AutoMod: A Software Tool for High-Accuracy Design of Curved DNA Nanostructures
	Poster	Florian Katzmeier , Matthew Aquilina, Minke Nijenhuis, Siyuan Wang and William Shih	Department of Cancer Biology, Dana-Farber Cancer Institute, Boston, MA, USA	A graph-based algorithm for generating large sets of thermodynamically orthogonal DNA sequence pairs
DNA Nanostructures II	Poster	Yan Xiong, Shih-Ting Wang, Ashley Shay , Dmytro Nykypanchuk, Honghu Zhang and Oleg Gang	Department of Chemical Engineering, Columbia University, New York, USA	Nanoscale Display for Pattern Reconfiguration and Information Readout
	Poster	Pranav Bharadwaj , Sumanjit Datta and Amelie Heuer-Jungemann	Department of Chemistry and Chemical Biology, Technical University of Dortmund, Germany	Silicified DNA origami compartments for CO ₂ fixation
	Poster	Qian Li	School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, China	Transfer Learning-Empowered High-Throughput Atomic Force Microscopy Structural Analysis of DNA Nanostructures
	Poster	Karen Cardos , Leo Sala and Jaroslav Kočišek	Dept. of Dynamics of Molecules and Clusters, J. Heyrovsky Institute of Physical Chemistry of the CAS, Czechia	DNA Origami Damage Induced by Low and High Linear Energy Transfer Radiation
	Poster	Michael Matthies , Petr Sulc, Hao Liu, Hao Yan, Joshua Hihath, Matthew Sample, Thong Diep, Subhajt Roy, Joshua Evans, Daniel Podbielski, Sneha Vaidyanathan, Dewight Williams, Lukáš Kroc, Kyoungdu Kim, Haozhi Wang and Yonggang Ke	School of Molecular Sciences and Center for Molecular Design and Biomimetics, The Biodesign Institute, Arizona State University, 1001 South McAllister Avenue, Tempe, Arizona 85281, USA	Universal 3D Nanoscale Assembly with DNA Polycubes
	Poster	Zixiao Zhang , Claudia Corti, Elise Gayet, Nesrine Aissaoui, Sylvie Marguet, Gaetan Bellot and Sébastien Bidault	Institut Langevin, ESPCI Paris, Université PSL, Sorbonne Université, CNRS, France	Digital Colorimetric Biosensing on DNA Origami
	Poster	Zohar Amon , Crystal Lee, Silvia Piperno, Dan Redeker, Ewelina Randall, Alexei Tkachenko, Hagay Shpaisman and Oleg Gang	Department of Chemical Engineering, Columbia University, USA	Directing assembly kinetics and macroscale morphology of DNA-based materials with acoustic energy
	Poster	Jessica Bennett , Christophe Lachance-Brais and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	Reprogramming DNA with a Small Molecule
	Poster	Xiaodan Xu , Sandra Gołębowski, Teresa de Los Arcos, Guido Grundmeier and Adrian Keller	Technical and Macromolecular Chemistry, Paderborn University, Warburger Str. 100, Paderborn 33098, Germany	DNA origami adsorption at single-crystalline TiO ₂ surfaces
	Poster	Alexia Rottensteiner , Nora Hagleitner-Ertuğrul, Hubert Suh Saanfor, Yongzheng Xing and Stefan Howorka	Department of Chemistry, University College London, UK	Highly tunable biomimetic DNA nanopores reveal molecular interactions in nanoconfinement
	Poster	Lukas Rabbe , Guido Grundmeier and Adrian Keller	Paderborn University, Technical and Macromolecular Chemistry, Warburger Str. 100, 33098 Paderborn, Germany	Hierarchical encoding of digital data on DNA origami nanostructures
	Poster	Luis García García-Arisco , Minh-Kha Nguyen, Xuan-Hung Pham, Guillermo González-Rubio and Anton Kuzyk	Department of Neuroscience and Biomedical Engineering, School of Science, Aalto University, Finland	Polishing Metallized DNA Origami towards smooth, continuous and programmable shells
	Poster	Mandy Zhang , Siyuan Stella Wang, William Shih, Kurt Gothelf, Matthew Aquilina and Yichen Xiao-Xiao Zhao	Interdisciplinary Nanoscience Center, Department of Chemistry, Aarhus University, Denmark	Immobilization of Gold Nanowires on Crisscross DNA Origami
	Poster	Julian Martinez	Department of Chemistry, Ecole Normale Supérieure (ENS Ulm), Paris, France	Competition and selection of self-assembling DNA origami structures in physiological medium
	Poster	Siyuan Stella Wang , Matthew Aquilina, Florian Katzmeier, Huangchen Cui, Jaewon Lee, Seungwoo Lee and William Shih	Wyss Institute, Harvard University, United States	Solid-phase assembly of micrometer-scale crisscross DNA origami structures
	Poster	Corey Becker , Matthew Aquilina, Minke Nijenhuis and William Shih	Department of Physics, Harvard University, USA	Hinged origami enable cell-scaled 3D DNA nanostructures
	Poster	Alexia Rottensteiner , Esra Oktay, Surabhya Balasubramanian, Anjelica Kucinic and Julie Finkel	Department of Chemistry, Institute for Structural and Molecular Biology, University College London, London WC1H 0AJ, England, United Kingdom	WONDER (Women's Organization for Nanotechnology in DNA for Engineering and Research): Empowering Inclusion and Innovation in a Growing Field
	Poster	Thorsten L Schmidt	Department of Physics, Kent State University, Kent OH, USA	DNA Nanotechnology Tools for Membrane Protein Structural Biology
	Poster	Mohammad Amir Ghasemian Moghaddam and Leo Chou	Institute of Biomedical Engineering, University of Toronto, Canada	Overcoming the Stability-Specificity Trade-off in DNA Nanostructures via Peptide-Polymer Coatings
	Poster	Eval Perry , Jan O. Tjepelt and Joseph Jacobson	Massachusetts Institute of Technology	DNA Canvas: reusable 2D nanoarrays on a chip with <10nm spacing
	Poster	Tiffany Olivera , Devanathan Perumal, Minu Saji, Christina Sarkes and Fei Zhang	Department of Chemistry, Rutgers University - Newark, U.S.A.	Selective In Situ Growth of Programmable Noble Metal Nanoclusters on DNA Origami
	Poster	Ruiyao Liu , Xinyue Cai and Deborah Fygenson	Department of Physics, University of California, Santa Barbara, U.S.A.	Investigating the bent states of dsDNA with and without defects
	Poster	Anurit Dey , Mohammed Mustafa A. Al Hussain, Xuan-Hung Pham, Jacky Loo, Ashwin Karthick Natarajan and Anton Kuzyk	Department of Neuroscience and Biomedical Engineering, Aalto University, Espoo, Finland	Effect of Temperature Ramp in Rapid Folding of 3D DNA Origami Structures
	Poster	Stefano Mami , Francesco Fontana, Pietro Zecchini and Tommaso Bellini	Department of Medical Biotechnology and Translational Medicine, University of Milano, Italy	Hybridization Rules and self-Assembly of Random-Sequence DNA Oligomers
Poster	Yunxuan Li , Siong Chen Meng, Yesheng Wang, Casey Platnich, Max Earle, Elli Mylona, Plamena Naydenova, Stephen Baker, Jinbo Zhu and Ulrich Keyser	Cavendish Laboratory, University of Cambridge, United Kingdom	Nanopore detection of single-nucleotide RNA mutations and modifications with programmable nanolatches	

RNA Nanostructures	Poster	Casey Platnich	School of Chemistry, Trinity College Dublin (the University of Dublin), Ireland	Chemical Annealing Modulates RNA:DNA Conformation and Stability for Enhanced Nanopore Biosensing
	Poster	Luca Monari, Sergio Fernández Ruiz-Buruecos and Kerstin Göpfrich	Center for Molecular Biology of Heidelberg University (ZMBH), Heidelberg University, Germany	Solving the RNA origami puzzle
	Poster	Luca Monari , Ken Sachenbacher, Sergio Fernández Ruiz-Buruecos, Cody Geary and Kerstin Göpfrich	Center for Molecular Biology of Heidelberg University (ZMBH), Heidelberg University, Germany.	Rapid inverse folding algorithm for scalable, complex, and multimeric RNA origami
	Poster	Kevin Neis, Laia Civit, Thea Schinkel, Gerardo Patiño Guillén, Nete Christensen, Kathrine Pedersen, Emil Kristoffersen, Ebbe Andersen, Ulrich Keyser, Steffen Thiel and Julian Valero	Interdisciplinary Nanoscience Center, Department of Molecular Biology and Genetics, Aarhus University, Denmark	Chemically modified RNAs: from biomolecular targeting to nanotechnological applications
DNA Nanosystems: Programmed Function II	Poster	Florian Rothfischer , Lennart J. K. Weiß, Niccolò Tedeschi, Michael Matthies, Sonja K. Schinko, Matthias Vogt, Christoph Karfusehr, Alexander Hebel, Petr Šulc, Tim Liedl, Enzo Kopperger and Friedrich C. Simmel	School of Natural Sciences, Technical University of Munich, Germany	A high endurance DNA origami compliant snap-through mechanism under external control
	Poster	Joel Spratt , Jakub Palacka, David Fernandez Bonet, Simon Kolmodin Dahlberg, Xiang Jiao, Johan Strömqvist, Erik Benson and Ian Hoffecker	KTH - Royal Institute of Technology	VOLUMINEX: A 3-D Implementation of DNA Sequencing-Based Microscopy
	Poster	Diana Soukarie , Jokin Yeregui Elosua, Cecilia Wetzl, Alexander Bittner and Ibon Santiago Gonzalez	Self-assembly lab, CIC nanoGUNE BRTA, Spain	Electrospun polymeric nanofibers as an attractive preservation medium for DNA data storage.
	Poster	Jokin Yeregui-Elosua , Diana Soukarie, Cecilia Wetzl, Alexander M. Bittner and Ibon Santiago	Self-Assembly Lab, CIC nanoGUNE BRTA, Spain	Molecular random access for DNA data storage via stimuli-responsive vesicles embedded in reusable nanofibers
	Poster	Samia Bakhtawar and Dr Wooli Bae	Department of Physics, University of Surrey, U.K	High-capacity loading and release of complementary single-stranded DNA from AuNP surfaces
	Poster	Borja Rodriguez-Barea , Yifeng Shi, Rene Hubner, Grigory Tikhomirov and Artur Erbe	Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden-Rossendorf, 01328 Dresden, Germany	Novel Dielectrophoretic Assembly of Reconfigurable Au Nanowires from DNA Origami Hybrids
	Poster	Manash Saikia , Victor Slivinskis, Haoqing Xu, Gaurav Arya, Stefan Zauscher and Yonggang Ke	Department of Chemistry, Emory University, USA	Enzymatic In Situ Force Generation Inside a DNA Origami Nanotube
	Poster	Damien Bajcl	Department of Chemistry, École Normale Supérieure, PSL University, Sorbonne Université, CNRS, 75005 Paris, France	DNA-encoded life-like soft matter at physiological temperature: from in situ assembly, growth and morphing to macroscopic transport