

Monday, April 15

8:00 - 9:30 AM Continental Breakfast ... Ballroom 2 Lobby

9:30 - 9:40 AM	Introduction: John Reif, Conference Chair and Andrew Turberfield, Programme Chair		
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Track on DNA Nanostructures I. Track Chair: Nadrian Seeman, New York University

9:40 - 10:20 AM	Keynote	<u>F. Akif Tezcan</u> , Rohit Subramanian and Sarah Smith	Department of Chemistry and Biochemistry, University of California, San Diego	<i>Self-Assembly of a Designed Nucleoprotein Architecture through Multimodal Interactions</i>
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10:20 - 11:30 AM Refreshments and Poster Session ... Ballroom 2 Lobby

Posters Track on DNA Nanostructures: Semantomorphic Science A	Poster	Jingjing Ye, Richard Weichelt, Alexander Eychmüller and Ralf Seidel	Peter Debye Institute for Soft Matter Physics, Universität Leipzig, Germany	<i>Nano-electronic components built from DNA templates</i>
	Poster	Rachel Nixon, Wenyan Liu, Shuo Yang and Risheng Wang	Department of Chemistry, Missouri University of Science and Technology, USA	<i>Exploring the addressability of DNA-decorated multifunctional gold nanoparticles with DNA origami template</i>
	Poster	Shuo Yang, Wenyan Liu and Risheng Wang	Department of Chemistry, Missouri University of Science and Technology, USA	<i>pH-Driven hierarchical assembly of DNA origami nanostructures</i>
	Poster	Banani Chakraborty and Elmar Weinhold	Department of Chemical Engineering, Indian Institute of Science, Bangalore, India	<i>A DNA Origami based multi-input logic gate for modifying DNA by enzyme nano-factory</i>
	Poster	Casey Platnich, Amani Hariri, Janane Rahbani, Jesse Gordon, Hanadi Sleiman and Gonzalo Cosa	Department of Chemistry, McGill University, Montreal QC, Canada	<i>Kinetics of Strand Displacement and Hybridization on Wireframe DNA Nanostructures: Dissecting the Roles of Size, Morphology, and Rigidity</i>
	Poster	Xin Luo, Pongphak Chidchob and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	<i>Construct Complex Gold Nanoparticle Structures using DNA as a Chaperon</i>
	Poster	Feng Zhou, Ruojie Sha, Nadrian Seeman and Paul Chaikin	Center for Soft Matter Research, New York University, New York, NY 10003, USA	<i>3D self-replication of DNA nanostructures</i>
11:30 - 11:55 AM	Invited	Yun Zeng, Wenyan Liu and <u>Risheng Wang</u>	Department of Chemistry, Missouri University of Science and Technology, USA	<i>Fabrication of a DNA Origami Integrated Hydrogen Peroxide Sensing Platform</i>
11:55AM - 12:20 PM	Invited	<u>Masayuki Endo</u>	Department of Chemistry, Kyoto University	<i>Investigation of physical properties of i-motif and G-quadruplex in a confined nanospace</i>

12:20 - 1:30 PM LUNCH ... Golden Cliff (You must have a meal ticket)

Track on Chemical Tools for DNA Nanotechnology. Track Chairs: Andrew Ellington, University of Texas at Austin / Floyd Romesberg, Scripps Research Institute				
1:30 - 2:10 PM	Keynote	Chen Liang, Allisandra Rha, Anthony Semetilli, Christella Gordon, Youngsun Kim and <u>David Lynn</u>	Departments of Chemistry and Biology, Emory University, USA	<i>Extending Mutualistic Biopolymer Co-Assembly</i>
2:10 - 2:35 PM	Invited	<u>Nils Walter</u>	University of Michigan, USA	<i>Movers and shakers: How single molecule fluorescence microscopy helps accelerate nucleic acid based devices</i>
2:35 - 3:00 PM	Invited	<u>Kate Adamala</u>	Department of Genetics, Cell Biology and Development, University of Minnesota, USA	<i>Synthetic minimal cell toolbox</i>
3:00 - 3:25 PM	Invited	<u>Lydia Contreras</u> , Mia Mihailovic and Jorge Vazquez	Department of Chemical Engineering/ Cell Molecular Biology Institute, University of Texas at Austin, USA	<i>Biologically inspired sensors of nucleic acid assembly</i>
3:25 - 4:35 PM Refreshements and Poster Session ... Ballroom 2 Lobby				
Posters: Track on Chemical Tools for DNA Nanotechnology	Poster	Felix Rizzuto and Hanadi Sleiman	McGill University, Canada	<i>Reprogramming self-assembly pathways with amphiphilic DNA and small molecules</i>
	Poster	Siyuan Wang, Erhu Xiong and Andrew Ellington	Institute for Cellular and Molecular Biology, University of Texas at Austin, USA	<i>Modeling thermodynamic stability of phosphorothioate-modified DNA</i>
	Poster	Siyuan Wang, Andrew Ellington and Ilya Finkelstein	Institute for Cellular and Molecular Biology, University of Texas at Austin, USA	<i>High-throughput thermodynamic profiling of mismatched nucleic acid hybridization on Next-Generation sequencing chips</i>
	Poster	Brandon Wilson, Amani Hariri, Ian Thompson and H. Tom Soh	Department of Chemical Engineering, Stanford University, USA	<i>Thermodynamic and Kinetic Optimization of Aptamer Switches for Real-time Molecular Recognition</i>
	Poster	Brian Young, Adam Kabza and Jonathan Sczepanski	Department of Chemistry, Texas A&M University, USA	<i>The battle of enantiomers: comparing the performance of D-DNA and L- DNA strand-displacement circuits in living cells</i>
Posters: Track on Nanophotonics and Superresolution	Poster	David Neff, Sanaz Jafarvand, Nathan Shin and Michael Norton	Department of Chemistry, Marshall University, USA	<i>Toward 1-D Arrays of Two Color Molecular Beacons</i>
	Poster	Nathan Williams, Wenjiao Zhou, John Powell, Ravi Kasula, Derek Toomre, Julien Berro and Chenxiang Lin	Department of Cell Biology, Yale School of Medicine, USA	<i>Programmable DNA-nanostructures for rapid and facile molecular counting</i>
Track on Nanophotonics and Superresolution. Track Chair: Ralf Jungmann, Max Planck Institute for Biochemistry, Martinsried				
4:35 - 5:15 PM	Keynote	<u>Francisco Balzarotti</u> , Yvan Eilers, Klaus C. Gwosch, Jasmin Pape and Stefan W. Hell	Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	<i>MINFLUX Nanoscopy and Tracking</i>
5:15 - 5:40 PM	Invited	Linh Nguyen, Timon Funck, Amelie Heuer-Jungemann, Kevin Martens, Alexander Govorov and <u>Tim Liedl</u>	Faculty of Physics and Center for Nanoscience (CeNS), Ludwig-Maximilians-Universität, München, Germany	<i>Chiral plasmonic sensing and silicifying DNA materials</i>
5:40 - 6:00 PM	Contributed	<u>Shalin Shah</u> , Abhishek Dubey and John Reif	Department of Electrical & Computer Engineering, Duke University, US	<i>Imaging single-molecules with temporal DNA barcodes</i>

Dinner (On Your Own) / Track Chairs' Dinner

Tuesday, April 16

7:45 - 8:30 AM Continental Breakfast ... Ballroom 2 Lobby

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

8:30 - 9:10 AM	Keynote	<u>Elisa Franco</u>	UCLA, USA	<i>Programming dynamic behaviors in molecular systems and materials</i>
9:10 - 9:35 AM	Invited	<u>Kerstin Göpfrich</u> , Kevin Jahnke, Ilia Platzman and Joachim P. Spatz	Department of Cellular Biophysics, Max Planck Institute for Medical Research, Germany	<i>Synthetic cells: Bottom-up assembly with DNA nanotechnology and microfluidics</i>
9:35 - 9:55 AM	Contributed	<u>Brian Rolczynski</u> , William Klein, Sebastian Diaz, Reza Zadegan, Mario Ancona, Wan Kuang, Igor Medintz and Joseph Melinger	Electronics Science and Technology Division, Code 6800, US Naval Research Academy, USA	<i>Deducing the roles of individual chromophores in energy transport relays using machine-learning tools</i>
9:55 - 10:15 AM	Contributed	<u>Rasmus Peter Thomsen</u> , Anders Okholm, Mette Malle Galsgaard, Swati Krishnan, Søren Schmidt-Rasmussen, Rasmus Schøler Sørensen, Friedrich Simmel, Nikos Hatzakis and Jørgen Kjems	Interdisciplinary Nanoscience Center, Aarhus University, Denmark	<i>A large size-selective DNA nanopore with sensing applications</i>

10:15 - 11:25 AM Refreshments and Poster Session ... Ballroom 2 Lobby

Posters Track on DNA Nanosystems: Programmed Function	Poster	Alex Prinzen and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	<i>Amplified Uncaging of Functional Molecules through the Hybridization Chain Reaction</i>
	Poster	Ming Gao and Thom LaBean	Department of Materials Science and Engineering, North Carolina State University, USA	<i>Self-Assembly of Three-Dimensional Electronic Systems with Neuromimetic Network Architectures</i>
	Poster	Akinori Kuzuya	Kansai University, Japan	<i>Real-Time Observation of The Movements of DNA Origami Pinching Devices on Mica Using High-Speed AFM</i>
	Poster	Rajan Sharma, Iwona Mames, Eugen Stulz and Christoph Walti	Bioelectronics, School of Electronic and Electrical Engineering, University of Leeds, UK	<i>Self-assembled DNA Light-Pipes</i>
Posters: Track on Computational Tools for Self-Assembly	Poster	Michael Tobiason, Bernard Yurke and William Hughes	Micron School of Materials Science & Engineering, Boise State University, USA	<i>Engineering Kinetically Reproducible DNA Devices</i>
	Poster	Chao-Min Huang, Anjelica Kucinic, Carlos Castro and Hai-Jun Su	Department of Mechanical and Aerospace Engineering, the Ohio State University, US	<i>Design automation for DNA origami mechanisms</i>

Track on Computational Tools for Self-Assembly. Track Chair: William Shih, Wyss Institute and Harvard Medical School

11:25AM - 12:05 PM	Keynote	<u>Sinan Keten</u> and Kerim Dansuk	Northwestern University, USA	<i>A simple mechanical model for synthetic catch bonds</i>
12:05 - 12:25 PM	Contributed	<u>Daniel Fu</u> , Raghu Narayanan Pradeep, Fei Zhang, John Schreck, Hao Yan and John Reif	Department of Computer Science, Duke University, USA	<i>Automated Design of Curved DNA Origami Capsules with Multilayer-Reinforced Rigidity with Specified Shape</i>

12:25 - 12:45 PM	Contributed	<u>Stefan Badelt</u> , Casey Grun, Karthik Sarma, Brain Wolfe, Seung Woo Shin and Erik Winfree	Biology and Biological Engineering, California Institute of Technology, USA	<i>Enumeration, condensation and simulation of pseudoknot-free domain-level DNA strand displacement systems</i>
12:45 - 1:55 PM LUNCH ... Golden Cliff (You must have a date specific meal ticket)				
Track on Synthetic Biology. Track Chair: Alex Deiters, University of Pittsburgh				
1:55 - 2:35 PM	Invited	<u>Christopher Ahern</u>	University of Iowa	<i>The Power of Small: Atomic Mutagenesis in Ion Channels in a Post-Structural Era</i>
2:35 - 3:00 PM	Invited	Jorge Dabdoub, Michelle Tong, Benjamin Schuster, Gregory Dignon, William Benman, Daniel Hammer, Jeetain Mittal and <u>Matthew Good</u>	Department of Cell and Developmental Biology, University of Pennsylvania, USA	<i>Engineering Synthetic Membraneless Organelles With Tunable Composition</i>
3:00 - 3:25 PM	Invited	<u>Travis Young</u>	California Institute for Biomedical Research, La Jolla, CA USA	<i>Molecular Control of T Cell-Based Therapeutics</i>
3:25 - 3:45 PM	Contributed	<u>Lukas Aufinger</u> and Friedrich C. Simmel	Physics-Department and ZNN, Technical University of Munich, Germany	<i>Artificial Gel-based Organelles for Spatial Organization of Cell-free Gene Expression Reactions</i>
3:45 - 4:45 PM Refreshments and Poster Session ... Ballroom 2 Lobby				
Posters: Track on Synthetic Biology	Poster	William Klein, Rasmus Thomsen, James Vranish, Kendrick Turner, Mario Ancona, Jørgen Kjems and Igor Medintz	Center for Bio/Molecular Science and Engineering, U.S. Naval Research Laboratory, USA	<i>Enhanced Catalysis of a Three-Enzyme Pathway on a DNA Triangle</i>
	Poster	Tobias Pirzer, Kilian Vogeles, Thomas Frank, Lukas Gasser, Marisa Goetzfried, Mathias Hackl, Stephan Sieber and Friedrich Simmel	Department of Physics, Technical University of Munich, Germany	<i>Towards synthetic cells using peptide-based reaction compartments</i>
	Poster	Siddharth Agarwal, Melissa Klocke and Elisa Franco	Mechanical Engineering, Bourns College of Engineering, University of California, Riverside, USA	<i>Engineering dynamic nucleic acid nanotubes in cell-sized compartments</i>

Posters: Track on Principles and Theory of Self-Assembly	Poster	Caroline Rossi-Gendron, Koyomi Nakazawa, Masayuki Endo, Léa Chocron, Mathieu Morel, Sergii Rudiuk, Hiroshi Sugiyama and Damien Baigl	Département de Chimie, UMR 8640, Ecole Normale Supérieure, France	<i>Isothermal formation of DNA origamis at room temperature in an unchanging buffer: robust self-assembly through multiple folding pathways</i>
	Poster	Rokiah Alford, James Walsh, Lisanne Spenkelink, Jonathan Berengut, Sophie Hertel, Till Böcking, Antoine van Oijen and Lawrence Lee	EMBL node for Single Molecule Sciences, UNSW, Sydney, Australia	<i>Concentration dependent exchange of subunits on DNA origami: a 'fuel-free' design from nature's molecular machines.</i>
	Poster	Jacob Majikes, Paul Patrone, Daniel Schiffels, Michael Zwolak, Anthony Kearsley, Sam Forry and J. Alexander Liddle	National Institute of Standards and Technology, Gaithersburg, MD USA	<i>Measuring Energetics and Cooperativity of Origami Folds</i>
Special Track on Nanoscience for Computation. Track Chair: Andrew Turberfield, University of Oxford				
4:45 - 5:25 PM	Keynote	<u>Mark A. Reed</u> , Hyunwook Song and Takhee Lee	School of Engineering and Applied Science, Yale University, USA	Molecular Transistors
5:25 - 5:50 PM	Invited	<u>Bernard Yurke</u>	Boise State University	Exciton quantum walks over DNA-assembled dye aggregates - a path to quantum computing?
5:50 - 7:40 PM Refreshments and Combined Poster Session ... all Monday and Tuesday posters ... Ballroom 2 & 3 (1 date specific drink ticket per person)				
7:45 - 8:45 PM ISNSCE AWARD ADDRESS				

Wednesday, April 17

7:45 - 8:30 AM Continental Breakfast ... Ballroom 2 Lobby

Track on Biomedical Nanotechnology. Track Chair: Thomas LaBean, North Carolina State University

8:30 - 9:10 AM	Keynote	<u>Darrin Pochan</u>	Materials Science and Engineering, University of Delaware, USA	<i>Biomolecules for Biological (and Non-biological!) Things: Materials Construction through Peptide Design and Solution Assembly</i>
9:10 - 9:35 AM	Invited	<u>Carson Key</u> , Kristen Froehlich, Michael Fergione, Sahil Pontula, Matthew Hart, Pedro Carriel, Cynthia Koehler, Abhichart Krissanaprasit and Thomas LaBean	Department of Materials Science and Engineering, North Carolina State University, USA	<i>Genetically Encoding Functional RNA Origami: Anticoagulant</i>
9:35 - 10:00 AM	Invited	<u>Devin Daems</u> , Iene Rutten, Jonathan Bath, Andrew Turberfield and Jeroen Lammertyn	KU Leuven, Department of Biosystems, Biosensors group, Belgium	<i>DNA origami nano-tailored surfaces enhance biomolecular interactions at the biosensor surface</i>
10:00 - 10:20 AM	Contributed	<u>Frances Anastassacos</u> , Maartje Bastings and William Shih	Wyss Institute of Biologically Inspired Engineering, Harvard University, USA	<i>pH responsive DNA origami nanocapsules for endosome-specific drug delivery</i>

10:15 - 11:25 AM Refreshments and Poster Session ... Ballroom 2 Lobby

Posters: Track on Biomedical Nanotechnology	Poster	Ronit Freeman	Department of Applied Physical Sciences, University of North Carolina - Chapel Hill, NC, USA	<i>Reversible Self-Assembly Guides Phenotype of Cells</i>
	Poster	Liwei Hui, Anqin Xu and Haitao Liu	Department of Chemistry, University of Pittsburgh, USA	<i>DNA-based nanofabrication for antifouling application</i>
	Poster	Hieu Bui, Mario Ancona, Ellen Goldman, Youngchan Kim, Divita Mathur and Igor Medintz	National Research Council, Washington D.C., USA	<i>Enzyme-to-DNA Conversion Using Ultra-Small Circular DNAs</i>
	Poster	Heini Ijäs, Iris Hakaste, Boxuan Shen, Mauri Kostiaainen and Veikko Linko	Nanoscience Center, Department of Biological and Environmental Science, University of Jyväskylä, Finland	<i>Reconfigurable and Programmable pH-Responsive DNA Origami Nanocapsule for Loading, Encapsulation and Displaying of Cargo</i>
	Poster	Youngeun Kim and Peng Yin	Wyss Institute for Biologically Inspired Engineering, Harvard University, USA	<i>DNA dendrimer-coated DNA nanostructures</i>
	Poster	Philip Lukeman, Netzahualcóyotl Arroyo-Currás, Muaz Sadeia, Alexander Ng, Yekaterina Fyordova, Natalie Williams, Tammy Afif, Nathan Ogden, Roberto C. Andresen Eguiluz and Kevin W Placxo	Chemistry Department, St. John's University, NY, USA	<i>An Electrochemical Biosensor Exploiting Conformational Changes in Electrode-Attached DNA Origami to Detect Hundred Nanometer-Scale Targets</i>

Track on Protein and Viral Nanostructures. Track Chair: Nicole Steinmetz, UC San Diego

11:25AM - 12:05 PM	Keynote	Rebecca Hochstein, Mark Young and <u>Martin Lawrence</u>	Department of Chemistry and Biochemistry, Montana State University, USA	<i>Easy Peasy Lemon Squeezy; Acidianus Tailed Spindle Virus Provides a New Paradigm for Viral Capsid Architecture and Genome Delivery</i>
12:05 - 12:30 PM	Invited	<u>Junghae Suh</u>	Bioengineering, Rice University, USA	<i>Designing Virus Capsids for Controllable Therapeutic Delivery</i>
12:30 - 12:50 PM	Contributed	<u>Mauri Kostianen</u>	Department of Bioproducts and Biosystems, Aalto University, Finland	<i>Virus and DNA Origami Directed Nanoparticle Superlattices</i>

12:50 - 2:00 PM LUNCH ... Golden Cliff (You must have the date specific meal ticket)

Track on DNA Nanostructures II. Track Chair: Nadrian Seeman, New York University

2:00 - 2:25 PM	Invited	<u>Alasdair Clark</u> , Glenn Burley, Gabriella Flynn, Gerard Macias, Jamie Withers, Andrea Taladriz Sender, Justin Sperling and Jiajia Zou	School of Engineering, University of Glasgow, UK	<i>Using the Fluorous Effect to Control the Immobilization and Orientation of DNA and DNA Nanostructures</i>
2:25 - 2:50 PM	Invited	<u>Yuki Suzuki</u> , Kohei Mizuno, Ibuki Kawamata and Satoshi Murata	Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Japan	<i>Large deformation of a linear DNA origami beam via cumulative actuation of tension-adjustable modules</i>
2:50 - 3:15 PM	Invited	Andrew Tuckwell, Jonathan Berengut, Matthew Baker, Rokiah Alford, Sophie Hertel, Stephanie Xu, Chu Wai Liew, Samuel Tusk, Joel Spratt, Keiichi Namba, Richard Berry, Andrew Turberfield and <u>Lawrence Lee</u>	The University of New South Wales, Australia	<i>DNA templates and building blocks for bioinspired molecular assemblies</i>

3:15 - 4:20 PM Refreshments and Poster Session ... Ballroom 2 lobby				
Posters Track on DNA Nanostructures: Semantomorphic Science B	Poster	Qi Yan, Yaqi Wang and Bryan Wei	School of Life Sciences, Tsinghua University, China	<i>Conformational isomerization of DNA nanostructures based on enzyme treatment</i>
	Poster	Jonathan Berengut and Lawrence Lee	EMBL Australia node for Single Molecule Science, UNSW Sydney, Australia	<i>Vernier Assembly of Multi-Subunit DNA Origami Nanostructures</i>
	Poster	Anjelica Kucinic, Chao-Min Huang, Carlos Castro and Haijun Su	Chemical and Biomolecular Engineering, The Ohio State University, USA	<i>DNA origami tubes with reconfigurable cross-section</i>
	Poster	Yan Cui and Bryan Wei	School of Life Sciences, Tsinghua University, China	<i>Hybrid Wireframe DNA Nanostructures</i>
	Poster	John Powell, Joshua Temple, Yong Xiong, Meaghan Sullivan, Matthew Simon and Chenxiang Lin	Department of Cell Biology, Yale University, USA	<i>DNA Origami Supports for Protein and RNA Structural Studies</i>
	Poster	Megan Kizer, Yanxiang Deng, Aram Chung, Robert Linhardt and Xing Wang	Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, USA	<i>Microfluidic Delivery of DNA Nanostructures and Investigation of In Vitro and In Vivo Stability</i>
Track on Integrated Chemical Systems. Track Chair: Jeremiah Gassensmith, Universty of Texas, Dallas				
4:20 - 5:00 PM	Keynote	<u>Thomas Hermans</u>	Institut de Science et d'Ingénierie Supramoléculaires, University of Strasbourg,	<i>Supramolecular polymerization driven by chemical fuels</i>
5:00 - 5:25 PM	Invited	<u>Ellen Sletten</u>	Department of Chemistry and Biochemistry, University of California, Los Angeles, USA	<i>Versatile perfluorocarbon nanoemulsion theranostics stabilized by poly(2-oxazoline) amphiphiles</i>
5:30 - 7:00 PM Refreshments and Combined Poster Session ... all Wednesday and Thursday posters ... Ballroom 2 & 3 (1 date specific drink ticket per person)				
7:00 - 7:30 PM ISNSCE Business Meeting				
7:30 - 8:00 PM Robert Dirks Prize Presentation				

Thursday, April 18

7:45 - 8:30 AM Continental Breakfast ... Ballroom 2 Lobby

Track on Nucleic Acid Nanostructures In Vivo. Track Chair: Yamuna Krishnan, University of Chicago

8:30 - 9:10 AM	Keynote	<u>Ludger Johannes</u> , Dhiraj Bhatia, Christian Wunder, Cesar Augusto Valades-Cruz and Yamuna Krishnan	Cellular and Chemical Biology, Institut Curie, Paris, France	<i>Designer DNA nanodevices to probe endocytic pathways</i>
9:10 - 9:35 AM	Invited	<u>Jonathan Choi</u>	Department of Biomedical Engineering, The Chinese University of Hong Kong, Hong Kong	<i>Promoting the delivery of nanoparticles to atherosclerotic plaques by DNA coating</i>
9:35 - 9:55 AM	Contributed	Mikhail H. Hanewich-Hollatz, Zhewei Chen, Jining Huang, Lisa M. Hochrein and <u>Niles A. Pierce</u>	Division of Biology & Biological Engineering, Caltech, USA	<i>Conditional Guide RNAs: Programmable Conditional Regulation of CRISPR/Cas Function in Bacteria via Dynamic RNA Nanotechnology</i>
9:55 - 10:15 AM	Contributed	<u>Cynthia Koehler</u> , Daniel Chester, Ashley Brown and Thomas LaBean	Department of Materials Science and Engineering, North Carolina State University, USA	<i>A multiscale approach to investigating cell signaling in vivo using DNA origami and colloidal hydrogels</i>

10:15 - 11:10 AM Poster Session

Posters: Track on Molecular Machinery	Poster	Gadiel Saper, Stanislav Tsitkov, Neda Bassir Kazeruni and Henry Hess	Department of Biomedical Engineering, Columbia University, New York, NY, USA	<i>Kinesin-propelled microtubules exhibit collective motion and extended life-time under confinement</i>
	Poster	Joshua Johnson, Abhilasha Dehankar, Jessica Winter and Carlos Castro	Biophysics Program, The Ohio State University, USA	<i>Control of DNA Origami Mechanisms and Assemblies via Gold Nanoparticles</i>
	Poster	Andrew Tuckwell, Sophie Hertel, Chu Liew, Stephanie Xu and Lawrence Lee	EMBL Australia Node for Single Molecule Science, UNSW, Australia	<i>DNA-Templated Protein Assembly: An Engineering Approach to Understanding Nature's Molecular Machines</i>
	Poster	David Arredondo and Darko Stefanovic	Department of Computer Science, University of New Mexico, USA	<i>Catalytic molecular walker teams</i>
	Poster	<u>Jan-Philipp Günther</u> , Michael Börsch, Günter Majer and <u>Peer Fischer</u>	Max Planck Institute for Intelligent Systems, Stuttgart, Germany Institute of Physical Chemistry, University of Stuttgart, Germany Jena University Hospital, Friedrich-Schiller University, Jena, Germany	<i>Do Active Enzymes Exhibit Enhanced Diffusion?</i>

Track on Molecular Machinery. Track Chair: Andrew Turberfield, University of Oxford

11:10 - 11:50 AM	Keynote	<u>Ulrich Keyser</u>	Cavendish Lab, University of Cambridge, UK	<i>Active molecular sensors built with DNA nanotechnology</i>
11:50AM - 12:15 PM	Invited	<u>Yujia Qing</u> , Sandra A. Ionescu, Gökçe Su Pulcu and Hagan Bayley	Department of Chemistry, University of Oxford, UK	<i>Directional control of a molecular hopper</i>
12:15 - 12:40 PM	Invited	<u>Henry Hess</u> and Gadiel Saper	Department of Biomedical Engineering, Columbia University, USA	<i>Engineering with Biomolecular Motors</i>
12:40 - 1:00 PM	Contributed	<u>Pallav Kosuri</u> , Benjamin Altheimer, Mingjie Dai, Peng Yin and Xiaowei Zhuang	Department of Chemistry and Chemical Biology, Harvard University, USA	<i>Self-assembled DNA rotors enable high-resolution tracking of molecular motors</i>