Sunday 15 April 2018					
3:00-5:00 PM	**REGISTRATION (BALLROOM 3 LOBBY)**				
Monday 16 April 2018					
7:30-8:50 AM	**REGISTRATION (BALLROOM 3 LOBBY)**				
9:00-9:10 AM	**Introduction: John Reif, Conference Chair and Andrew Turberfield, Programme Chair**				
Track on DNA Nanostructures I. Track Chair: Nadrian Seeman, New York University					
9:10-9:50 AM	Keynote	p2	Lulu Qian	Bioengineering, California Institute of Technology, USA	Scaling up the complexity, design space, and accessibility of artificial molecular machines
9:50-11:05 AM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on DNA Nanostructures A					
	Poster	p71	Nicholas Stephanopoulos, Yang Xu, Shuoxing Jiang, Chad Simmons, Raghu Pradeep Narayanan, Fei Zhang	School of Molecular Sciences, Arizona State University, USA	Hybrid nano-cages from DNA and self-assembling proteins
	Poster	p73	Xiao Wang, Nadrian Seeman and James Canary	Department of Chemistry, New York University, USA	The Construction of a DNA Origami Based Molecular Electro-Optical Modulator
	Poster	p74	Nathaniel Anderson, Peter Dinolfo and Xing Wang	Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, USA	Synthesis and Characterization of Porphyrin-DNA Constructs for the Self-Assembly of Modular Energy Transfer Arrays
	Poster	p76	Megan Kizer, Tom Jing, Ian Huntress, Benjamin Walcott, Joseph Bromley, Keith Fraser, Christopher Bystroff and Xing Wang	Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, USA	The complex between a multi-crossover DNA nanostructure, PX-DNA, and T7 endonuclease I
	Poster	p78	Young-Joo Kim, Chanseok Lee, Jae Gyung Lee and Do-Nyun Kim	Department of Mechanical and Aerospace Engineering, Seoul National University, South Korea	A strain-based design approach for twisted DNA nanostructures
	Poster	p80	Kyung Soo Kim, Chanseok Lee, Jae Young Lee, Young-Joo Kim and Do-Nyun Kim	Department of Mechanical and Aerospace Engineering, Seoul National University, South Korea	Controlling the flexibility of DNA nanostructures via gap design
Posters: Track on Biomedical Nanotechnology A					
	Poster	p83	Lin Huang, Ruoping Chen and Kun Qian	Med-X Research Institute, Shanghai Jiao Tong University, P. R. China	Plasmonic nanoshells based metabolite detection for in-vitro metabolic diagnostics and therapeutic evaluation
	Poster	p85	Pongphak Chidchob, Daniel Offenbartl-Stiegert, Stefan Howorka and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	Site-Specific Functionalization of DNA Cube with Cholesterol Units: Self-Assembly and Interactions with Lipid Bilayers
	Poster	p86	Devin Daems, Iene Rutten, Jonathan Bath, Deborah Decrop, Andrew Turberfield and Jeroen Lammertyn	Department of Biosystems, KU Leuven, Belgium	Combining DNA origami with aptamers for single molecule counting in microwell arrays
	Poster	p88	Thomas Edwardson, Takahiro Mori and Donald Hilvert	Laboratory of Organic Chemistry, ETH Zurich, Switzerland	An engineered non-viral protein cage for siRNA delivery
	Poster	p89	Yulia Gerasimova, Ryan Connelly and Adam Reed	Chemistry Department, University of Central Florida, USA	Self-assembling DNA structures as probes for nucleic acid analysis
	Poster	p90	Xin Song and John Reif	Dept. of Electrical and Computer Engineering, Dept. of Biomedical Engineering, Duke University, USA	Semi-Synthetic Smart Hydrogel for Tailored 3D Cell Culture
11:05-11:30 AM	Invited	p19	Jie Song, Zhe Li, Pengfei Wang, Travis Meyer, Chengde Mao and Yonggang Ke	Biomedical Engineering Department, Emory University, USA	Reconfigurable DNA nanostructures controlled by information relay
11:30-11:55 AM	Invited	p61	David Neff and Michael Norton	Department of Chemistry, Marshall University, USA	1D Arrays of Molecular Beacons
11:55-12:20 AM	Invited	p36	Jonathan Berengut and Lawrence Lee	EMBL Australia node for Single Molecule Science, UNSW Sydney, Australia	Tuneable repulsion domains in multi-subunit DNA origami nanostructures
12:20-1:30 PM	***Lunch (Primrose Room - Meal Ticket Required)***				
Track on Biomedical Nanotechnology. Track Chair: Thomas LaBean, North Carolina State University					
1:30-2:10 PM	Keynote	p8	Armando Hernandez-Garcia, Nicole A. Estrich, Thomas H. Labean and Renko de Vries	Physical Chemistry and Soft Matter, Wageningen University, the Netherlands	Designing proteins for self-assembling DNA-protein nanostructures
2:10-2:35 PM	Invited	p10	Bjorn Hogberg	Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Sweden	Revealing the Spatial Tolerance of Human Antibodies Using Nanopatterned Antigens
2:35-3:00 PM	Invited	p11	Jessica Lorenz, Jörg Schnauß, Martin Glaser, Martin Sajfutdinow, Carsten Schuldt, Josef Käs and David Smith	Fraunhofer Institute for Cell Therapy and Immunology (IZI), Leipzig, Germany	DNA-based biomimetics as tools to study reconstituted and cellular systems

3:00-3:20 PM	Contributed	p13	Aurelie Lacroix, Empar Vengut-Climent, Thomas G. W. Edwardson, Mark A. Hancock, Michael D. Dore and Hanadi F. Sleiman	Department of Chemistry, McGill University, Canada	DNA Nanocubes Interfacing with Biological Systems
3:20-4:30 PM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on Biomedical Nanotechnology B					
	Poster	p93	Parsa Nafisi, Tural Aksel, Suraj Makhija and Shawn Douglas	Department of Cellular and Molecular Pharmacology, University of California, San Francisco, USA	pScaf: A novel plasmid enabling phage-based production of single-stranded DNA scaffolds of custom size and sequence
	Poster	p95	Mingyeong Kang, Jayun Ha, Jeonghwa Jeong, Kwonhoo Kim, Jun-O Jin and Minseok Kwak	Department of Chemistry, Pukyong National University, Republic of Korea	Polymeric nanoparticles containing Lumogen® dyes for cellular detection and imaging
	Poster	p96	Ioanna Smyrlaki, Bjorn Hogberg and Anna Teixeira	MBB, Karolinska Institutet, Sweden	DNA Origami nanocalipers as a Precise Tool for Studying Notch Receptor Activation
	Poster	p97	Suraj Makhija, Tural Aksel, Kole Roybal and Shawn Douglas	Department of Cellular and Molecular Pharmacology, University of California San Francisco, USA	Toward Immunomodulatory DNA Origami Nanodevices
	Poster	p98	Hung Nguyen, Nolan Gallagher, Alexandre Detappe, Peter Harvey, Hui Zhang, Changcun Yan, Yivan Jiang, Farrukh Vohidov, Ken Kawamoto, Peter Ghoroghchian, Irene Ghobrial, Alan Jasanoff, M. Francesca Ottaviani and Jeremiah Johnson	Department of Chemistry, MIT, USA	Scalable Synthesis of ROMP-compatible Multi-valent Macromonomers Allows for High-Loading Nitroxide-Based Macromolecular MRI Contrast Agents with Unprecedented Transverse Relaxivity and Stability for Millimetric Tumor Detection
Posters: Track on Chemical Tools for DNA Nanotechnology					
	Poster	p101	Samuel Núñez-Pertíñez, Robert Oppenheimer, Lucy Arkinstall, Thomas Wilks, Jonathan Bath, Andrew Turberfield and Rachel O'Reilly	Department of Chemistry, University of Warwick, U.K.	Development of chemical tools for DNA-templated synthesis
	Poster	p103	Michael Dore, Tuan Trinh, Aurélie Lacroix, Johans Fakhoury and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	Self-assembly of sequence-controlled DNA-amphiphiles and their use in templated synthesis of spherical RNA nanoparticles
	Poster	p105	Tuan Trinh, Chenyi Liao, Jianing Li and Hanadi Sleiman	Department of Chemistry, McGill University, Canada	DNA-Imprinted Polymer Nanoparticles with Monodispersity and Prescribed DNA Strand Patterns
	Poster	p106	Donatien de Rochambeau, Yuanye Sun, Maciej Barlog, Robin S Stein, Johans J Fakhoury, Thomas Gw Edwardson, Hassan S Bazzi and Hanadi F Sleiman	Department of Chemistry, McGill University, Canada	Multifunctional sequence-defined polymers and nucleic acids: synthesis and self-assembly
	Poster	p107	Abhichart Krissanaprasit, Pedro Carriel, Lu Cao, Matt Oliver, Dewran Kocak, Charles Gersbach and Thomas Labean	Department of Materials Science and Engineering, North Carolina State University, USA	Using dCas9-affinity peptides complex for organization of Inorganic Nanomaterials on DNA origami
	Poster	p109	Dionis Minev, Elisha Krieg, Richard Guerra and William Shih	Dana-Farber Cancer Institute, Boston, USA	DNA-tagged methanol responsive polymer (MeRPy) for single stranded DNA purification
	Poster	p111	Jared Moon and Samie Jaffrey	Department of Pharmacology, Weill Cornell Medical College, USA	DNA mimics of Green Fluorescent Protein
	Poster	p112	Katarina Iric and Thorsten-Lars Schmidt	Faculty of Physics, Technical University Dresden, Germany	DNA-encircled lipid bilayers
Track on Chemical Tools for DNA Nanotechnology. Track Chairs: Floyd Romesberg, Scripps Research Institute / Andrew Ellington, University of Texas at Austin					
4:30-5:10 PM	Keynote	p16	Jean Chmielewski	Department of Chemistry, Purdue University, USA	Metal-promoted assembly of peptide-based materials
5:10-5:35 PM	Invited	p17	Byron Purse	Department of Chemistry and Biochemistry, San Diego State University, USA	Designing Fluorescent Nucleoside Analogues for Desired Responses to Base Pairing and Stacking
5:35-6:00 PM	Invited	p18	Nicholas Chim, Changhua Shi, Sujay Sau, Ali Nikoomanzar and John Chaput	Department of Pharmaceutical Sciences, University of California, Irvine, USA	Structural Basis for TNA Synthesis by an Evolved TNA Polymerase
6:00-6:25 PM	Invited	p19	Ashwin Gopinath	Department of Bioengineering, California Institute of Technology, USA	Democratizing single molecule nanoarrays
6:30 PM	***Dinner (On Your Own)***				
6:30 PM	***Track Chairs' Dinner (at the back room of the Aerie Restaurant, on Level 10 of the Cliff Lodge)***				

Tuesday 17 April 2018

Track on Synthetic Biology. Track Chair: Alex Deiters, University of Pittsburgh					
8:30-8:55 AM	Invited	p21	Elliot Dine, Agnieszka Gil, Evan Zhao, Clifford Brangwynne, Jose Avalos and Jared Toettcher	Department of Molecular Biology, Princeton University, USA	Towards controllable, light-switchable synthetic organelles
8:55-9:20 AM	Invited	p22	Ming Hammond	Department of Chemistry, University of California, Berkeley, USA	Riboswitching on the light: Applying riboswitches to control assembly of RNA-dye complexes for in vivo biosensing
9:20-10:00 AM	Keynote	p23	Lei Qi	Department of Bioengineering; Department of Chemical and Systems Biology, Stanford University, USA	Precise genome engineering and synthetic biology
10:00-10:20 AM	Contributed	p24	Sisi Jia, Siew Cheng Phua, Yuta Nihongaki, Yizeng Li, Michael Pacella, Sean Sun, Takanari Inoue and Rebecca Schulman	Department of Chemical and Biomolecular Engineering, Johns Hopkins University, USA	Measuring flow rates at the cell surface with micron-scale DNA devices
10:20-11:30 AM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on Synthetic Biology					
	Poster	p114	Zhao Zhang, Michael Grome, Xin Bian, Frederic Pincet, Pietro De Camilli and Chenxiang Lin	Department of Cell Biology, Yale University, USA	Shaping and placing liposomes with DNA origami
	Poster	p116	Siddharth Agarwal and Elisa Franco	Department of Mechanical Engineering, University of California, Riverside, USA	Enzyme-driven assembly and disassembly of hybrid DNA/RNA nanotubes
	Poster	p118	Sisi Jia, Siew Cheng Phua, Yuta Nihongaki, Yizeng Li, Michael Pacella, Sean Sun, Takanari Inoue and Rebecca Schulman	Department of Chemical and Biomolecular Engineering, Johns Hopkins University, USA	Attachment of DNA nanotubes to specific mammalian cell receptors with control over orientation
Posters: Track on Computational Tools for Self-Assembly					
	Poster	p120	Chao-Min Huang, Anjelica Kucinic, Jenny Le, Carlos Castro and Hai-Jun Su	Department of Mechanical and Aerospace Engineering, the Ohio State University, USA	Uncertainty Quantification of a DNA Origami Mechanism Using a Coarse-Grained Model and Kinematic Variance Analysis
	Poster	p122	Hyungmin Jun, Fei Zhang, Sakul Ratanalert, Tyson Shepherd, Hao Yan and Mark Bathe	Department of Biological Engineering, Massachusetts Institute of Technology, USA	Programming 2D DX-based DNA Nanostructures using Top-Down Geometric Specification
	Poster	p124	Hyungmin Jun, Tyson Shepherd, Kaiming Zhang, Sakul Ratanalert, Wah Chiu and Mark Bathe	Department of Biological Engineering, Massachusetts Institute of Technology, USA	Inverse Geometric Design of Honeycomb DNA Nanoparticles
	Poster	p126	Byoungkwon An, Jie Song, Lavio Romano, Daniel Fu, John Schreck, Thorston Schmidt, John Reif and Yonggang Ke	Department of Computer Science, Duke University, USA	An Algorithm for Design of DNA Origami Lattices with Specified 2D Pixel and 3D Voxel Patterns
	Poster	p128	Byoungkwon An, Daniel Fu, Dongran Han, Gaetan Bellot, John Reif, Peng Yin and Yonggang Ke	Department of Computer Science, Duke University, USA	Design Algorithm for DNA Oligos of Given 3D Wire-Frame Graphs
	Poster	p130	Daniel Fu, Byoungkwon An, Reem Mokhtar and John Reif	Department of Computer Science, Duke University, USA	Semi-Automatic Design of Arbitrarily Shaped Solid-Walled Multi-Component DNA Origami Cages
	Poster	p132	Ze Shi, Alexander E. Marras, Carlos E. Castro and Gaurav Arya	Department of NanoEngineering, University of California San Diego, USA	Modeling the Conformational Dynamics and Ion-Mediated Actuation of DNA Origami Hinges
Track on Computational Tools for Self-Assembly. Track Chair: William Shih, Wyss Institute and Harvard Medical School					
11:30 AM-12:10 PM	Keynote	p26	Nick Conway and Shawn Douglas	University of California San Francisco, USA	Programmable DNA origami Design with Cadnano 2.5
12:10-12:30 PM	Contributed	p27	Ze Shi, Alexander E. Marras, Carlos E. Castro and Gaurav Arya	Department of NanoEngineering, University of California San Diego, USA	Modeling the Cation-Triggered Actuation of DNA Origami Hinges
12:30-12:50 PM	Contributed	p29	Christopher Maffeo and Aleksei Aksimentiev	Department of Physics, University of Illinois at Urbana-Champaign, USA	Multi-resolution modeling of DNA origami objects for fast and detailed structure prediction
12:50-2:00 PM	***Lunch (Primrose Room - Meal Ticket Required)***				
Track on Nucleic Acid Nanostructures In Vivo. Track Chair: Yamuna Krishnan, University of Chicago					
2:00-2:25 PM	Invited	p34	Chunhai Fan and Zhilei Ge	Shanghai Institute of Applied Physics, Chinese Academy of Science,China	Shape-dependent cell entry and intracellular transport of self-assembled DNA nanostructures
2:25-2:45 PM	Contributed	p136	Pengfei Wang, M. Aminur Rahman, Zhixiang Zhao, Dongsheng Wang, Sreenivas Nannapaneni, Chao Zhang, Zhengjia Chen, Christopher C. Griffith, Selwyn J. Hurwitz, Zhuo G. Chen, Dong M. Shin and Yonggang Ke	Wallace H. Coulter Department of Biomedical Engineering, Georgia Institute of Technology and Emory University School of Medicine, USA	In Vivo Delivery of siRNA by DNA Nanoparticles for Cancer Treatment

2:45-3:05 PM	Contributed	p36	Kasturi Chakraborty and Yamuna Krishnan	Department of Chemsitry, University of Chicago, USA	DNA-based nanodevices as reporters for lysosomal diseases
3:05-3:30 PM	Invited	p37	Mingxu You, Bin Zhao and Yousef Bagheri	Department of Chemistry, University of Massachusetts, Amherst, USA	Quantifying Intercellular Tensile Forces by Membrane DNA Probes
3:30-4:45 PM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on Nucleic Acid Nanostructures In Vivo					
	Poster	p134	Zhilei Ge and Chunhai Fan	Shanghai Institute of Applied Physics, Chinese Academy of Science, China	DNA Origami Nanostructures Exhibit Predominant Renal Uptake and Alleviate Acute Kidney Injury
	Poster	p138	Mingxu You, Rigumula Wu, Aruni Karunanayake Mudiyanselage and Qikun Yu	Department of Chemistry, University of Massachusetts, Amherst, USA	Genetically Encoded RNA Sensors for Live Cell Imaging of Antimicrobials and Signaling Molecules
	Poster	p140	Yi Li and Rebecca Schulman	Department of Chemical and Biomolecular Engineering, Johns Hopkins University, USA	DNA nanostructures that self-heal in serum
	Poster	p142	Haejoo Kim, Kwonhoo Kim, Jun-O Jin and Minseok Kwak	Department of Chemistry, University of Pukyong, South Korea	Administration of lipid-DNA nanoparticle as the immunostimulant via multiple injections routes
	Poster	Addition	Kyoung-Ran Kim and Dae-Ro Ahn	Center for Theragnosis, Korea Institute of Science and Technology (KIST), Republic of Korea (South Korea)	Mirror DNA tetrahedron as a universal platform for enzyme delivery
Posters: Track on DNA Nanostructures B					
	Poster	p144	Chanseok Lee, Jae Young Lee and Do-Nyun Kim	Department of Mechanical and Aerospace Engineering, Seoul National University, South Korea	Polymorphic design of DNA origami structures using mechanically tunable modules
	Poster	p146	Shuo Yang, Wenyan Liu, Rachel Nixon and Risheng Wang	Department of Chemistry, Missouri University of Science and Technology, USA	Metal-Ion Responsive Reversible Assembly of DNA Origami Dimers: G-Quadruplex Induced Intermolecular Interaction
	Poster	p147	Ashley Stammers, Neil Thomson and Christoph Walti	School of Physics and Astronomy, University of Leeds, U.K.	Exploring curvature in single-sheet DNA origami nanotiles
	Poster	p149	Timon Funck, Francesca Nicoli and Tim Liedl	Faculty of Physics and Center of Nanoscience, LMU Munich, Germany	Biomolecular Sensor Based on a Gold-DNA-Structure with Switchable Chirality
	Poster	p150	Andrew Lee, Masayuki Endo, Jamie Hobbs and Christoph Wälti	The Pollard Institute, School of Electronic & Electrical Engineering, University of Leeds, U.K.	Observing the Mode and Geometry of RecA-Mediated Homology Search within a DNA origami structure
Posters: Track on Teaching Through Nanoscience					
	Poster	p153	Michael Hudoba, Carlos Castro, Peter Beshay and Rutva Patel	Department of Engineering, Otterbein University, USA	Development of DNA Origami Education Modules for Middle School, High School, and Undergraduate Students and Educators
	Poster	p155	Jinglin Fu	Department of Chemistry, Center for Computational and Integrative Biology, Rutgers University-Camden, USA	Undergraduate teaching and research on DNA-scaffolded proximity assembly of biochemical reaction circuit
Special Track on Teaching Through Nanoscience. Track Chair: Philip Lukeman, St. John's University					
4:45-5:25 PM	Keynote	p39	Gwendolyn Stovall	Freshman Research Initiative, The University of Texas at Austin, USA	Freshman Research Initiative: Transforming Education through Research
5:25-7:40 PM	***Refreshments and Combined Poster Session (all Monday and Tuesday posters) The Primrose Room***				
7:45-8:45 PM	***ISNSCE Award Address (Ballrooms 2-3)***				

Wednesday 18 April 2018

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

8:30-8:55 AM	Invited	p28	Megan Kizer, Tom Jing, Ian Huntress, Benjamin Walcott, Joseph Bromley, Keith Fraser, Christopher Bystroff and Xing Wang	Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, USA	The complex between a multi-crossover DNA nanostructure, PX-DNA, and T7 endonuclease I
8:55-9:20 AM	Invited	p42	Akinori Kuzuya, Naohide Akamatsu, Mana Ishino and Yuichi Ohya	Department of Chemistry and Materials Engineering, Kansai University, Japan	Single-Molecule Observation of alpha-CyD Rotaxane Incorporated into DNA Origami with Nanocavities
9:20-9:45 AM	Invited	p43	Andrew Lee, Masayuki Endo, Jamie Hobbs, Giles Davies and Christoph Walti	School of Electronic and Electrical Engineering, University of Leeds, UK	Direct in situ observation of RecA mediated homologous recombination
9:45-10:10 AM	Invited	p45	Do-Nyun Kim, Jae Young Lee, Jae Gyung Lee, Young-Joo Kim, Kyung Soo Kim and Chanseok Lee	Department of Mechanical and Aerospace Engineering, Seoul National University, Republic of Korea	Mechanical design strategies for DNA origami nanostructures based on multiscale analysis framework
10:10-11:10 AM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on DNA Nanostructures C					
	Poster	p158	Ronit Freeman	Department of Applied Physical Sciences, University of North Carolina - Chapel Hill, USA	Programming hierarchical supramolecular architecture
	Poster	p159	Megan Kizer	Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, USA	Evolution of RNA Aptamers with Specificity for Glycosaminoglycans Heparosan and Chondroitin
	Poster	p161	Nayan P. Agarwal, Michael Matthies, Bastian Joffroy and Thorsten L. Schmidt	DNA Chemistry, Technical University of Dresden, Germany	Structural transformation of wireframe DNA Origami via DNA polymerase assisted gap-filling.
	Poster	p162	Chris Wintersinger, Yang Zeng and William Shih	Department of Cancer Biology, Dana-Farber Cancer Institute, USA	Square-lattice wedges to assemble multi-component DNA origami rings
	Poster	p163	Nikolay Frick, Matthew Hart, Ming Gao and Thom Labean	Department of Materials Science and Engineering, North Carolina State University, USA	Progress toward reservoir computing with self-assembled neuromimetic memristor networks
	Poster	p165	Tural Aksel and Shawn Douglas	Department of Cellular and Molecular Pharmacology, University of California, San Francisco, USA	DNA nanotechnology platform for high-throughput cryo-EM studies of small proteins
	Poster	p166	Basu Aryal, Bibek Uprety, Diana Calvopina, Tyler Westover, John Harb, Robert Davis and Adam Woolley	Department of Chemistry & Biochemistry, Brigham Young University, USA	Gold Nanorod Seeding on DNA Origami Templates to Make Designed Conductive Nanostructures
Posters: Track on Integrated Chemical Systems					
	Poster	p169	Nathan Colley, Xuesong Li, Mark Nosiglia, Jeremy Fisher and Jonathan Barnes	Department of Chemistry, Washington University in St. Louis, USA	Orthogonal Metal Templation Strategy to Synthesize a [4]Catenate
	Poster	p170	Kevin Liles, Angelique Greene, Mary Danielson, Andrew Wellen, Nathan Colley, Jeremy Fisher and Jonathan Barnes	Department of Chemistry, Washington University in St. Louis, USA	Actuating Viologen-based Hydrogels using a Photoredox Mechanism
	Poster	p171	Johanna Zessin, Franziska Fischer, Andreas Heerwig, Alfred Kick, Brigitte Voit, Anton Kiriy and Michael Mertig	Polymer Structures, Leibniz Institute for Polymer Research, Germany	DNA Origami-Templated Formation of Semiconducting Polythiophene Wires
	Poster	p173	Keita Abe, Ibuki Kawamata, Yuki Suzuki, Shin-Ichiro Nomura and Satoshi Murata	Department of Robotics, Graduate School of Engineering, Tohoku University, Japan	Pattern Formation in Programmed Reaction Diffusion Field

Track on Integrated Chemical Systems. Track Chair: Jeremiah Gassensmith, Universty of Texas, Dallas

11:10-11:50 AM	Keynote	p48	Jeremiah Johnson	Department of Chemistry, Massachusetts Institute of Technology, USA	Convergent Synthesis of Macromolecular Constructs for Drug Delivery and Imaging
11:50 AM-12:15 PM	Invited	p49	Angelique Greene, Kevin Liles, Nathan Colley and Jonathan Barnes	Chemistry Department, Washington University in St. Louis, USA	Redox-responsive Artificial Molecular Muscles
12:15-12:40 PM	Invited	p50	Daniel Siegwart, Jason B. Miller, Shuyuan Zhang, Petra Kos, Hu Xiong, Kejin Zhou, Hao Zhu, Lukas Farbiak, Tuo Wei and Qiang Cheng	Simmons Comprehensive Cancer Center, Department of Biochemistry, University of Texas Southwestern Medical Center, USA	Non-viral CRISPR/Cas gene editing in vivo enabled by synthetic nanoparticle co-delivery of Cas9 mRNA and sgRNA
12:40-1:50 PM	***Lunch (Primrose Room - Meal Ticket Required)***				

Track on Principles and Theory of Self-Assembly. Track Chair: Rebecca Schulman, Johns Hopkins University

1:50-2:30 PM	Keynote	p53	Sarah A. Woodson	Department of Biophysics and Biophysical Chemistry, Johns Hopkins School of Medicine, USA	Trial, error and cooperativity of RNA self-assembly
2:30-2:55 PM	Invited	p54	Farzaneh Mohajerani, Lev Tsidilkovski and Michael Hagan	Martin Fisher School of Physics, Brandeis University, USA	Simulations of microcompartment assembly around many molecules
2:55-3:20 PM	Invited	p55	Chris Thachuk and Erik Winfree	Computing + Mathematical Sciences, California Institute of Technology, USA	A fast, robust and reconfigurable molecular circuit breadboard using leakless DNA strand displacement cascades
3:20-4:20 PM	***Refreshments and Poster Session - Ballroom Lobby***				

Posters: Track on Principles and Theory of Self-Assembly					
	Poster	p176	Ke-Hsin Hsu and Ho-Lin Chen	Department of Electrical Engineering, National Taiwan University, Taiwan	Efficient Self-Healing Systems
	Poster	p178	Natalie Haley, Thomas Ouldridge, Alessandro Geraldini, Ard Louis, Jonathan Bath and Andrew Turberfield	Department of Bioengineering, Imperial College London, UK	Rational design of hidden thermodynamic driving through DNA mismatch repair
	Poster	p180	Behnam Najafi, Katherine G Young, Ard Louis, Jonathan Doye, Jonathan Bath and Andrew Turberfield	Department of Physics, University of Oxford, U.K.	Modelling The Folding Pathway of DNA Origami
	Poster	p182	Martin Falk, Lucy Colwell, Amy Duwel and Michael Brenner	Department of Physics, MIT, USA	Bio-inspired design principles for the self-assembly of twisted filaments
	Poster	p184	Maxime Tortora, Garima Mishra, Domen Presern, Yijing Cao and Jonathan Doye	Department of Chemistry, University of Oxford, UK	Predicting the phase chirality of cholesteric liquid crystals of DNA origamis
	Poster	p186	Joshua Johnson, Vasiliki Kolliopoulus, Alexander Marras and Carlos Castro	Biophysics Program, The Ohio State University, USA	Directing self-assembly of multiple DNA nanostructures in a single reaction
	Poster	p188	Jacob Majikes, Daniel Schiffels, Samuel Forry, Michael Zwolak and J. Alexander Liddle	National Institute of Standards and Technology, USA	Thermodynamics of DNA looping for origami folding
Posters: Track on Molecular Machinery					
	Poster	p190	Yaron Berger, Toma E. Tomov, Roman Tsukanov, Miran Liber, Eyal Nir and Dinesh Chandra Khara	Department of Chemistry, Ben-Gurion University of the Negev, Israel	Fast and Processive Computer Controlled DNA Bipedal Walker
	Poster	p191	Jing Pan, Yancheng Du and Jong Hyun Choi	School of Mechanical Engineering, Purdue University, USA	DNA Walker Enabled Nanoscale Motility
	Poster	p192	David Arredondo and Darko Stefanovic	Center for Biomedical Engineering, University of New Mexico, USA	The Effect of Leg Length and Tether Length on Superdiffusive Motion of Two Connected Bipedal Spiders on a Narrow Strip
Track on Molecular Machinery. Track Chair: Andrew Turberfield, University of Oxford					
4:20-5:00 PM	Keynote	p58	Gourab Chatterjee, Neil Dalchau, Richard Muscat, Andrew Phillips and Georg Seelig	Department of Electrical Engineering and Paul G. Allen School of Computer Science & Engineering, University of Washington, USA	A spatially localized architecture for fast and modular DNA computing
5:00-5:20 PM	Contributed	p59	Stephanie Lauback, Kara Mattioli, Alexander Marras, Maxim Armstrong, Thomas Rudibaugh, Ratnasingham Sooryakumar and Carlos Castro	Department of Physics, The Ohio State University, USA	Real-time Magnetic Actuation of DNA Nanodevices via Stiff Micro-levers
5:20-5:40 PM	Contributed	p61	Sungwook Woo and Peng Yin	Wyss Institute, Harvard University, USA	Molecular Crawlers for Inspection and Reconstruction of Molecular Landscapes
5:40-7:40 PM	***Refreshments and Combined Poster Session (all Wednesday and Thursday posters) The Primrose Room***				
7:45-8:00 PM	***ISNSCE Business Meeting (Ballrooms 2-3) Open to All***				
8:00-8:35 PM	***Robert Dirks Prize Presentation (Ballrooms 2-3)***				

Thursday 19 April 2018

Track on Nanophotonics and Superresolution. Track Chair: Ralf Jungmann / Philipp Nickels, Max Planck Institute for Biochemistry, Martinsried

8:30-9:10 AM	Keynote	p63	Wesley Legant	Departments of Biomedical Engineering and Pharmacology, University of North Carolina - Chapel Hill, USA	Lattice light sheet microscopy – innovations, applications and future directions
9:10-9:35 AM	Invited	p24	Thorsten L Schmidt, F. N. Gür, C. P. T. McPolin, F. W. Schwarz, J. Ye, S. Diez, S. Raza, M. Mayer, D. J. Roth, A. M. Steiner, M. Löffler, A. Fery, M. L. Brongersma, A. V. Zayats, T. A. F. König	Center for Advancing Electronics Dresden (cfaed), Germany	Self-assembled plasmonic waveguides for excitation of fluorescent nanodiamonds
9:35-9:55 AM	Contributed	p65	Mikael Madsen, Mette R. Bakke and Kurt Gothelf	Interdisciplinary Nanoscience Center (iNANO), University of Aarhus, Denmark	A Directional Single-Polymer Photonic Wire
9:55-10:15 AM	Contributed	p67	Francesca Nicoli, Tao Zhang, Andre Neumann, Alexander Högele, Tim Liedl and Mauricio Pilo-Pais	Faculty of Physics and Center for NanoScience (CeNS), Ludwig-Maximilians-Universität (LMU), Munich, Germany	Fluorescence Enhancement of a Single Quantum Emitter in a DNA-Mediated Self-Assembled Plasmonic Cavity
10:15-11:25 AM	***Refreshments and Poster Session - Ballroom Lobby***				
Posters: Track on Nanophotonics and Superresolution					
	Poster	p195	Jaewon Lee, Ji-Hyeok Huh, Kwangjin Kim and Seungwoo Lee	SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University (SKKU), Republic of Korea (South Korea)	Supracolloidal Assembly of Large (60 ~ 100 nm), Highly Uniform, and Roundest Gold Nanospheres into Plasmonic Metamolecules
	Poster	p197	Brittany Cannon, Donald Kellis, Lance Patten, Paul Davis, Jeunghoon Lee, Elton Graugnard, Bernard Yurke and William Knowlton	Micron School of Materials Science & Engineering, Boise State University, USA	Coherent Exciton Delocalization in a Two-State DNA-Templated Dye Aggregate System
	Poster	p199	Ninning Liu, Mingjie Dai and Peng Yin	Wyss Institute, Harvard University, USA	Super-resolution labelling with Action-PAINT
	Poster	p200	Pablo Damasceno, Tural Aksel, Shawn Douglas and Nick Fong	University of California San Francisco, USA	Toward Programmable DNA Origami Lattices
	Poster	p201	Bogdan Dragnea	Chemistry Department, Indiana University, Bloomington, USA	Quantum coherent protein cage antennas
	Poster	p202	Mette R. Bakke, Mikael Madsen and Kurt Gothelf	Interdisciplinary Nanoscience Center (iNANO), University of Aarhus, Denmark	Controlled Single-Polymer Photonics on DNA Origami
Posters: Track on Protein and Viral Nanostructures					
	Poster	p205	Candace Benjamin, Zhuo Chen, Blake Wilson, Peiyuan Kang, Na Li, Steven Nielson, Zhenpeng Qin and Jeremiah Gassensmith	Department of Chemistry, The University of Texas at Dallas, USA	Site Selective Nucleation and Growth of Gold Nanoparticles on the Pore Structures of a Virus.
	Poster	p208	Hamilton Lee and Jeremiah Gassensmith	Department of Chemistry and Biochemistry, University of Texas at Dallas, USA	pH Mediated Cell Uptake of Alkyl Carboxylate Functionalized Qβ VLPs
	Poster	p209	Anna Simon, Jens Glaser, Jillian Gerberich, Janelle Legerre, Drew Wagner, Jessica Meinke, Vyas Ramasubramani, Barrett Morrow, Arti Pothukuchy, Jimmy Gollihar, Cheulhee Jung, Sharon Glotzer, David Taylor, Adrian Keatinge-Clay and Andrew Ellington	Center for Systems and Synthetic Biology, UT Austin, USA	Using supercharging and molecular “legos” to engineer synthetic biological assemblies
	Poster	p211	Adam D. Brown, Sangwook Chu, Reza Ghodssi and James N. Culver	Department of Bioengineering, University of Maryland, USA	Directed self-assembly of environmentally responsive virus-like nanoscaffolds

Special Track on DNA Information Storage. Track Chair: John Reif, Duke University

11:25 AM-12:00 PM	Invited	p69	Henry Lee and George Church	Department of Genetics, Harvard Medical School, USA	Towards scalable information storage in DNA
12:00 PM-12:25 PM	Invited		Luis Ceze and Karin Strauss	University of Washington and Microsoft	Systems Aspects of Large Scale DNA Data Storage