2022

International Institute for Nanotechnology Symposium

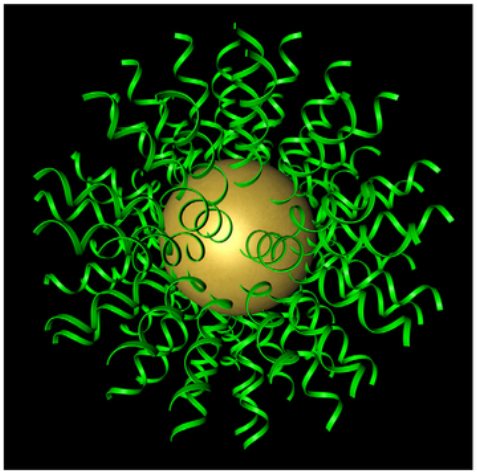
Celebrating 20 Years of Big Thinking at the Nanoscale

Thursday, October 27, 2022

Northwestern University

INTERNATIONAL INSTITUTE FOR NANOTECHNOLOGY

Fueling Innovation



Marshall Gerstein protects, enforces, and transfers intellectual property rights for the world's leading innovators.

Congratulations to the **Northwestern University International Institute for Nanotechnology** on celebrating its 20th anniversary! We proudly support the IIN's mission to bring together exceptional researchers across multiple disciplines to make groundbreaking scientific and technological advances.

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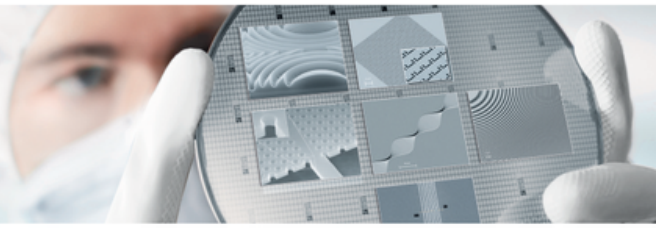

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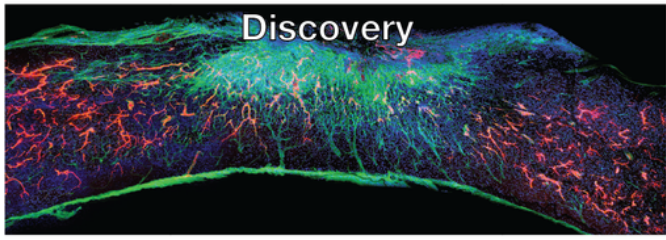

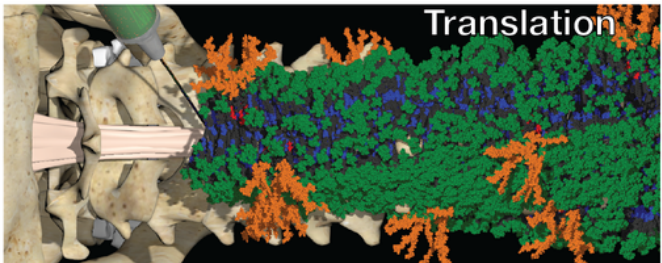

Welcome

On behalf of the Northwestern University (NU) International Institute for Nanotechnology (IIN), welcome to our 2022 annual IIN Symposium. Today, in celebration of the 20th anniversary of the IIN, we present an exciting roster of NU researchers as well as our 2021 Kabiller Prize and Award recipients.

We are excited to hold our first in-person symposium since 2019. Despite COVID-related disruptions, IIN researchers have continued to make substantial advances and significant discoveries, including those that have helped mitigate the global pandemic. For example, they have developed nanotechnology-based vaccines against or treatments for COVID-19 and used nanotechnology innovations to print thousands of face shields for the benefit of workers on frontlines. Indeed, we have overcome challenges, and we have a lot to celebrate. This year, we are celebrating the 15th anniversary of the IIN symposium. From humble beginnings, this event has grown to attract world-renowned speakers and over 10,500+ attendees to date. We are celebrating new talent in nanotechnology that have been recruited to NU that are bolstering many science and engineering departments. We are celebrating a history of strong support for nano-research that has led to seven major research centers, including the newly founded Center for NanoCombinatorics. We are celebrating the 15th year of the remarkably impactful Ryan Fellows Program and the establishment of new IIN Named Postdoctoral Fellowship programs. In 2020, the generous support of the Weinberg Family Foundation made the Weinberg Postdoctoral Fellowship possible. Just this year, we have established fellowships in honor of Professors Mark Ratner, Fraser Stoddart, and the late Richard Van Duyne that will support the next generation of nanotechnology thought leaders.

We are delighted to recognize the recipients of the 2021 Kabiller Prize in Nanoscience and Nanomedicine, the Kabiller Young Investigator Award, and the inaugural winner of the Kabiller Rising Star Award. We are indebted to David Kabiller, Northwestern alumnus and trustee, and co-founder of AQR Capital Management, for his dedication to and support of innovative research and technology.

In closing, we express our gratitude to the 2022 Symposium sponsors for their generous support. We especially thank Marshall Gerstein and, in alphabetical order, we also are extremely grateful to Gatan, Glen Research, Hitachi, Illinois Science & Technology Park, JEOL, JLL, Oxford Instruments, Raith Nanofabrication, the Simpson Querrey Institute, and Stoicheia.

We hope you enjoy this year's symposium. We look forward to celebrating the past and future of nanotechnology at NU with you today!

Chad A. Mirkin
IIN Director

Sarah H. Petrosko
IIN Associate Director

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Agenda

8:30 am – 9:00 am	Registration Open (continental breakfast served)
9:05 am – 9:20 am	Welcoming Remarks Chad Mirkin, Director, International Institute for Nanotechnology Milan Mrksich, Vice President for Research

Session I - Nanotechnology's Importance to the World and Northwestern

9:20 am – 9:25 am	Introduction Chad Mirkin, Director, International Institute for Nanotechnology
9:25 am – 9:50 am	**Vinayak Dravid** Abraham Harris Professor of Materials Science & Engineering Director, NU Atomic and Nanoscale Characterization Experimental Center **Teri Odom** Joan Husting Madden and William H. Madden, Jr. Professor of Chemistry Chair, Department of Chemistry
9:50 am – 10:00 am	Q&A

Session II – Nanotechnology and Regenerative Medicine

10:00 am – 10:05 am	Introduction Evan Scott, Kay Davis Professor of Biomedical Engineering
10:05 am – 10:30 am	**Guillermo Ameer** Daniel Hale Williams Professor of Biomedical Engineering, Professor of Surgery Director, Center for Advanced Regenerative Engineering and Regenerative Engineering Training Program **Samuel Stupp** Board of Trustees Professor of Materials Science, Chemistry, Medicine, and Biomedical Engineering Director, Simpson Querrey Institute for BioNanotechnology
10:30 am – 10:40 am	Q&A
10:40 am – 10:55 am	Break

Session III – Nanotechnology and Cancer

10:55 am – 11:00am	Introduction Dr. Leonidas Platanias, Director, Robert H. Lurie Comprehensive Cancer Center

11:00 am – 11:25 am	**Priya Kumthekar** Associate Professor of Neurology & Medicine **Alexander Stegh** Professor, Department of Neurosurgery and Research Director, Brain Tumor Center, Washington University School of Medicine in St. Louis Adjunct Professor of Neurology, Northwestern University
11:25 am – 11:35 am	Q&A

Session IV – Nanotechnology and Human Performance

11:35 am – 11:40 am	Introduction Joshua Leonard, Associate Professor of Chemical and Biological Engineering
11:40 am – 12:05 pm	**John Rogers** Louis Simpson and Kimberly Querrey Professor of Materials Science & Engineering Director, Querrey Simpson Institute for Bioelectronics **Shuai "Steve" Xu** Ruth K. Frenkel, MD, Assistant Professor of Dermatology Director of Medical Research, Querrey Simpson Institute for Bioelectronics
12:05 pm – 12:15 pm	Q&A

Session V – Nanotechnology Mimicking Living Systems

12:15 pm – 12:20 pm	Introduction Franz Geiger, Charles E. and Emma H. Morrison Professor of Chemistry
12:20 pm – 12:45 pm	**Monica Olvera de la Cruz** Lawyer Taylor Professor of Materials Science & Engineering Director, Center for Computation & Theory of Soft Materials **George Schatz** Charles E. and Emma H. Morrison Professor of Chemistry and Chemical & Biological Engineering
12:45 pm – 12:55 pm	Q&A
12:55 pm – 1:10 pm	Recognition of IIN Named Fellowship Awardees Recognition of 2022 IIN Outstanding Researchers Chad Mirkin, Director, International Institute for Nanotechnology
1:15 pm – 2:15 pm	Lunch Break

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Session VI – Nanotechnology for Air and Water Security

2:20 pm – 2:25 pm	Introduction Mercouri Kanatzidis, Charles E. and Emma H. Morrison Professor of Chemistry
2:25 pm – 2:50 pm	**William Dichtel** Robert L. Letsinger Professor of Chemistry **Omar Farha** Charles E. and Emma H. Morrison Professor of Chemistry
2:50 pm – 3:00 pm	Q&A

Session VII – Artificial Intelligence in Nanotechnology

3:00 pm – 3:05 pm	Introduction Mark Hersam, Walter P. Murphy Professor of Materials Science & Engineering
3:05 pm – 3:30 pm	**Randall Snurr** John G. Searle Professor of Chemical & Biological Engineering Chair, Department of Chemical & Biological Engineering **Chris Wolverton** Jerome B. Cohen Professor of Materials Science & Engineering
3:30 pm – 3:40 pm	Q&A
3:40 pm – 3:55 pm	Break

Session VIII – 2021 Kabiller Prize Winners

3:55 pm – 4:00 pm	Kabiller Awards Video and Kabiller Rising Star Introduction Shana Kelley, Neena B. Schwartz Professor of Chemistry and Biomedical Engineering
4:00 pm – 4:20 pm	**Natalie Artzi, Kabiller Rising Star Award winner** Assistant Professor of Medicine, Harvard Medical School Principal Research Scientist, Institute for Medical Engineering & Science, Massachusetts Institute of Technology
4:20 pm – 4:30 pm	Q&A

4:30 pm – 4:35 pm	Kabiller Young Investigator Award Introduction Ted Sargent, Lynn Hopton Davis and Greg Davis Professor of Chemistry
	Bin Liu, Kabiller Young Investigator Award winner (IN ABSENTIA) Distinguished Professor, Senior Vice Provost, National University of Singapore
4:35 pm – 4:40 pm	Kabiller Award Winner Introduction Milan Mrksich, Vice President for Research
4:40 pm – 5:10 pm	**David Walt, Kabiller Prize winner** Hansjörg Wyss Professor of Biologically Inspired Engineering, Harvard Medical School Professor of Pathology, Brigham and Women's Hospital
5:10 pm – 5:20 pm	Q&A
5:20 pm – 6:20 pm	Reception (please join us outside White Auditorium)

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Speaker Bios

Vinayak Dravid

Vinayak Dravid is the Abraham Harris Chaired Professor of Materials Science and Engineering at the McCormick School, and the founding director of the Northwestern University Atomic and Nanoscale Characterization Experimental Center (NUANCE) and the Soft and Hybrid Nanotechnology Experimental Resource (SHyNE), which is the Midwest node of the NSF network called the National Nanotechnology Coordinated Infrastructure (NSF-NNCI). In addition, he is the IIN Director of Global Initiatives and the co-director of the Global McCormick Initiative, which supports sustainable global research and educational initiatives. He received his bachelor of technology in metallurgical engineering from the Indian Institute of Technology Bombay in 1984. Upon receiving his PhD in materials science and engineering from Lehigh University, he joined the Northwestern faculty in 1990. His scholarly interests lie at the intersection of materials science, physics, chemistry, biology, and engineering, with implications in electronics, energy, environmental science and biomedicine.

Teri Odom

Teri W. Odom is the Joan Husting Madden and William H. Madden, Jr. Professor of Chemistry, Chair of the Department of Chemistry, and Professor of Materials Science and Engineering. She earned her BS in chemistry from Stanford University in 1996 and her PhD in chemical physics in 2001 from Harvard University, where she completed an NIH postdoctoral fellowship the following year. Professor Odom is the Editor-in-Chief of Nano Letters and the inventor of a class of biological nanoconstructs facilitating insight into nanoparticle-cell interactions. She is an expert in designing structured nanoscale materials that exhibit extraordinary size- and shape-dependent optical properties. Odom has pioneered a suite of multi-scale nanofabrication tools that has resulted in flat optics that can manipulate light at the nanoscale and beat the diffraction limit, plasmon-based nanoscale lasers that exhibit tunable color, and hierarchical substrates that show controlled wetting and super-hydrophobicity.

Samuel Stupp

Samuel Stupp was born and raised in Costa Rica before coming to the U.S. for his undergraduate studies in 1968. He earned his BS in chemistry from the University of California, Los Angeles in 1972, and his PhD in materials science and engineering from Northwestern in 1977. Upon graduation, he joined the Northwestern faculty, before moving to the University of Illinois at Urbana-Champaign in 1980. He returned to the Northwestern faculty in 1999 as Board of Trustees Professor of Materials Science and Engineering, Chemistry, Medicine, and Biomedical Engineering. He directs the Simpson Querrey Institute for BioNanotechnology, which focuses on interdisciplinary research, and the Center for Bio-Inspired Energy Science, an Energy Frontiers Research Center (EFRC) funded by the U.S. Department of Energy. Professor Stupp focuses on supramolecular self-assembly, and his research is aimed at synthesizing nanomaterials and structures with unique biological activities or electronic or photocatalytic properties or those capable of actuation that emulate living organisms. His very recent work focuses on supramolecular dynamics and its role in actuation to create robotic soft matter and optimize bioactivity.

Guillermo Ameer

Guillermo Ameer is the Daniel Hale Williams Professor of Biomedical Engineering and Surgery in the Biomedical Engineering Department at the McCormick School of Engineering and the Department of Surgery at the Feinberg School of Medicine. He is the founding director of the Center for Advanced Regenerative Engineering. Ameer received his BS in chemical engineering from the University of Texas at Austin and his doctoral degree in chemical and biomedical engineering from the Massachusetts Institute of Technology. He develops biomaterials and nanotechnology for regenerative engineering, medical devices, and drug and cell delivery applications. He is a Deputy Editor of Science Advances, a member of the Board of Directors of the Regenerative Engineering Society, Chair of College of Fellows of the American Institute of Medical and Biological Engineering and a member of the Scientific Advisory Board of Acuitive Technologies, Inc., a company that is bringing one of his technologies to the musculoskeletal surgery market.

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Speaker Bios

Priya Kumthekar

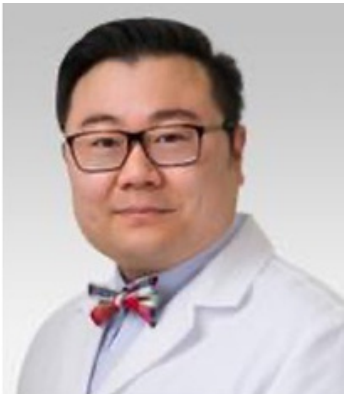
Priya Kumthekar is a UCNS-certified neuro-oncologist and an Associate Professor of Neurology and Medicine at the Feinberg School of Medicine. Her clinical interests include treating primary and secondary brain tumors. She received her BS from Kent State University in 2003 and her MD from Northeastern Ohio University in 2007. She completed her residency at McGaw Medical Center in Neurology, and a fellowship at McGaw in Neuro-Oncology. She is a leader in clinical trials nationally and is the principal investigator of six multicenter national treatment trials in neuro-oncology and institutionally serves as Neuro-Oncology Disease Team Leader and the Co-chair of the Scientific Review Committee at the Robert H. Lurie Comprehensive Cancer Center at Northwestern University. She serves as the national Executive Officer of Neuro-Oncology at the Alliance for Clinical Trials in Oncology, In this role, she oversees the conception and development of clinical trials from early phases through registration studies.

Alexander Stegh

Alexander Stegh is a Northwestern Adjunct Professor of Neurology, a Professor of Neurosurgery at Washington University School of Medicine in St. Louis, and the Research Director of the Brain Tumor Center at Siteman Cancer Center. He was born in Hürth-Hermülheim, Germany, and obtained his Diploma in Biochemistry from Leibniz University in Hannover. His graduate studies were carried out at the German Cancer Center in Heidelberg and the Ben-May Institute for Cancer Research, culminating in a PhD in 2000. He completed his postdoctoral training at Harvard Medical School's Dana-Farber Cancer Institute in the laboratory of Dr. Ronald DePinho, where he became interested in functional genomics. After promotion to instructor at Dana-Farber in 2007, Stegh joined Northwestern as an Assistant Professor in 2009, with appointments at the Davee Department of Neurology and the Robert H. Lurie Comprehensive Cancer Center. This past January, he was named Research Director of the Brain Tumor Center at Siteman Cancer Center, based at Barnes-Jewish Hospital and Washington University School of Medicine in St. Louis.

John Rogers

John Rogers is the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering, Mechanical Engineering, Electrical Engineering and Computer Science, Chemistry, Neurological Surgery and Dermatology, and Director of the Querrey Simpson Institute for Bioelectronics. He obtained a BA in chemistry and a BS in physics in 1989 from the University of Texas at Austin. He received MS degrees in physics and in chemistry from MIT in 1992, and his PhD in physical chemistry in 1995. From 1995 to 1997, Rogers was a Junior Fellow in the Harvard University Society of Fellows. In 1997, he joined Bell Laboratories as a Member of the Technical Staff and then served as Director of the Condensed Matter Physics Research Department from 2000 to the end of 2002. From 2003-2016, he was on the faculty at the University of Illinois at Urbana-Champaign, where he held a Swanlund Chair, the highest chaired position at the university. In September 2016, he was recruited to Northwestern, where he became the founding Director of the Center on Bio-Integrated Electronics, which was endowed as the Querrey-Simpson Institute of Bioelectronics in 2019.



Shuai “Steve” Xu

Steve Xu is the Ruth K. Frenkel, MD, Assistant Professor of Dermatology and the Director of Medical Research at the Querrey Simpson Institute for Bioelectronics. He obtained his BS in engineering from Rice University in 2009, earning his master of science in health policy and finance from The London School of Economics in 2010. After receiving his MD from Harvard Medical School in 2014, he did a residency at McGaw Medical Center at Northwestern, where he also completed a postdoctoral fellowship in Materials Science and Engineering under Professor John Rogers. Dr. Xu has developed medical device technologies across multiple medical fields, including dermatology, orthopedics, cardiology, and patient non-adherence. He now leads a spinout, Sibel Health, launching advanced ICU-grade wearable sensors in neonatal and maternal monitoring.

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Speaker Bios

Monica Olvera de la Cruz

Monica Olvera de la Cruz is the Lawyer Taylor Professor of Materials Science and Engineering and Professor of Chemistry, and by courtesy Professor of Chemical and Biological Engineering, and of Physics and Astronomy. She received her B.A. in Physics from the Universidad Nacional Autonoma de Mexico in 1981. After earning her PhD in Physics from Cambridge University in 1985. She joined the faculty at Northwestern in 1986. From 1995 to 1997 she was a Staff Scientist in the French Commissariat a l'Energie Atomique. From 2006 to 2013 she directed the Materials Research Center at Northwestern and is currently the Director of the Center for Computation and Theory of Soft Materials. She is a senior editor of ACS Central Science and a member of the Gordon Research Conferences Board of Trustees.

George Schatz

George Schatz is the Charles E. and Emma H. Morrison Professor of Chemistry and of Chemical and Biological Engineering. He received his BS in chemistry from Clarkson University and his PhD from the California Institute of Technology. After a postdoc at MIT, he joined the faculty at Northwestern in 1976. Schatz has published three books and over 1,000 papers and was Editor-in-Chief of the Journal of Physical Chemistry from 2005 to 2019. In his research, Schatz has contributed theory and computational studies to some of the most important problems in contemporary nanoscience, including studies of SERS and plasmonics, DNA hybridization leading to functional nanostructures, peptide self-assembly, carbon-based nanomaterials, energy transfer processes, transport phenomena, catalysis, and photocatalysis. In 2010 he appeared on the Times Higher Education list of Top 100 Chemists of the Past Decade and has been on the Thomson Reuters / Clarivate Analytics list of highly cited researchers since 2014.

William Dichtel

William Dichtel is the Robert L. Letsinger Professor of Chemistry. He earned his BS in chemistry at MIT, before moving to the University of California, Berkeley, where he earned his PhD in 2005 investigating light-harvesting macromolecules under the supervision of Dr. Jean Fréchet. He did a joint postdoctoral appointment in Los Angeles with Dr. Fraser Stoddart at UCLA and Dr. Jim Heath at Caltech. Dichtel began his independent career in the Department of Chemistry and Chemical Biology at Cornell University in 2008 and was promoted to the rank of Associate Professor in 2014. He moved to Northwestern in the summer of 2016. He has been recognized with numerous awards, including a MacArthur Fellowship in 2015 and as the 2020 National Laureate in Chemistry by the Blavatnik Awards for Young Scientists.

Omar Farha

Omar Farha is the Charles E. and Emma H. Morrison Professor of Chemistry and the Director of Graduate Admissions for Northwestern. Farha earned an associate degree in chemistry from Fullerton College in 1999 and his BS in chemistry from the University of California, Los Angeles in 2002, receiving the latter's highest departmental and university honors. The dissertation for his PhD in chemistry from UCLA was recognized as “Dissertation of the Year" in 2006. Farha came to Northwestern as a postdoctoral fellow in 2007, becoming a research assistant professor in 2009. He was appointed Professor of Chemistry in 2020, receiving the Morrison Professorship the following year. He is an expert in metal-organic framework (MOF) chemistry, a co-founder and Chief Scientific Officer of NuMat Technologies, and an Associate Editor of ACS Applied Materials & Interfaces.

Randall Snurr

Randall Snurr is the John G. Searle Professor and Department Chair of Chemical and Biological Engineering. He holds BS and PhD degrees in chemical engineering from the University of Pennsylvania and the University of California, Berkeley, respectively, and performed postdoctoral research at the University of Leipzig in Germany supported by a fellowship from the Alexander von Humboldt Foundation. His other honors include a CAREER award from the National Science Foundation, the Institute Award for Excellence in Industrial Gases Technology from the American Institute of Chemical Engineers, and the IChemE Senior Moulton Medal. He was elected a corresponding member of the Saxon Academy of Sciences in 2019 and named a Highly Cited Researcher from 2014 to 2021 by Thomson Reuters/Clarivate.

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Speaker Bios

Chris Wolverton

Christopher Wolverton is the Jerome B. Cohen Professor of Materials Science and Engineering. He received his BS in physics from the University of Texas at Austin in 1987, and his PhD in physics from the University of California, Berkeley in 1993. From 1993 to 1996 was a postdoctoral research associate at the National Renewable Energy Lab (NREL), and was a Staff Scientist at NREL 1996 to 1999. From 1999 to 2003, Wolverton was a Senior Technical Specialist at Ford Research Laboratory, and between 2004 and 2006 he was a Technical Leader at Ford. In 2007, he joined the faculty at Northwestern, becoming Jerome B. Cohen Professor of Materials Science and Engineering in 2017. He is on the Editorial Boards of Scientific Data and npj Computational Materials, and in 2019 was recognized as a President's International Distinguished Fellow by the Chinese Academy of Sciences. His group created the Open Quantum Materials Database (OQMD), one of the largest materials databases in the world, containing properties of more than one million compounds.

Natalie Artzi
Kabiller Rising Star Award winner

Natalie Artzi is an Assistant Professor of Medicine at Harvard Medical School, a Principal Research Scientist at MIT's Institute for Medical Engineering and Science, and an Associate Faculty Member at the Wyss Institute of Harvard University. Professor Artzi has made an extraordinary impact on the development of biomaterials for medical applications and has pioneered our understanding of tissue-biomaterial interactions by demonstrating that the tissue microenvironment modifies an implanted material in a manner that is disease type-and state-dependent. This realization allows for the targeted, selective, and triggered release of therapeutics in a particular site and cell. Professor Artzi's team is also working on the design of scaffolds for local delivery of nanoparticle-based therapeutics, to enable improved bioavailability, selective uptake of drugs, and transfection efficiency. She is a co-founder of BioDevek, a company that provides surgical solutions that aim to create materials that seal suture lines post-surgery. She has received a number of awards including the Bright Futures Prize from Brigham Health, the Young Investigator Award from the Controlled Release Society, the One Brave Idea Award from Google Verily, Astra Zeneca, and the American Heart Association, and the Women Entrepreneurs Award from the Massachusetts Life Science Center.

Bin Liu
Kabiller Young Investigator Award winner

Bin Liu is a Distinguished Professor and Senior Vice Provost at the National University of Singapore. She earned her BS and MS in chemistry at Nanjing University, completing her PhD at the National University of Singapore in 2001. She performed postdoctoral research at the University of California, Santa Barbara, before returning to the National University of Singapore as a professor in 2005. Professor Liu has made outstanding contributions to the development of platforms that advance biomedical research and nanomedicine. Her invention of bio-nanoprobes enables the visualization of cancer metastasis and the monitoring of tissue regeneration after stem cell transplantation, rapid disease diagnosis, and drug screening. Her team has integrated therapeutic functions into organic molecules to develop novel platforms that combine image-guided cancer surgery with treatments. Most recently, the signal amplification technologies developed in her lab were used for COVID-19 protein detection. She is the co-founder of LuminiCell, a Singapore-based biotech company focused on bringing next-generation cell imaging contrast agents to the market.

David Walt
Kabiller Prize winner

David Walt is the Hansjörg Wyss Professor of Biologically Inspired Engineering at Harvard Medical School in the Department of Pathology at Brigham and Women's Hospital, is a Core Member of the Wyss Institute for Biologically Inspired Engineering, and a Howard Hughes Medical Institute Professor. His name is synonymous with optical sensing and ultrasensitive diagnostics. His discovery of the microwell-based DNA array is in large part responsible for what has become a $65B company, Illumina. His microwell invention is the dominant technological platform for high-throughput genomic sequencing, which has revolutionized the field. His single molecule detection method, Simoa, forms the core technology of the $2B company Quanterix. His advances were brought into sharp focus by the COVID-19 pandemic when the diagnostic tools he invented enabled rapid identification of viral targets and were used in the Pfizer, Moderna, and Johnson & Johnson vaccines. Walt has received numerous honors including membership in the National Academy of Academy of Medicine, National Academy of Engineering, and the National Academy of Inventors; induction into the Inventors Hall of Fame; and the American Chemical Society Kathryn C. Hach Award for Entrepreneurial Success.

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IIN Postdoctoral Fellows

These prestigious fellowships support brilliant young scientists and engineers from institutions around the country as they conduct independent research under the mentorship of world-class nanoscience and nanoengineering researchers at Northwestern University.

Due to the interdisciplinary nature of the work, the IIN Postdoctoral Fellows have the opportunity to work across scientific, engineering, and medical research boundaries. Listed below are the current IIN Fellows.

Chaojian Chen
Kyle Gibson
Guanyu Lu
Zhiwei Li
Bo Shen
Peter Smith
Ye Zhang

IIN Leadership

Executive Council

Henry S. Bienen
President Emeritus

David G. Kabiller
Founding Principal, AQR Capital

Patrick G. Ryan
Founding Chairman and CEO Ryan Specialty Group

David B. Weinberg
Judd Enterprises, Inc. Chairman and CEO

Administration

Chad A. Mirkin
Director

Sarah H. Petrosko
Associate Director

Vinayak P. Dravid
Director of Global Initiatives

Kathleen Cook
Director of IIN Major Grants and Strategic Outreach

Steering Committee

William Dichtel
Robert L. Letsinger Prof. of Chemistry

Vinayak P. Dravid
Abraham Harris Prof. of Materials Science and Engineering

Nathan Gianneschi
Jacob and Rosaline Cohn Prof. of Chemistry

Kimberly A. Gray
Roxelyn and Richard Pepper Family Chair in Civil and Environmental Engineering

Michael Jewett
Walter P. Murphy Prof. of Chemical and Biological Engineering

Julia Kalow
Assistant Prof. of Chemistry

Shana Kelley
Neena B. Schwartz Prof. of Chemistry and Biomedical Engineering

Milan Mrksich
Henry Wade Rogers Prof. of Biomedical Engineering

Amy Paller
Walter J. Hamlin Prof. of Dermatology

Ted Sargent
Lynn Hopton Davis and Greg Davis Prof. of Chemistry

Sir Fraser Stoddart
Board of Trustees Prof. of Chemistry, 2016 Nobel Laureate

Samuel Stupp
Board of Trustees Prof. of Materials Science, Chemistry, Medicine, and Biomedical Engineering

Outstanding Researcher Award Winners

The IIN solicits nominations from faculty each year for graduate students and postdoctoral associates who have made outstanding contributions in the field of nanotechnology. In addition to recognition at the symposium, recipients receive a crystal award and a cash prize. The winners of the 2022 Outstanding Researcher Awards are listed below.

Sina Dereshgi
Electrical and Computer Engineering

Max Distler, PhD
Chemistry

Julia Downing
Materials Science and Engineering

Yuanning Feng, PhD
Chemistry

Karam Idrees, PhD
Chemistry

Minliang Lai, PhD
Chemistry

Kaitlin Landy
Chemistry

Shupeng Li, PhD
Mechanical Engineering

Yuanwei Li
Chemistry

Hector Lopez de la Cerda Rios, PhD
Materials Science and Engineering

Emily Ma
Chemistry

Akanksha Mahajan
Driskill Graduate Program Life Sciences

Donghoon Shin
Materials Science and Engineering

Devin Stranford, PhD
Chemical and Biological Engineering

Peter Winegar, PhD
Chemistry

International Institute for Nanotechnology Symposium

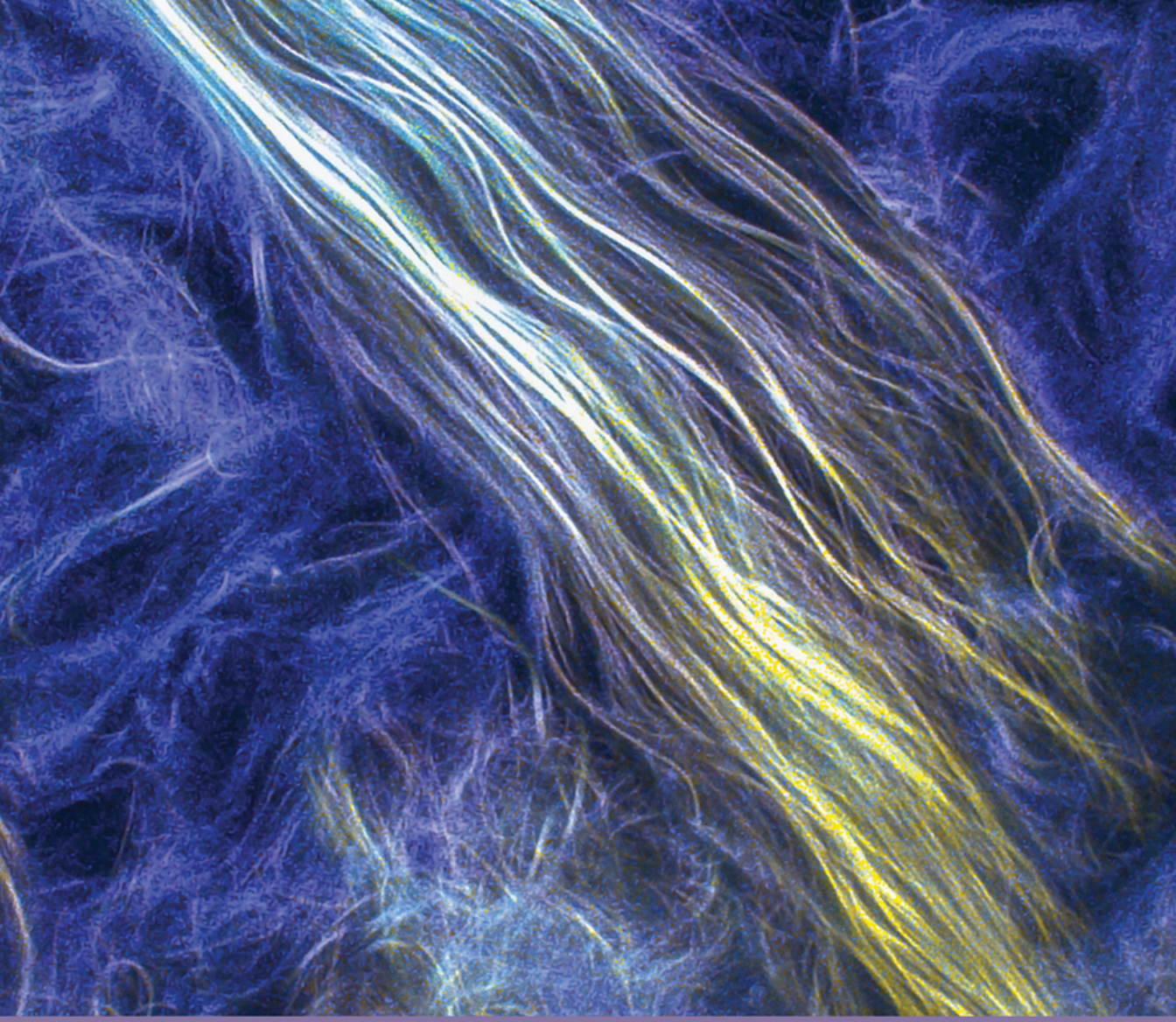
Ryan Fellows

Nanotechnology, the science and technology of precisely controlling the structure of matter on the 1-100-nm length scale, is widely viewed as the most significant technological frontier currently being explored. Materials and devices at the nanoscale hold vast promise for innovation in virtually every industry and public endeavor, including health, electronics, transportation, the environment, and national security, and have been heralded as spurring the next industrial revolution. In order to realize the full benefits to society, there must be a cadre of exceptional researchers and educators fluent in this new field.

To meet this challenge, the Ryan Fellowship was created to support graduate students dedicated to the exploration of fundamental nanoscale science and to advancing this knowledge into practical applications of benefit to society.

Made possible by a generous donation from Patrick G. and Shirley W. Ryan, the goal of this program is to identify and support the finest graduate students in the country, and to provide them with the education and experience to assume leadership roles in academia and industry in the realm of nanotechnology. Listed below are the current Ryan Fellows. Over 200 students have been supported by this program to date, and they are now leading science and engineering initiatives all over the world,

Michael Barsoum
Alessandro Benadia
Kendal Carrow
Doruk Cezan
Emily Chase
Jacob Cohen
Beth DiBiase
Patrick Ding
Michael Evangelopoulos
Kira Fahy
Simona Fine
Hendryck Antonio Gellineau
Jacob Graham
Henry (Zhenyu) Han
John Hegarty
Christina Hemmingsen
Spencer Hong
Broderick Johnson
Evan Jones
Rebecca Keate
Joanna Korpanty
Kaitlin Landy
Yea-shine Lee
Jenni (Yueyi) Li
Shupeng Li
Yuanwei Li
Alexis Magana
Akanksha Mahajan
Jessica Marks
Kelly Matuszewski
Haley McAllister
Anushre Natraj
Meagan Olsen
Evan Oriel
Shobhana Panuganti
Kelly Parker
Justin Peruzzi
Nicholas Pogharian
Stephanie Ribet
James Seale
Daniel Selgrade
Fanrui Sha
Donghoon Shin
Alexander Simon
Zofia Siwicka
Florencia Son
Max (Jin Hui) Tan
Ibrahim Tanriover
Jenna Trost
Samuel Tyndall
Matthew Vasher
Carolin Wahl
Peter Winegar
David Xu



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