

We are happy to reach out to the broader NYU Chemistry community with some updates regarding the excitement and momentum that we have been enjoying! It is an active time for both the University and the Department. Our overriding objective is to create and support a community of the world's greatest researchers, educators, and students of Chemistry and related areas of molecular science.



The past year has seen two major additions to our tenured faculty. We are delighted that Andrew Hamilton accepted NYU's Presidency. We have also been very excited that he has been able to establish a research group including postdocs and graduate students here in the Department. His lab has already published a couple of papers from NYU! This March, we welcomed our newest colleague, Dirk Trauner from Ludwig-Maximilians-Universität, Munich. Professor Trauner is the inaugural Janice Cutler Chair and is located in Chemistry with joint appointments at NYU's Center for Neural Science as well as at Langone Medical Center's Neuroscience Institute.

Our other faculty are also flourishing, and we are especially delighted with our 5 assistant professors, all of whom have now received NSF awards, in addition to other funding and distinctions.

We are immensely grateful for Dr. Janice Cutler's gifts to the Department. The Janice Cutler Chair was mentioned above. Janice Cutler Fellowships support needy students in CAS, and help the Department to recruit top graduate students. Many of our alumni will remember Dr. Cutler's support of and advocacy for undergraduates in the Department over many years, and it is

wonderful that we will be able to celebrate her contributions for years to come.

We are also excited to announce a gift from Joseph and John McNelis, the sons of another beloved faculty member, Professor Edward McNelis. The gift has established the Edward McNelis Lecture in Chemistry. The inaugural lecture was given this spring by UC Berkeley's John Hartwig.

There are many exciting opportunities for undergraduates to pursue research. The NYU MRSEC has hosted a very successful Research Experiences for Undergraduates (REU) program for several years. Typically, students from outside NYU are welcomed during the summer and are provided access to hands-on research in our laboratories, and are supported by a variety of educational and social activities. We are pleased with a new parallel program in Chemical Biology, supported by NSF's REU program. These are in addition to many opportunities for NYU undergraduate students to work in the labs, and we are grateful for a generous gift from the Société de Chimie Industrielle to support summer scholarships for NYU students.

We are very happy that some of our teaching faculty have been recognized and promoted.

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Letter From The Chair

Department News

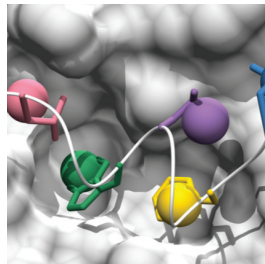
Department Events

Fellowship, Awards, And Honors

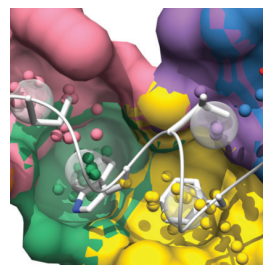
Trauner Joins Faculty



Department news



Redesign Science Rational Therapeutics



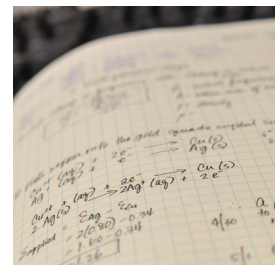
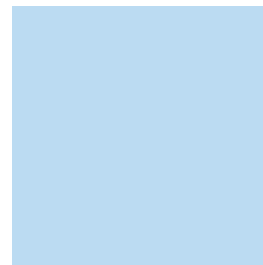
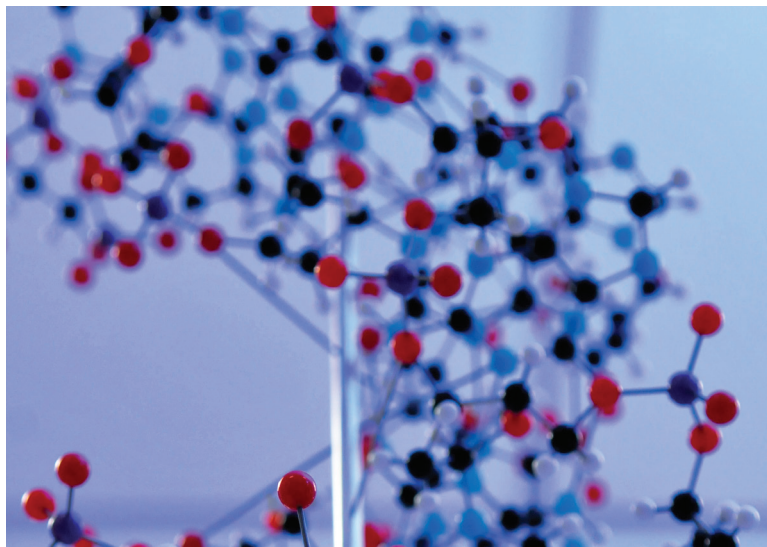
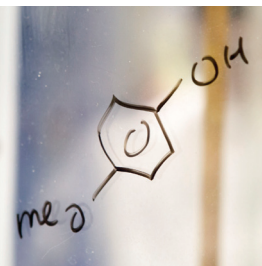
Faculty News

- **Nadrian C. Seeman's** book *Structural DNA Nanotechnology*, won a 2016 Prose Award given by the Association of American Publishers. Ned's book, published by Cambridge University Press, was praised widely and won in the category of Biological Science.
- NYU Chemistry Professor **Lara Mahal** received the 2017 Horace S. Isbell Award given by the American Chemical Society's Division of Carbohydrate Chemistry.
- NYU Professors **Nicholas Geacintov** (Chemistry) and **Suse Broyde** (Biology) received the 2016 Richard N. Loeppky Founders Award given by the American Chemical Society's Division of Chemical Toxicology.
- Junior faculty **Daniela Buccella** and **Daniel Turner** both received NSF CAREER Awards this year. The Buccella Group works on the design of small molecule indicators to study the biology of magnesium by fluorescence-based techniques. The Turner Group investigates how conical intersection topography drives photochemistry using high-sensitivity femtosecond spectroscopy.
- NYU Chemistry Professor **Daniel Turner** has been selected as a 2017 Sloan Research Fellow. The early-career scholars honored by the Alfred P. Sloan Foundation "represent the most promising scientific researchers working today. Their achievements and potential place them among the next generation of scientific leaders in the U.S. and Canada."

Grad Student News

- **William (Billy) Marsiglia** is the recipient of a Predoctoral to Postdoctoral Transition Fellowship. This prestigious NIH Fellowship, given by the National Cancer Institute (NCI), will support Billy's research in the Nate Traaseth Lab for 6 years. Billy's work focuses on understanding how pathogenic mutations in receptor tyrosine kinases lead to overstimulation of cell division that is characteristic of many types of cancers and growth disorders.
- NYU Chemistry postdoctoral fellow and alumnus, **David Rooklin** (Yingkai Zhang's lab), and graduate students, **Ashley Modell** (Paramjit Arora's lab) and **Joseph Katigbak** (Yingkai Zhang's lab), took 1st place in the Technology Division of NYU's 2016 \$200K Entrepreneurs Challenge, a competition sponsored by Stern's W.R. Berkley Innovation Lab. The award will support the team's startup, Redesign Science, which will specialize in virtual molecular design to target disease-related protein-protein interactions. Redesign Science will apply a new molecular modeling platform—AlphaSpace—in strategic industry and academic partnerships to tackle drug design for challenging new therapeutic targets.

5 grad students
won
Dissertation
Fellowships
in 2016!



Alumni News

- **Phillip S. Baran** (B.S.1997, Schuster Lab) received the 2016 Elias J. Corey Award from the American Chemical Society and a 2016 Blavatnik Award presented by the New York Academy of Sciences. Phil is currently the Darlene Shiley Chair in Chemistry at Scripps Research Institute, working on environmentally friendly methods of “total synthesis” with a roster of accomplishments too numerous to list!
- **Neil Garg** (B.S. 2000, Walters Lab), currently Professor of Chemistry and Biochemistry and Vice Chair for Education at UCLA, is the winner of a 2016 Guggenheim Fellowship. The funding will support Neil’s research on “New Reactions Catalyzed by Non-Precious Metals.” Look for Neil’s excellent TED talk, on YouTube!
- **John L. Kulp** (Ph.D 2006, Evans Lab), who is an Associate Professor and Director for Academic Affairs at the Blumberg Institute, won an emerging leaders award in Bucks and Montgomery County PA for his research on hepatitis B and for establishment of the first graduate degree in life sciences in the county (a master in biomedical sciences).
- **Meredith Foley** (Ph.D 2010, Schlick Lab), Assistant Professor of Chemistry at the New Jersey City University, will co-chair the ACS New York Section’s 65th Undergraduate Research Conference this May at Fordham University. NYU Tandon School of Engineering’s **Jin Montclare**, who happens to be a faculty member affiliated with NYU Chemistry, will deliver the keynote address, “Intelligent Self-Assembling Biomaterials.”
- NYU Chemistry has been fortunate to be visited by many of its alumni, who often give career talks to the students in addition to their scientific seminars. This semester, we hosted a seminar by **Dinshaw Patel** (Ph.D 1968, Schuster Lab), who is the Abby Rockefeller Mauze Chair in Experimental Therapeutics at Sloan-Kettering Institute. We look forward to upcoming visits by St. Louis University Professor **Paul Bracher** (BS 2002, Schuster Lab) and Wayne State University Professor **Young-Hoon Ahn** (Ph.D 2007, Chang Lab).
- The entrepreneurial ventures of alumni have been nurtured by the Leslie eLab, with recent successes including not only **David Rooklin**’s (Ph.D 2012, Y.Zhang Lab) prize-winning venture described above, but also **Steve Isaacman**’s (Ph.D 2008, Canary Lab) R&D-turned-marketing venture, now a thriving business called Ph.D Skincare, and **Anna Powers**’ (Ph.D 2015, Bacic Lab) venture called Powers Education, providing tutoring & mentoring services dedicated to the success of women in science, math and technology.

We love to hear from alumni!
Please send us your news!
If nothing is new, tell us what’s old! Write to:

julie.kaplan@nyu.edu

Hello!

Department Events



Hamilton Symposium

On November 11th we hosted a symposium to welcome Andrew D. Hamilton, NYU President and faculty member of the Department of Chemistry. The event was hosted Chemistry Department faculty member Daniela Buccella. Featured speakers and topics included:

Sir J. Fraser Stoddart

(Northwestern)—The Nature of the Mechanical Bond: From Molecules to Machines

Jonathan Sessler (University of Texas at Austin)—Expanded Porphyrins: A Personal Journey

Lara Estroff (Cornell)—Bio-Inspired Single-Crystal Composites: Growth Mechanisms and Properties

Craig Crews (Yale)—PROTACs: Induced Protein Degradation as a Therapeutic Strategy

Dirk Trauner (NYU)—Controlling Nature's Molecular Machines with Synthetic Photoswitches

Andrew Hamilton (NYU)—Synthetic Mimics of Protein Secondary Structure and Function

McNelis Lecture

The NYU Department of Chemistry is thrilled to announce the establishment of our first named colloquium series, the Edward J. McNelis Lecture. The inaugural McNelis Lecture was delivered by John Hartwig, the Henry Rappoport Chair in Organic Chemistry at UC Berkeley, on March 31, 2017.

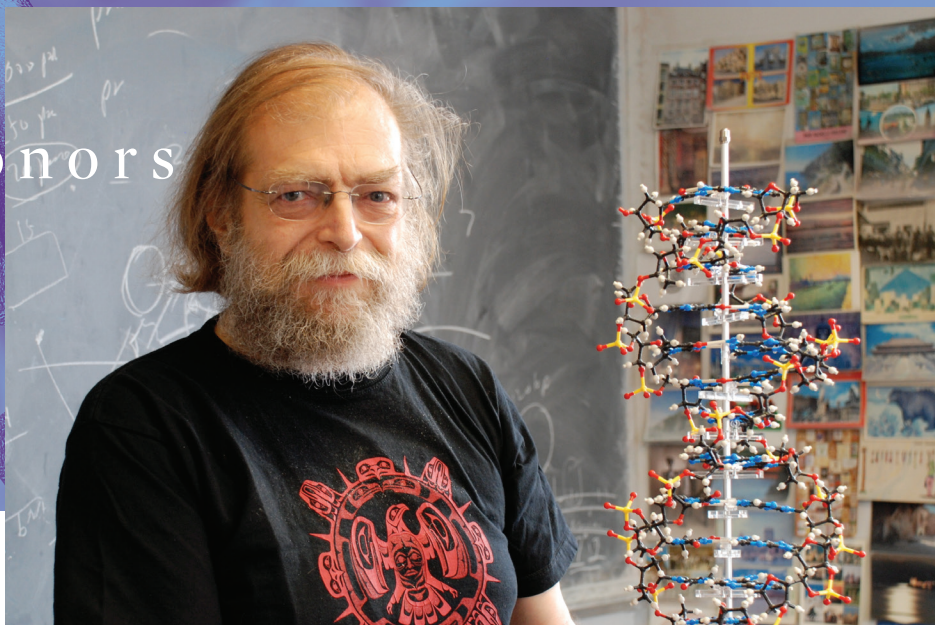
Edward J. McNelis was Professor of Chemistry at New York University from 1967-2003, and Chair of the department in the 1980's. While his research was focused in organic chemistry, McNelis was an intellectual whose interests were broad. The lectureship was established with generous gifts from Professor McNelis' sons, Joseph and John, both of whom are NYU alumni. Ed McNelis was a passionate scholar, devoted teacher and respected colleague, and we look forward to honoring him with this colloquium series.

Chemical Biology of Cancer Symposium

On November 15, 2016, the Department of Chemistry, in collaboration with the NYU Perlmutter Cancer Center, organized a symposium that features examples of the research at the Medical Center and the downtown campus on molecular interactions, structural biology and chemical biology that is relevant to cancer biology and therapeutics.

An exceptional lineup of speakers consisting of chemical and structural biologists from both NYU campuses headlined the meeting. Our own NYU President Andy Hamilton, who as you know is a renowned chemical biologist, kicked off the symposium describing his work on synthetic targeting of protein-protein interactions. This symposium will foster new collaborations between cancer biologists, chemists and physicians to help bring discoveries from the bench to the clinic.

Fellowships, Awards & Honors



Franklin Medal

Margaret and Herman Sokol Chair in Chemistry **Nadrian C. Seeman** is the recipient of the 2016 Benjamin Franklin Medal in Chemistry for his pioneering work in founding the field of DNA Nanotechnology. The Franklin Institute selected Ned to receive this prestigious honor “for his conceptualization and demonstration that DNA can be used as a construction material that can spontaneously form sub-microscopic structures of diverse shapes and functions, with potential applications in disease treatment, mechanics, and computation.” As a Franklin Institute Laureate, Ned is keeping good company with the likes of Curie, Edison, Einstein, Fermi, Goodall, Tesla, Hawking, and many other luminaries. The Franklin Institute created a terrific video about Ned’s work. Look for it on YouTube!

Seeman, who has been on the NYU faculty since 1988, has a bachelor of science from the University of Chicago (1966) and a Ph.D. in crystallography/biochemistry from the University of Pittsburgh (1970). He did postdoctoral training at Columbia University and at MIT. He was the founding president of the

International Society for Nanoscale Science, Computation, and Engineering. Among his many honors, he has received the American Chemical Society’s Nichols Medal as well as the Sidhu Award from the Pittsburgh Diffraction Society, a Popular Science Magazine Science and Technology Award, the Feynman Prize in Nanotechnology, a Discover Magazine Emerging Technology Award, a Nanotech Briefs Nano50 Innovator Award, the World Technology Network Award in biotechnology, the Alexander Rich Lectureship from MIT, the Frontiers of Science Award from the Society of Cosmetic Chemists, the Nanoscience Award of the ISNSCE, the Rozenberg Tulip Award in DNA Computing, the Einstein Professorship of the Chinese Academy of Sciences, a John Simon Guggenheim Fellowship, the Jagadish Chandra Bose Triennial Gold Medal of the Bose Institute, and a Distinguished Alumnus Award from the University of Pittsburgh, and NYU’s Margaret and Herman Sokol Faculty Award in the Sciences. In 2010, Seeman was awarded the Kavli Prize in Nanoscience, which he shared with Donald Eigler of IBM’s Almaden Research Center. ■

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Professors Zhihua An and Petra Tosovska were promoted to Clinical Associate Professor, and Professors Margaret Mandzuik and Dubravko Szabo were promoted to Clinical Professor.

The faculty have been assisting NYU Abu Dhabi and NYU Shanghai to establish Chemistry programs, and are especially supportive of the Computational Chemistry Center at NYU Shanghai that includes several of our NY faculty. We enjoyed joint symposia this past year at both locations, as well as a joint meeting with faculty from Tel Aviv University, our partner institution at

the NYU Study Away site in Tel Aviv. We are now teaching Chemistry courses in Tel Aviv, London, and Sydney. We are happy to have awarded recently the third round of Puller Scholarships that support undergraduates to study for a semester overseas at one of these sites.

Much news is included elsewhere in this newsletter, including faculty and student awards and other events. We would love to hear from you! Please keep us updated at julie.kaplan@nyu.edu. We also welcome you to support the Department. To find ways that you can provide support, please visit the following web site: chemistry.as.nyu.edu. ■

Trauner Joins Faculty

*The NYU Department of Chemistry
welcomes **Dirk Trauner**, who officially
joined the faculty March 1st 2017!*



DIRK comes to us from the University of Munich, but his career has been quite trans-Atlantic. Born in Austria, Dirk earned his undergraduate degree in Berlin and his doctorate in Vienna. He crossed the Atlantic for a postdoctoral fellowship with Sam Danishefsky at Memorial Sloan Kettering Cancer Center, and began his independent career in the United States, earning tenure at UC Berkeley. After 8 years on the faculty in Munich, he returns to New York City.

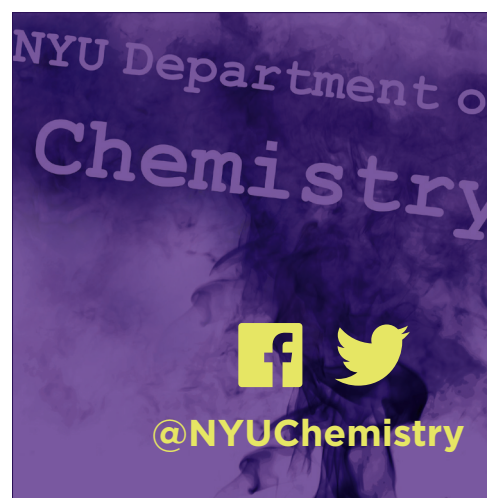
Professor Trauner has a distinguished career, adorned with awards and accomplishments. Among other honors, he is a fellow of the Royal Society of Chemistry, and most recently, he is the recipient of the 2016 Emil Fischer Medal and the 2016 Otto Bayer Award for his "pioneering contributions to photopharmacology and chemical optogenetics." The broad objective of research in the Trauner Lab is to "demonstrate the awesome power of chemical synthesis with challenging target molecules and to use it toward the establishment of synthetic biological pathways." In this context, he will build both organic chemistry and neuroscience labs at NYU, establishing an exciting new presence in the field of chemical neuroscience with strong connections at the Center for Neuroscience as well as the Neuroscience Institute at the Langone School of Medicine. ■



The deadline for applications to the doctoral program in Chemistry at NYU is

December 15, 2017. For full consideration, get your application in by the deadline date, when we will begin our review! The application is available on the department website and also on the Graduate School of Arts and Science Admissions Resource Page: gsas.nyu.edu/page/grad.admissionsapplication

Graduate Admissions





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