THE CAMILLE AND HENRY
Dreyfus Foundation

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
2026		
Tufts University	Ira Caspari-Gnann	The Impact of Instructor Facilitation, Class Design, and Power on In-the-Moment Chemistry Learning
Texas A&M University	Abdoulaye Djire	Designing Lattice-Active MXenes for Electrochemical Catalysis, Separations, and Energy Storage
University of Florida	Austin Evans	Emergent Phenomena in Crystalline and Porous Macromolecular Systems
University of Washington	Matthew Golder	(Re)design & (Re)construction of Plastics: Enhancing Polymer Integrity and Sustainability
Binghamton University	Jennifer Hirschi	Modern Experimental Probes and Theoretical Studies for the Elucidation of Contemporary Catalytic Reactions
University of Minnesota	Jessica Lamb	Harnessing Main-Chain Dipoles in Polymers for Next-Generation Dielectric Materials
Yale University	Stacy Malaker	Cracking the Glycocode through Next-Generation Glycoproteomic Technologies
Virginia Polytechnic Institute and State University	Emily Mevers	Ecology-Driven Natural Product Discovery
Northeastern University	Mona Minkara	Decoding the Molecular Logic of Innate Immune Recognition
University of Colorado Boulder	Andrés Montoya-Castillo	Next Generation Dimensionality Reduction to Predict, Measure, and Manipulate Energy Flow
Stanford University	Grant Rotskoff	Building Thermodynamically Aware Chemical Intelligence
University of California, Berkeley	Karthik Shekhar	The Chemical Physics of Bioelectricity: From Ion Channels to Emergent Excitability
University of California, Riverside	Timothy Su	Molecular Silicon Electronics
Northwestern University	Roel Tempelaar	New Theories of the Optics, Chirality, and Excited-State Dynamics of Materials
The University of Texas at Austin	Huiliang Wang	Molecular Engineering of Organic Nanomaterials for Ultrasound-Activated Neuromodulation
Princeton University	Marissa Weichman	Spectroscopy, Dynamics, and Photonic Control of Complex Chemical Systems
University of Chicago	Anna Wuttig	Designing for Disorder in the Electrocatalytic Synthesis of Fuels and Chemicals
2025		
University of California, Berkeley	Ashok Ajoy	Quantum Sensor NMR

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Massachusetts Institute of Technology	Connor Coley	Molecular Design, Synthesis, and Analysis with Data Science and Machine Learning
Columbia University	Milan Delor	Realizing lossless energy and information flow in materials and molecules
Michigan State University	Selvan Demir	Developing Lanthanide-based Organometallic Chemistry for Applications in Magnetism, Quantum Information Science, and Small Molecule Activation
University of Illinois Urbana-Champaign	Nicholas Jackson	A Chemically Transferable Coarse-Grained Electronic Structure Model for Polymers
Clark Atlanta University	Xinle Li	Sustainable Pathways to Impactful Porous Materials for Addressing Societal Challenges
University of California, Los Angeles	Yuzhang Li	Innovating Cryo-EM tools to accelerate technologies in energy and sustainability
Montana State University	Martín Mosquera	Investigate extended quantum correlations of quantum light and their effect on molecular chromophores
New York University	Marvin Parasram	Heteroatom Transfer Reactions Promoted by Photoexcited 1,3-Dipoles
University of Minnesota	Courtney Roberts	Taming Aryne Intermediates to Impact Medicinal Chemistry
Northwestern University	Linsey Seitz	Harnessing Dynamic Materials and Systems for Sustainable Electrocatalytic Technologies
The University of Chicago	Weixin Tang	Enzyme Engineering to Fuel Genome Editing and Therapeutics Discovery
Clemson University	Thao Tran Dominy	Chemical Bonding in Quantum Materials: Simple, Innovative Solutions for Future Energy and Information Technology
California Institute of Technology	Lu Wei	Illuminating subcellular biology through functional bond-selective imaging
University of Wisconsin–Madison	Zachary K. Wickens	Selective Synthesis using Light and Electricity
Harvard University	Suyang Xu	Bridging Quantum Chemistry and Physics by Chirality
University of California, Santa Barbara	Yang Yang	New Strategies for Stereoselective Radical Biocatalysis
University of Virginia	Huiyuan Zhu	Advancing Sustainable Chemistry and Environmental Remediation with Well-Defined Materials
The University of North Carolina at Chapel Hill	Aleksandr Zhukhovitskiy	Advancing the logic of polymer synthesis, modification, and degradation

2024

The University of Chicago	Chibueze Amanchukwu	Ion and Molecular Solvation to Control Electrochemical Processes
University of California, Santa Barbara	Raphaële Clément	Solid-State Lithium-Sulfur Batteries
California Institute of Technology	Scott Cushing	Understanding When Quantum Mechanics Controls Macroscopic Devices Using Novel Forms of Light

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Institution	Awardee	Project
Indiana University Bloomington	Joseph Gerdt	Uncovering the Chemistry of Microbial Symbioses
Northwestern University	Todd Gingrich	Computational Tools for Stochastic, Far-From-Equilibrium Chemical Kinetics
Princeton University	Kelsey Hatzell	Next Generation Materials for Energy and Climate Applications
Stanford University	Guosong Hong	Deep-Tissue Light Delivery and Imaging Enabled by Chemistry Advances
Johns Hopkins University	Xiongyi Huang	Bringing New Catalytic Functions to Metalloenzymes
Texas A&M University	Quentin Michaudel	Harnessing New Modes of Reactivity for the Precise Synthesis of Polymers with Tailored Properties
University of Illinois at Urbana-Champaign	Lisa Olshansky	Emergent Properties from Dynamicity: Investigating Conformational Control in Biomimetic Inorganic Systems
University of California, Riverside	Giulia Palermo	Dynamics and Mechanisms of Genome Editing Systems through the Lens of Computer Simulations
University of Colorado Boulder	C. Wyatt Shields IV	Synthetic and Living Microrobots for Directed Transport in Biomedicine
The University of Akron	Junpeng Wang	Molecular Solutions to Challenges in Materials for a Sustainable Future
Massachusetts Institute of Technology	Alison Wendlandt	Selective Catalytic Isomerization Reactions
University of North Carolina at Chapel Hill	Sidney M. Wilkerson-Hill	Advancements in the Chemistry of Non-stabilized Carbenes - Synthesis of Orphaned Cyclopropanes
University of Washington	Dianne Xiao	Reimagining Porous Materials for a Sustainable Future
Cornell University	Rong Yang	Advancing Polymer Synthesis via Non-covalent Interactions
University of California, Berkeley	Michael W. Zuerch	Symmetry and Beyond: Unveiling the Mysteries of Quantum Materials and Complex Interfaces

2023

Georgia Institute of Technology	Vinayak Agarwal	Marine biosynthetic enzymology in research and education
Stony Brook University	Eszter Boros	Harnessing Coordination Chemistry of Non-Endogenous and Radioactive Metal Ions for Diagnosis and Therapy of Disease
Johns Hopkins University	Stephen D. Fried	How to Fold Every Protein – A Structural Proteomics Approach
Massachusetts Institute of Technology	Ariel Furst	Bio-inspired Electron Transfer for Equitable Technologies
Brandeis University	Grace G.D. Han	Light-Responsive Organic Materials for a Sustainable Future
University of Chicago	Chong Liu	Designing interfacial ion pathways for critical elements separation
Harvard University	Jarad Mason	Manipulating Phase Transitions and Porosity in Metal–Organic Materials: From Solid Refrigerants to Porous Water
Cornell University	Phillip Milner	Simplifying Synthesis at the Interface of organic and Materials Chemistry

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Florida State University	Lea Nienhaus	Exploring Critical Parameters of Materials for High-Yield Solid-State Photon Upconversion
Boston College	Jia Niu	Precision Macromolecules for Sustainability and Biological Discoveries
Stanford University	Lauren O'Connell	Predator-prey interactions as a framework discovering new chemical toolkits
Columbia University	Allie Obermeyer	Harnessing protein assembly for living and soft materials
The University of Texas at Austin	Zachariah A. Page	Light as a Chemical Tool to Precisely Control Synthetic Soft Materials
California Institute of Technology	Kimberly See	Next-Generation Battery Chemistry
The Ohio State University	Christo Sevov	Battery-Inspired Strategies for Electrocatalytic Carbon-Carbon Bond Forming Reactions
University of Washington	Alexandra Velian	Molecular Approaches to Synthesize Single-Site Catalysts
Northwestern University	Muzhou Wang	New Methods Bringing Polymer Science into its Second Century
University of Michigan	Wenjing Wang	Molecular sensors and tools for studying G-protein-coupled receptor signaling and Parkinson's Disease

2022

University of California, Los Angeles	Justin Caram	Materials which explore the extremes of excitonic photophysics
University of Illinois at Urbana-Champaign	Jefferson Chan	Light in, sound out: Making chemical probes to detect invisible disease states using photoacoustic imaging
Princeton University	Sujit S. Datta	Dynamics of soft and living matter in complex environments
University of Oregon	Christopher H. Hendon	Hydrogen Atom Transfer Catalysis in Earth-Abundant Metal-Organic Frameworks
North Carolina State University	Lilian Hsiao	Physico-chemical design of bioinspired soft materials to reproduce touch
The University of Chicago	Mark Levin	Single-Atom Logic for Molecular Skeletal Editing
Dartmouth College	Weiyang (Fiona) Li	Novel Functional Electrochemical Materials for Energy and Sustainability
Harvard University	Brian Liau	Unraveling Macromolecular Complexes and Gene Regulation with Chemical Genomics
Northeastern University	Steven A. Lopez	Sustainable energy and chemistry through computations and machine learning
California Institute of Technology	Maxwell J. Robb	Molecular Design Strategies for Mechanochemically Responsive Polymers
University of Colorado Boulder	Sandeep Sharma	Accurate electronic structure for quantum materials and metalloenzymes
Massachusetts Institute of Technology	Daniel L. M. Suess	Understanding and Exploiting Electronic Cooperation in Metalloclusters
Stanford University	William Tarpeh	Rendering "Wastewater" Obsolete: Designing Selective Electrochemical Separations to Valorize Water Pollutants

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Institution	Awardee	Project
University of Washington	Ashleigh Theberge	Bioanalytical Chemistry for Medicine and the Environment
Johns Hopkins University	V. Sara Thoi	Molecular Approaches to Materials Design in Energy Conversion and Storage
University of California, Davis	Jesús Velázquez	Atomically Precise Active Sites for Catalytic Small-Molecule Conversion
The Pennsylvania State University	Lauren Zarzar	Dynamics of Active and Responsive Microscale Materials
Yale University	Mingjiang Zhong	Rapid Access to Diversified Polymer Properties through Microstructure Engineering

2021

The University of Chicago	John S. Anderson	Leveraging Unorthodox Bonding Effects in Transition Metal Molecules and Materials
The University of Texas at Austin	Carlos R. Baiz	Ultrafast Dynamics at Heterogeneous Liquid-Liquid Interfaces
University of California, Santa Barbara	Christopher M. Bates	Phase Behavior of Statistical Bottlebrush Copolymers
University of Maryland	Osvaldo Gutierrez	New Paradigms in Sustainable Catalysis
Northwestern University	Julia A. Kalow	Harnessing Reactivity-Property Relationships for Polymer Discovery
University of California, Berkeley	Markita P. Landry	Plant Transport Phenomena to Optimize Plant Photosynthesis
Cornell University	Song Lin	An Electrocatalytic Approach to Organic Reaction Discovery
Yale University	Nikhil S. Malvankar	Biogenic production of robust and scalable nanomaterials with genetically tunable electronic, optical, and mechanical functionalities.
Massachusetts Institute of Technology	Karthish Manthiram	Electrification and Decarbonization of Chemical Synthesis
University of California, Davis	David E. Olson	Chemical Tools for Controlling Neuroplasticity
Brown University	Brenda M. Rubenstein	Accurate and Efficient Stochastic Electronic Structure Algorithms for Materials Design
University of California, San Francisco	Ian B. Seiple	Chemical Synthesis to Enable Biological Discovery
The University of Utah	Luisa Whittaker-Brooks	Designer Hybrid Organic-Inorganic Interfaces for Coherent Spin and Energy Transfer
Lehigh University	Xiaoji G. Xu	Development of the Next Generation of Multimodal Chemical, Optical, and Electrical Scanning Probe Microscopy
University of Massachusetts Amherst	Mingxu You	Nucleic Acid-based Cellular Imaging and Analysis
University of California, San Diego	Joel Yuen-Zhou	Polariton Chemistry: Controlling Molecules with Optical Cavities

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Institution	Awardee	Project
2020		
The Ohio State University	L. Robert Baker	Visualizing Charge and Spin Dynamics at Interfaces
Brown University	Ou Chen	From Nanocrystals to Macromaterials: Bridging the Divide
Duke University	Emily R. Derbyshire	Chemical Approaches to Understand Infectious Agents
The University of North Carolina at Chapel Hill	Frank A. Leibfarth	Modern Approaches to Functional and Sustainable Thermoplastics
University of Rochester	Ellen M. Matson (Hicks)	Multimetallic Metal Oxide Clusters for Electrochemical Energy Storage and the Production of Chemical Fuels
University of California, Berkeley	Evan W. Miller	Chemical Indicators to Visualize Cellular Physiology
Dartmouth College	Katherine A. Mirica	Molecular Engineering of Multifunctional Materials for Chemical Sensing and Microelectronics
Arizona State University	Gary F. Moore	Bioinspired Materials for Green Chemistry
University of Michigan	Alison R. H. Narayan	Biocatalytic Reactions for Selective, Sustainable Synthesis
Massachusetts Institute of Technology	Gabriela Schlau-Cohen	Elucidating Structural and Energetic Dynamics of Membrane Proteins
University of California, Los Angeles	Alexander M. Spokoyny	Hybrid Materials and Reagents Featuring Boron-Rich Clusters
Vanderbilt University	Steven D. Townsend	Chemical Approaches for Trojan-Horse Microbicidal Contraception
The University of Chicago	Suriyanarayanan Vaikuntanathan	Controlling Organization, Self-assembly, and Dynamics in Complex Non-equilibrium Systems
Harvard University	Christina Woo	Chemical Control of Cellular Signaling
2019		
Princeton University	José L. Avalos	Spatial and Dynamic Control of Engineered Metabolism for Microbial Chemical Production
New York University	Tianning Diao	Stereoselective Alkene Carbofunctionalization: Method Development and Applications
The University of Chicago	Bryan C. Dickinson	Chemical and Evolutionary Approaches to Probe and Control Biology
The Scripps Research Institute	Keary M. Engle	New Strategies for Selective Catalytic Functionalization of C–C π-Bonds
University of Minnesota	Renee R. Frontiera	Nanoscale Raman Spectroscopy
Colorado State University	Garret M. Miyake	Harnessing the Power of Light: Light-Driven Syntheses Reflective Materials
Yale University	Timothy R. Newhouse	Chemical Technologies and Computational Approaches for the Step-efficient Synthesis of Structurally Complex Natural Products
University of Pennsylvania	Amish J. Patel	How Surfaces Recognize and Bind Nascent Crystals

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Institution	Awardee	Project
Iowa State University	Dipali G. Sashital	Defining the Molecular Basis for Memory Formation in CRISPR-Cas Systems
University of South Carolina	Natalia B. Shustova	Photophysics of Hybrid Hierarchical Structures with Emphasis on Directional Energy Transfer
Purdue University	Christopher Uyeda	Designing New Catalysts Using Metal-Metal Bonds
Washington University in St. Louis	Timothy A. Wencewicz	New Antibiotics from Nature's Chemical Inventory
University of California, Irvine	Jenny Y. Yang	Molecular Design of Redox Catalysts
2018		
Washington University in St. Louis	Alexander B. Barnes	Magnetic Resonance Technology for In-cell NMR Structural Determination of HIV Latency Reversal Agents
The Pennsylvania State University	Amie K. Boal	Watching Metalloenzymes at Work
Boston College	Abhishek Chatterjee	A Genetically Encoded Toolset to Unravel the Roles of Post-translational Modifications in Human Biology
University of California, Santa Barbara	Irene A. Chen	Probing Known Unknowns in Systems Biology
Emory University	Francesco A. Evangelista	Quantum Renormalization Group Methods for Excited States of Strongly Correlated Electrons
Northwestern University	Danna Freedman	Applying Inorganic Chemistry to Challenges in Physics
University of Delaware	Catherine L. Grimes	Breaking Down and Building Up Bacterial Cell Walls to Understand Inflammation
Virginia Polytechnic Institute and State University	John B. Matson	Functional Bioactive Materials for Gasotransmitter Delivery and Tissue Engineering
Harvard University	Kang-Kuen Ni	Ultracold Molecules for Chemistry and Physics
University of Michigan	Corinna S. Schindler	New Methods for Sustainable Organic Synthesis
Princeton University	Mohammad R. Seyedsayamdost	Total Chemo-Enzymatic Synthesis of Vancomycin and its Analogs
California Institute of Technology	Mikhail G. Shapiro	Molecular Engineering for Noninvasive Imaging and Control of Cellular Function
Massachusetts Institute of Technology	Matthew D. Shoulders	Molecular Mechanisms of Protein Folding and Evolution in Living Cells
2017		
North Carolina State University	Chase L. Beisel	Understanding and Exploiting the Biochemical Properties of CRISPR-Cas Immune Systems
University of Washington	Brandi M. Cossairt	The Synthetic Inorganic Chemistry of Sustainable Technologies
Yale University	Jason M. Crawford	Decoding Specialized Bacterial Metabolic Pathways in the Human Microbiome
University of California, Irvine	Aaron P. Esser-Kahn	Chemical Methods to Understand and Improve Vaccines

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University of Illinois at Urbana-Champaign	Alison R. Fout	Ligand Influences on Base Metals for Multi-Electron Reactions
University of Wisconsin–Madison	Randall H. Goldsmith	New Technologies for Single-Molecule Spectroscopy: Optical Microresonators, Fluorescent Catalysts, High Concentrations, and Cancelling Brownian Motion
Princeton University	Robert R. Knowles	Proton-Coupled Electron Transfer in Organic Synthesis and Asymmetric Catalysis
Northwestern University	Julius B. Lucks	A Synthetic Approach to Uncovering how RNA Molecules Coordinate the Biochemical Processes of Life
Stanford University	Thomas E. Markland	Theory and Simulation of Quantum Processes at Interfaces and in Confinement
University of California, San Diego	Christian M. Metallo	Metabolic Regulation of Lipid Diversity
University of California, Santa Barbara	Michelle A. O'Malley	Deconstructing Microbial Consortia for Sustainable Chemistry
Massachusetts Institute of Technology	William A. Tisdale	Energy Transport in Semiconductor Nanomaterials
The University of Texas at Austin	Guihua Yu	Building Artificial Layered Solids from the Bottom-Up to Enable New Energy Technologies

2016

University of Washington	Andrew J. Boydston	Functional Materials across Multiple Length Scales
Columbia University	Luis M. Campos	Development of Materials for Next Generation Solar Cells
Stanford University	William C. Chueh	Ion Insertion Electrochemistry at the Molecular & Nano Scale
University of California, San Diego	Neal K. Devaraj	Site-Specific Covalent Tagging of RNA for Live Cell Imaging and Affinity Purification
Massachusetts Institute of Technology	Mircea Dincă	Teaching Sponges New Tricks: Charge Transport and Heterogeneous Catalysis in Microporous Metal Organic Frameworks
University of California, Berkeley	Naomi S. Ginsberg	Elucidating Dynamic Processes in Heterogeneous Condensed Phases at the Nanoscale
Carnegie Mellon University	Aditya S. Khair	Physico-chemical Transport Processes in Soft Materials and Complex Fluids
The University of Chicago	Jared C. Lewis	Engineering Proteins for Selective Catalysis
Virginia Polytechnic Institute and State University	Amanda J. Morris	Metal Organic Framework Artificial Photosynthetic Arrays
Wayne State University	Eranda Nikolla	Oxidative Coupling of Methane using Layered, Nickelate Oxide Catalysts
University of Oregon	Michael D. Pluth	New Tools for Biological Hydrogen Sulfide Research and Applications to Enhanced Chemical Education
University of Michigan	Nathaniel K. Szymczak	New Approaches to Develop Catalysts for Energy Relevant Chemical Conversions

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Institution	Awardee	Project
Duke University	Qiu Wang	Developing New Strategies and Chemical Probes for Molecular Imaging
2015		
Harvard University	Emily P. Balskus	Discovering and Manipulating the Chemistry of Human Gut Microbes
University of Oregon	Shannon W. Boettcher cher	Semiconductors, Electrocatalysts, and Interfaces in Energy Conversion and Storage
Stanford University	Jennifer A. Dionne	New Optical Materials to Visualize and Control Nanoscale Phenomena
The Ohio State University	Joshua E. Goldberger	Solid-State Materials at the Atomic Scale
California Institute of Technology	André Hoelz	Atomic Structure of the Nuclear Pore Complex
Northwestern University	Michael C. Jewett	Biocatalysis Beyond the Cell: Molecular Engineering Catalytic Ensembles for Cell-free Synthetic Biology
Columbia University	Wei Min	Seeing the Invisible: Discovering New Spectroscopic Contrasts for Bio-imaging
University of Illinois at Urbana-Champaign	Douglas A. Mitchell	Harnessing the Power of Genome-Mining and Biosynthesis to Combat Antibiotic Resistance
The University of North Carolina at Chapel Hill	David A. Nicewicz	New Transformations in Chemical Synthesis via Organic Photoredox Catalysis
Massachusetts Institute of Technology	Bradley D. Olsen	New Materials from Bioinspired and Biofunctional Polymers
Washington University in St. Louis	Gary J. Patti	Mapping Cellular Interactions through Cell-Specific Isotopic Labeling and Metabolomics
University of California, Irvine	Jennifer A. Prescher	Expanding the Imaging Toolbox
University of Pennsylvania	Joseph E. Subotnik	New and Intuitive Approaches for Modeling Electronic Relaxation After Photo-Excitation
2014		
California Institute of Technology	Theodor Agapie	Multimetallic and Metal-ligand Cooperativity for Catalysis
The University of Texas at Austin	Hal Alper	Utilizing Cells as Biocatalysts for Producing Commodity and Specialty Chemicals
University of Massachusetts Amherst	Paul Dauenhauer	Production of Renewable Chemicals and Fuels by High Temperature Pyrolysis Chemistry of Cellulose
Yale University	Nilay Hazari	Transition Metal Catalyzed Conversion of Carbon Dioxide and Mechanistic Studies of the Reactions
Boston University	Ramesh Jasti	The Bottom-Up Organic Synthesis of Graphitic Nanomaterials with Well-Defined Structures and Properties
Stanford University	Matthew Kanan	Catalyzing CO2 Recycling and Controlling Reactions at Interfaces
Massachusetts Institute of Technology	Elizabeth Nolan	Understanding the Physiological Role of Peptides / Proteins that Bind Metals and their Function as Antibacterial Agents

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Princeton University	Rodney Priestley	Understanding the Combined Roles of Size, Interfaces, and Processing on the Properties of Amorphous Polymers
Emory University	Khalid Salaita	Cellular Mechanochemistry at Interfaces: Sensing and Manipulating Forces in Living Systems
University of Wisconsin–Madison	Jordan Schmidt	Computational Modeling for the Properties of Complex Materials, with Applications to Energy and Catalysis
Indiana University	Sara Skrabalak	Shaping the Synthesis of Nanoscale Solids
Purdue University	Adam Wasserman	Extending the Limits of Applicability of Density Functional Theory towards Larger Systems and Longer Times
Northwestern University	Emily Weiss	Controlling the Electronic Structure and Dynamics at Nanoscale Interfaces between Inorganic and Organic Materials
University of Rochester	Daniel Weix	New Methods and Mechanisms for Cross Couplings in C-C Bond Formation and Organic Synthesis
Temple University	Michael Zdilla	Synthesis and Reactivity of Multimetal Systems Inspired by Biology

2013

Harvard University	Theodore A. Betley	Correlation of Electronic Structure to Reactivity in Organometallic Catalysis and Small Molecule Activation
University of California, Berkeley	Michelle C. Chang	System Level Studies for Cellular Synthetic Biology
Cornell University	William R. Dichtel	Bottom-up Synthesis of Structurally Precise Organic Materials and Interfaces
Princeton University	Abigail G. Doyle	Transition Metal Catalysis for the Discovery and Development of Valuable Synthetic Methods
University of California, Los Angeles	Neil K. Garg	Catalytic Formation of Amide Bonds
Michigan State University	Thomas W. Hamann	Molecular and Material Approaches to Advance Solar Energy Conversion
Hunter College of the City University of New York	Mandë Holford	Lessons From Nature: Discovery, Characterization and Delivery of Novel Peptide Therapeutics from Venomous Marine Snails
University of Washington	Munira Khalil	Measuring Complex Molecular Dynamics in Solution with High Spatial and Temporal Resolution
University of Michigan	Stephen Maldonado	New Frontiers in Semiconductor Electrochemistry
California Institute of Technology	Thomas F. Miller	Quantum Dynamics from Classical Trajectories: New Approaches to Simulating Biological and Molecular Catalysts
University of California, Santa Barbara	Baron G. Peters	Additives for Control over Polymorph Selection during Nucleation: Computational Approaches
University of Illinois at Urbana-Champaign	Charles M. Schroeder	Molecular Engineering of New Materials for Biological Imaging & Polymeric Assembly
Boston University	Corey R. J. Stephenson	Sustainable Catalysis Mediated by Visible Light Photosensitization

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Institution	Awardee	Project
2012		
Harvard University	Adam Cohen	New Tools to Study Molecules and Cells
The University of Chicago	Greg Engel	Exploiting coherent response to electronic excitation to control excited state reactivity
University of California, San Diego	Joshua Figueroa	Isolable Monoalkyne Intermediates in the Alkyne Cyclotrimerization Catalytic Cycle
Yale University	Seth Herzon	Synthesis and Study of Complex Antiproliferative Natural Products
The Ohio State University	Christopher Jaroniec	Atomic Resolution Studies of Biomacromolecular Assemblies by Solid-State Nuclear Magnetic Resonance Spectroscopy
University of Pittsburgh	Steven Little	Mimicking Biological Structure and Behavior Using Polymeric Release Systems and Carbon Nanotubes
University of Oregon	Shih-Yuan Liu	Developing the basic science and applications of boron nitrogen heterocycles
Massachusetts Institute of Technology	Christopher Love	Application of interfacial chemistry, microfabrication, and process design to engineer integrated approaches to single-cell analysis
University of Washington	Dustin Maly	Chemical Tools for Studying Signal Transduction
University of Michigan	Anne McNeil	Towards the Next Generation of Tunable Organic Materials
The University of Utah	Valeria Molinero	Microscopic Mechanisms Of Phase Transitions And Molecular Organization
Princeton University	Celeste Nelson	The Chemistry of Morphogenesis: Quantitative Analysis of Transcription Factor Kinetics During Tissue Development
The Pennsylvania State University	William Noid	Theory and method development for improved multiscale models
California Institute of Technology	Sarah Reisman	Target-Directed Synthesis: A Platform for the Discovery and Development of New Synthetic Methods and Strategies
2011		
Kansas State University	Christine Aikens	Unraveling the Role of Electronic Structure in Nanoparticle Physical and Chemical Properties
Columbia University	Ruben L. Gonzalez, Jr.	Single-molecule mechanistic studies of protein synthesis by the ribosome
The Ohio State University	John Herbert	Quantum Chemistry in the Condensed Phase
University of Massachusetts Amherst	George Huber	The development of catalytic chemical processes for producing hydrocarbon fuels and chemicals from renewable biomass sources.
Carnegie Mellon University	Rongchao Jin	Quantum-Sized Metal Nanoclusters
University of Michigan	Kevin Kubarych	Ultrafast Vibrational Snapshots of Photocatalysis and Protein Dynamics
University of Pennsylvania	So-Jung Park	Controlling Materials Properties through the Self-Assembly of Nanoparticles and Polymer Amphiphiles

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University of Illinois at Urbana-Champaign	Nathan Price	Integrative implementation of complex biochemical reaction networks for systems biology and medicine
Harvard University	Tobias Ritter	Redox Chemistry for Positron Emission Tomography Imaging
University of Maryland, College Park	Herman Sintim	Small Molecule Modulators of Bacterial Virulence and Biofilm Formation
Tufts University	Charles H. Sykes	Turning Molecules into Motors and Mechanical Devices
University of California, Berkeley	Ting Xu	Directed Hierarchical Assemblies Toward Functional Soft Materials
The University of North Carolina at Chapel Hill	Wei You	Organic/Molecular Materials Science: Integration of Synthesis with Devices

2010

University of Michigan	Kate Carroll	Painting the Cysteine Chapel: New Tools to Probe Oxidation Biology
University at Buffalo	Matthew Disney	Progress Towards the Rational and Modular Design of Small Molecules Targeting RNA
University of Minnesota	Kevin Dorfman	Simulating DNA Electrophoresis in Complex Geometries
Indiana University	Amar Flood	Strong CH---Anion Hydrogen Bonds from Triazoles and in Triazolophanes
Louisiana State University	Jayne Garno	Combining Magnetic Sample Modulation (MSM) with Contact‐Mode Atomic Force Microscopy for Measurement of Magnetic Properties at the Nanoscale
University of California, Santa Barbara	Song-i Han	Unraveling the role of hydration water in protein dynamics and function
Queens College, City University of New York	Seogjoo Jang	Theory development and computational modeling of exciton and electron/hole migration in soft disordered environments
University of Illinois at Urbana-Champaign	Benjamin McCall	Astrochemistry: combining high resolution spectroscopy and measurements of reaction kinetics/dynamics with astronomical observations and modeling
Case Western Reserve University	R. Mohan Sankaran	A new paradigm for plasma processing: Microplasma synthesis of nanomaterials for catalytic, electronic, and photovoltaic applications
University of California, Berkeley	Rachel Segalman	Functional Nanoscale Polymers for Energy Applications: Molecular Design, Self-Assembly and Structure-Device Property Relationships
The University of Chicago	Dmitri Talapin	III-V semiconductors through solution-phase synthesis and self-assembly
Virginia Polytechnic Institute and State University	Edward Valeev	Predictive computation of molecular properties with explicitly correlated wave function methods: energetics, spectra, transport.
University of Virginia	B. Jill Venton	Tiny sensors for tiny organisms: measuring neurotransmitter dynamics in the fruit fly brain.
University of Wisconsin–Madison	Tehshik Yoon	Novel Strategies for Catalytic Redox Reactions

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Institution	Awardee	Project
2009		
Harvard University	Alán Aspuru-Guzik	Quantum Computation and Quantum Information for Chemistry
University of California, Davis	Xi Chen	Chemoenzymatic Approaches for Chemical Glycobiology
Duke University	Katherine J. Franz	Chemical Tools to Manipulate Metal-Catalyzed Oxidative Stress
University of Minnesota	Christy L. Haynes	Electroanalytical Eavesdropping on Cellular Communications
University of California, Irvine	Alan F. Heyduk	Redox-Active Ligands as a New Paradigm for Multi-Electron Small-Molecule Reactions Relevant to Energy Efficiency
University of Florida	So Hirata	The developments and applications of predictive electronic and vibrational many-body methods for molecules and macromolecules.
Columbia University	Laura J. Kaufman	The Effects of Crowding on Dynamics Across Length Scales and Across Disciplines
University of Michigan	Suljo Linic	Heterogeneous catalysis in 21st Century: well defined, high uniform, targeted nano-structures as highly selective heterogeneous catalysts, photo-catalysts, and characterization tools
University of California, Berkeley	Richmond Sarpong	New strategies and methods for the total synthesis of natural and unnatural compounds using metal-catalyzed reactions.
California Institute of Technology	Shu-ou Shan	Towards a new paradigm for GTPase regulation of intracellular protein targeting.
New Mexico State University	Jeremy M. Smith	Research on "nitrogen atom transfer" by three-fold symmetric iron nitrido complexes and description of the electronic structures of thermally stable iron(IV) complexes.
University of California, Santa Barbara	Todd M. Squires	Dynamic effects at physico-chemical interfaces
Cornell University	Abraham Stroock	Science and engineering of metastable liquid water in synthetic trees.
University of South Carolina	Paul Ryan Thompson	Chemical Biology of Eukaryotic Gene Regulation
2008		
The University of Texas at Austin	Christopher W. Bielawski	Reversible Polymers Based on Biscarbenes: Creating New Opportunities in Self-Healing Electronics, Catalysis, and Emissive Materials
Cornell University	Garnet K. Chan	Building New Paradigms in Quantum Chemistry: from Quantum Renormalisation Groups to Quantum Tensor Networks
University of Houston	Olafs Daugulis	New Synthetic Organic Chemistry Reactions Involving Transition-Metal Mediated Electrophilic C-H Bond-Activation
Northwestern University	Lincoln J. Lauhon	Development of Quantitative Synthesis-Structure-Property Relationships for Nanostructured Materials
Massachusetts Institute of Technology	Mohammad Movassaghi	Syntheses of Biologically Interesting Alkaloids and the Development of New and General Routes to Nitrogen-containing Heterocycles

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of California, Santa Barbara	Thuc-Quyen T. Nguyen	Understanding Charge Transport and Electronic Properties of Small Conjugated Molecules and Conjugated Polyelectrolytes for Applications in Optoelectronic Devices
The University of North Carolina at Chapel Hill	Garegin Papoian	Multi-Scale Modeling of Biophysical Processes in the Cell
Virginia Polytechnic Institute and State University	Theresa M. Reineke	Carbohydrate-Based Polymers for Cardiovascular Nucleic Acid Delivery and MRI
Johns Hopkins University	Justine P. Roth	Fundamental Principles of Oxidation Chemistry Relevant to Biology and Medicine
University of California, Los Angeles	Yi Tang	Natural Product Biosynthetic Pathways for Novel Enzymes and Useful Biocatalysts
Texas A&M University	Victor M. Ugaz	Directed Assembly of Ultra-concentrated Mesophases: a New Way to Detect and Characterize Biomolecules
University of South Carolina	Qian Wang	Hierarchical Micro-Nano Assemblies for Probing Cell-Matrix Interactions
University of Illinois at Urbana-Champaign	M. Christina White	Aliphatic and Allylic C-H Oxidations Methods for Streamlining Complex Molecule Synthesis
University of California, Berkeley	Haw Yang	Single-Molecule Approaches Towards Understanding Chemical Reactivity in Complex Systems
The Ohio State University	Dongping Zhong	Ultrafast Functional Dynamics of Biomolecules

2007

University of Wisconsin–Madison	Helen E. Blackwell	Expanding the Language of Bacterial Communication Using Synthetic Ligands
University of California, Santa Barbara	Frank L. H. Brown	Theoretical studies of biomembrane dynamics and structure, single molecule spectroscopy, and stochastic processes in chemistry and biophysics
University of Massachusetts Amherst	Jeffrey M. Davis	Understanding the Dynamics of Microscale Flows Over Heterogeneous Surfaces
University of Pennsylvania	Ivan J. Dmochowski	Chemical tools for elucidating complex biological processes such as brain development, limb regeneration, and tumorigenesis
Emory University	Justin P. Gallivan	Reprogramming Bacteria with Small Molecules and RNA
University of Washington	David S. Ginger	Probing Optoelectronic Processes in Nanostructured Organic Solar Cells
Northwestern University	Bartosz A. Grzybowski	Electrostatic Self-assembly of Static and Dynamic Nanostructures and Nanostructured Materials.
Rice University	Jeffrey D. Hartgerink	Self-assembly of nanostructured organic materials for biomedical applications and multi-disciplinary education
University of Minnesota	Efrosini Kokkoli	Biomimetic approaches for the design of materials and therapeutics
Harvard University	Gavin MacBeath	Receptor Tyrosine Kinase Promiscuity and Cancer

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
The University of Chicago	David A. Mazziotti	Blueprints of Atoms and Molecules: Two-particle Density-Matrix Representations of Electronic and Nuclear Motion
University of California, Irvine	Sergey Nizkorodov	Laboratory studies of chemical processes taking place in atmospheric aerosol particles
Brandeis University	Oleg V. Ozerov	Recyclable catalysts and structural discovery through ligand design
The Pennsylvania State University	Raymond E. Schaak	Chemical Strategies for the Synthesis of Multi-Metal Nanomaterials: Exploring Uncharted Territory in the Synthesis of Metallurgical Solids
Massachusetts Institute of Technology	Michael S. Strano	Conduction channel spectroscopy: a new tool to study the chemistry of 1-D systems
2006		
The Ohio State University	Heather C. Allen	Atmospheric Aerosol Chemistry: Understanding How Liquid and Solid Surfaces Mediate Aerosol Chemistry
Cornell University	Paul J. Chirik	New Transition Metal Reagents for Energy-Efficient, Environmentally Benign Chemical Synthesis
University of California, Santa Barbara	Patrick S. Daugherty	Molecular Specificity Evolution: Enabling Technology for Therapeutic Engineering and Diagnostic Proteome Fingerprinting
Johns Hopkins University	David H. Gracias	A Research and Education Program in Nano and Microscale Self Assembly: Integrated circuits, chemical sensors and remote controlled chemistry
The University of Chicago	Chuan He	Developing Chemical Probes to Study DNA Repair and DNA Methylation/Demethylation
University of Illinois at Urbana-Champaign	Paul J. Hergenrother	Targeting mRNA for the Treatment of Neurodegenerative Disorders
University of Illinois at Chicago	Yoshitaka Ishii	Expanding Boundaries of Structural Analysis by Solid-State NMR: From Paramagnetic Complexes to Misfolding of Amyloid Proteins
The University of North Carolina at Chapel Hill	Jeffrey S. Johnson	The Application of Polarity Reversal Concepts in the Discovery of New Catalysts and Chemical Reactivity
Emory University	James T. Kindt	Simulation and statistical theory of self-assembled systems: Molecular and mesoscale modeling of mixed membranes and more
The Pennsylvania State University	Carsten Krebs	Mechanisms of Iron-containing Enzymes: Characterization of reaction intermediates by a combination of rapid kinetic and spectroscopic methods
University of Pennsylvania	Eric Meggers	Chemical Biology with Organo-Metallic Compounds
Arizona State University	Dong-Kyun Seo	Theoretical and Experimental Studies on Itinerant Electron Magnetism in Intermetallics
Massachusetts Institute of Technology	Alice Y. Ting	New chemical methodologies for cellular imaging
North Carolina State University	Orlin D. Velev	Colloidal and Biocolloidal Engineering on Electrically Controlled Microchips: New Principles for Making Bionanomaterials, Microbioassys and Microrobots

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Michigan	John P. Wolfe	New Reactions for the Construction of Biologically Active Molecules and Intermediates of Synthetic Importance
2005		
Yale University	Victor Batista	Development of Semiclassical and Quantum Dynamical Methods for Quantum Reaction Dynamics Simulations
University of California, Berkeley	Kristie A. Boering	Atmospheric Chemistry and Climate on Earth and Other Exotic Planets: From the Molecular to the Global Scale
University of Washington	Daniel Gamelin	High-Tc Ferromagetic Semiconductors for Spintronics Applications: Development, Physical Characterization, and Chemical Manipulation
Columbia University	Brian R. Gibney	Design of Synthetic Metalloproteins Using Nonnatural Amino Acid Ligands
University of California, Irvine	Zhibin Guan	Programing Non-Covalent Interactions into Polymers for High-Order Structures and Advanced Properties.
North Carolina State University	Jason M. Haugh	Seminal and integrative advances in cell signaling from molecular structure and function to pathways, cell function, and tissue response
The University of Chicago	Rustem F. Ismagilov	Supporting Undergraduate Research to Understand Complex Chemical and Biochemical Reaction Networks Top-Down and Bottom-Up Using Microfluids
The Pennsylvania State University	Christine D. Keating	Chemical approaches to the materials/biology interface: nanobiosensors and synthetic cells
Boston College	Shana O. Kelley	Cellular and Molecular Probes of Oxidative Biomolecular Damage
University of Rochester	Todd D. Krauss	Investigations of fundamental properties of nanometer scale materials, and the development of nanomaterials for novel applications in photonics and biology.
University of California, Los Angeles	Yung-Ya Lin	Seeing the Seeds of Cancer: Contrast and Sensitivity Enhancement for Early MRI Tumor Detection by the Butterfly Effect and Chaos Control
The University of Utah	Janis Louie	The Development of Transition Metal Catalysts for New Cycloaddition Reactions.
Indiana University	Daniel J. Mindiola	New Paradigms in Early Transition Metal Complexes Containing Reactive Metal-Ligand Multiple Bonds
California Institute of Technology	Brian M. Stoltz	Complex Natural Products as a Driving Force for Discovery in Organic Chemistry
Georgia Institute of Technology	Marcus Weck	Densely Multifunctional Copolymers: Nature-Inspired Use of Multi-Recognition Site Self-Assembly Onto Polymer Backbones for Materials Applications
Harvard University	Xiaowei Zhuang	Exploring RNA-protein interactions and virus infections by ultra-sensitive fluorescence imaging and single-molecule spectroscopy
2004		
Stanford University	Justin Du Bois	Reaction design for the synthesis of neuroactive agents

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of California, Riverside	Pingyun Feng	Development of Novel Porous Materials as Fast Ion Conductors and Photocatalysts
University of Illinois at Urbana-Champaign	Neil L. Kelleher	The evolution of large molecule Mass Spectrometry
The University of Chicago	Sergey A. Kozmin	Chemical Synthesis: from Molecular Complexity and Skeletal Diversity to Cell-Regulatory Function
Harvard University	David R. Liu	Organic Synthesis Programmed by DNA Templates
Columbia University	Colin P. Nuckolls	Nanoscale electronic materials from self-assembled organic building blocks
The Pennsylvania State University	Blake R. Peterson	Synthetic receptor targeting as a novel tool for drug delivery
University of Arizona	Andrei Sanov	Photoelectron imaging of the electronic structure and time-resolved dynamics of molecular cluster anions: Unraveling the driving force of chemistry
Princeton University	Stanislav Shvartsman	Quantitative Analysis of Receptor-mediated Gene Expression
The University of Utah	Matthew S. Sigman	Physical Organic Chemistry as a Tool for Catalyst Design and Development
Georgetown University	Jennifer A. Swift	Surface Chemistry Approaches to Understanding & Directing Molecular Crystal Growth Processes
University of Michigan	Nils G. Walter	Structural dynamics and function of RNA enzymes highlighted by fluorescence spectroscopy at the single-molecule and ensemble levels
University of California, Berkeley	Peidong Yang	Chemistry and physics of semiconductor nanowires.

2003

Carnegie Mellon University	Catalina Achim	Design and synthesis of biology-inspired metal-containing nanostructures with potential applications in molecular electronics
Massachusetts Institute of Technology	Jianshu Cao	Statistical analysis of single molecule measurements and theoretical description of non-exponential and non-Gaussian single-particle slow dynamics
Texas A&M University	Paul S. Cremer	Investigations of the lower critical solution temperature of polymers and proteins with a linear temperature array
The University of Texas at Austin	Michael J. Krische	Catalytic reductive C-C bond formation: elemental hydrogen as terminal reductant
Cornell University	Kelvin H. Lee	New microfabricated technologies for proteome analysis
University of California, Los Angeles	Christopher J. Lee	Deciphering alternative splicing in the human genome: the new frontier in genomic complexity and proteome functional regulation
Georgia Institute of Technology	Louis A. Lyon	Design, synthesis, and self-assembly of stimuli-sensitive core/shell hydrogel nanoparticles
California Institute of Technology	David W. C. MacMillan	Enantioselective organocatalysis: Design of new catalysis concepts of broad utility to asymmetric chemical synthesis

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Stanford University	Vijay S. Pande	New methods for the simulation of the kinetics and thermodynamics of biological molecules
Harvard University	Hongkun Park	Transport and scanned probe investigation of chemical nanostructures
The Scripps Research Institute	Floyd E. Romesberg	New approaches to combating antiobiotic resistance
University of Wisconsin–Madison	Shannon S. Stahl	Catalytic methods for selective chemical oxidation with molecular oxygen
Princeton University	Suzanne Walker	Understanding post-translational modifications: chemical approaches to identifying the O-GlcNAcylated proteome
2002		
Northwestern University	Annelise E. Barron	N-substituted glycine oligomers (peptoids) with helical, amphipathic structure as biostable mimics of antimicrobial peptides
The University of Utah	Peter A. Beal	In vitro evolution of RNA for selective binding to acridine-peptide conjugates
Purdue University	Jillian M. Buriak	Nanoscale semiconductor surface chemistry
Princeton University	Jeffrey D. Carbeck	Measurements and modeling of electrostatic interactions in folded and denatured proteins
Stanford University	Hongjie Dai	Carbon nanotubes as a model system for nanoscale chemistry and physics
University of California, Los Angeles	Michael W. Deem	Statistical mechanical studies of zeolite nucleation
Georgia Institute of Technology	Robert M. Dickson	Single-molecule electroluminescence in nanotechnology - from fundamental understanding to device development
Wayne State University	Theodore G. Goodson	Ultra-fast optical investigations of novel dendrimer macromolecules and dendrimer metal nanocomposites for applications in photonics
California Institute of Technology	Jonas C. Peters	New strategies in catalysis with novel coordination complexes
Harvard University	David R. Reichman	Dynamics and spectroscopy of molecules in superfluid helium clusters
Columbia University	Dalibor Sames	C-H bond activation in complex chemical assembly
Carnegie Mellon University	David S. Sholl	Development and applications of instrinsically chiral solid surfaces based on metals, semiconductors, and natural minerals
New York University	Mark E. Tuckerman	Theoretical studies and new-methods development for proton-transfer processes in biologically and technologically important systems
University of Illinois at Urbana-Champaign	Wilfred van der Donk	Exercises in understanding enzyme catalysis
University of Washington	Younan Xia	Chemistry and the physics of one-dimensional nanostructures

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
2001		
The Pennsylvania State University	Philip Bevilacqua	Mechanistic studies of general acid-base catalysis and folding complexity in the HDV ribozyme
Rice University	Vicki Colvin	Protein crystals as scaffolds for materials design
North Carolina State University	Jan Genzer	Self- and directed assembly of polymers in thin films and at interfaces
University of Illinois at Urbana-Champaign	David Gin	Development and application of novel and practical methods for the efficient synthesis of complex carbohydrates
University of Minnesota	Richard Hsung	Development of novel methodologies for synthesis of natural products with biological and medicinal relevance
Brandeis University	Wenbin Lin	Crystal engineering of polar and chiral solids for applications in nonlinear optics and enantioselective separations and catalysis
University of Oregon	Mark Lonergan	Engineering depletion regions and controlling interfacial reactivity at conjugated polymer interfaces through internal compensation
University of Rochester	Benjamin Miller	Understanding carbohydrate recognition through the design, synthesis, and analysis of synthetic receptors
University of Wisconsin–Madison	Paul Nealey	Hybrid nanofabrication techniques combining advanced lithography and self-assembling systems for applications in molecular electronics and cell culture
Utah State University	John Peters	Investigating the biochemical mechanism of reactions catalyzed by enzymes that contain transition metals using structure determination by X-ray diffraction methods
Northwestern University	Amy Rosenzweig	Metal trafficking by copper ATPases
University of California, Los Angeles	Benjamin Schwartz	Experimental and theoretical studies of ultrafast processes in condensed phases: charge transfer, conjugate polymer/metal interfaces, and multiphoton lithography
Harvard University	Matthew Shair	Target-oriented and diversity-oriented synthesis of complex molecules applied to chemical biology
The Scripps Research Institute	Erik Sorensen	Profiling the chemical reactivity of complex proteomes
Duke University	Ross Widenhoefer	Palladium-catalyzed carbocyclization of functionalized dienes
University of Notre Dame	Olaf G. Wiest	Electron-transfer-induced reactions in organic and bio-organic chemistry
2000		
University of Colorado Boulder	Kristi S. Anseth	Novel photocrosslinkable materials and photopolymerization methods
University of South Carolina	Uwe H. F. Bunz	Synthesis and property evaluation of novel organic semiconductors based on poly(paraphenyleneethynylene)s
Cornell University	Geoffrey W. Coates	New catalysts for the synthesis of biodegradable polycarbonates from CO_2
University of California, Santa Barbara	Timothy Deming	Transition-metal complexes for peptides and polypeptide synthesis

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of New Mexico	Deborah G. Evans	Development of computational techniques and methods to simulate electron transfer in molecular arrays
The University of North Carolina at Chapel Hill	Michel R. Gagné	An outer-sphere approach to controlling catalytic reaction selectivities
Northwestern University	Hilary A. Godwin	Elucidation of the molecular mechanism of lead poisoning: biochemistry and aqueous coordination chemistry of Pb(II)
Duke University	Mark W. Grinstaff	Mechanistic studies of charge transfer in DNA
University of Minnesota	Marc A. Hillmyer	Design, synthesis, and application of new functional block copolymers
Columbia University	James L. Leighton	New methods and strategies for the synthesis of antibiotic medicinal agents
University of California, Berkeley	Jeffrey R. Long	Manipulating inorganic structures: general strategies for the synthesis of multimetal clusters and extended solid materials
University of Illinois at Urbana-Champaign	Todd J. Martinez	First-principles modeling of reaction dynamics including quantum effects
Boston College	Scott J. Miller	Discovery of new catalysts for the asymmetric synthesis of compounds of pharmaceutical interest
The University of Chicago	Milan Mrksich	Tailored substrates for mechanistic studies of cell adhesion
Johns Hopkins University	John P. Toscano	Rational design of novel photochemical precursors to nitric oxide
University of Pennsylvania	Patrick J. Walsh	Chiral environment amplification: use of achiral ligands in asymmetric catalysis
Stanford University	Thomas J. Wandless	New strategies to improve protein-ligand binding interactions
University of Massachusetts Amherst	James J. Watkins	Novel deposition methods for the preparation of nanostructured devices

1999

University of Massachusetts Amherst	Scott M. Auerbach	Theory and simulation of molecules in nanopores
University of California, Berkeley	Carolyn R. Bertozzi	Chemical approaches to understanding and modulating dynamic cell surface structures
Indiana University	David E. Clemmer	Development of gas-phase separations for the analysis of peptide libraries
Boston College	John T. Fourkas	Probing single-molecule dynamics and structure using two-photon microscopy
University of Minnesota	C. Daniel Frisbie	Nanoprobing electrical transport and luminescence in organic materials
University of Colorado Boulder	Randall L. Halcomb	New directions in organic synthesis: targets, strategies, methods, and biochemical applications
University of Notre Dame	Sharon Hammes-Schiffer	Theoretical and computational investigations of chemical reaction dynamics in complex systems
University of Oregon	James E. Hutchison	Chemical approaches to nanoscale electronic materials and devices
Johns Hopkins University	Thomas Lectka	Catalytic, asymmetric alkylations of N, O- and N, N-acetals

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Delaware	Raul Lobo	Molecular recognition phenomena in crystalline silica-water networks containing organic guests
University of Illinois at Urbana-Champaign	Yi Lu	Structural characterization and engineering of metalloproteins and metalloribozymes
University of California, Santa Barbara	Dimitrios Maroudas	Multiscale computational study of semiconductor thin-film deposition and heteroepitaxial growth of strained semiconductor films and confined quantum structures
The Ohio State University	Anne B. McCoy	Theoretical investigations of the effects of weak intermolecular interactions on spectroscopy and reaction dynamics in van der Waals complexes
University of Arizona	Dominic V. McGrath	Photoresponsive dendritic macromolecules for information storage, organic synthesis, and chemical agent delivery
Boston University	Amy S. Mullin	Putting out molecular fires: energy flow pathways and chemical reactions of highly excited molecules
University of Pennsylvania	Andrew M. Rappe	Tailoring molecule-surface properties via substrate modification
Texas A&M University	Daniel Romo	Synthesis and biological studies of natural products displaying potent physiological effects
Tulane University	Daniel K. Schwartz	The structural and dynamic properties of ultra-thin organic films formed on liquid and solid surfaces
Colorado State University	Yian Shi	Asymmetric synthesis with chiral dioxiranes
Wayne State University	Peng George Wang	Chemical and enzymatic synthesis of glycoconjugates and their biomedical applications

1998

University of California, Davis	Nicholas L. Abbott	Spontaneous assembly on the meso-scale using surface forces mediated by liquid crystals
Polytechnic University	Nitash P. Balsara	Microstructured polymer materials under quiescent conditions and under the influence of external fields
New York University	Stacey F. Bent	Studies of amorphous semiconductor alloys: growth and processing at a molecular level
Michigan State University	Marcos Dantus	Elucidating the dynamics of chemical reactions at high energies by femtosecond time-resolved techniques in the vacuum ultraviolet
University of Maryland, College Park	Jeffery T. Davis	Bioorganic chemistry and molecular recognition
University of Delaware	P. Andrew Evans	New transition-metal-catalyzed carbon-carbon bond forming reations
Colorado State University	Ellen Fisher	Use of resonantly enhanced multiphoton ionization to probe radical-surface interactions
Stony Brook University	Clare P. Grey	Solid-state NMR studies of disordered materials: molecular sieves, fluorides and oxyfluorides
University of Illinois at Urbana-Champaign	Martin Gruebele	Coordination of secondary and tertiary structure during protein folding

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Oregon	Michael M. Haley	Synthesis and characterization of novel benzenoid and non-benzenoid aromatic systems
Massachusetts Institute of Technology	Paul E. Laibinis	Development and application of solution-phase reactions at hydrogen-terminated silicon surfaces
Wayne State University	John Montgomery	New cyclizations and multicomponent couplings
University of South Carolina	Catherine J. Murphy	Biophysical applications of nanomaterials
University of Virginia	Brooks Hart Pate	New high-resolution infrared spectroscopy techniques for measuring the rate of conformational isomerization
North Carolina State University	David A. Shultz	Preparation and characterization of building blocks for molecule-blocks for molecule-based magnets
Boston College	Marc L. Snapper	Development of new olefin metathesis-based methods for the construction of complex natural products
University of Massachusetts Amherst	Michael Tsapatsis	Synthesis and assembly of hollow silicate nanospheres and incorporation of materials chemistry in the curriculum
University of California, Irvine	Keith A. Woerpel	The development of stereoselective methods of organic synthesis using new reactions of organosilicon compounds
Yale University	John L. Wood	Organic chemistry: synthetic methods and strategy development, natural product synthesis, and applications of synthesis at the organic chemistry/cellular biology interface
The Pennsylvania State University	XuMu Zhang	Development of asymmetric catalysts for the synthesis of chiral drugs and agrochemicals

1997

University of California, Santa Barbara	Eray S. Aydil	In situ surface and plasma diagnostics during plasma-assisted deposition and etching of electronic materials
University of Wisconsin–Madison	Juan J. de Pablo	Fundamental molecular-level studies for the structure and phase behavior of linear, branched, and crosslinked polymeric systems for engineering applications
Colorado State University	Peter K. Dorhout	Polychalcogenide and main-group metal-ion speciation in solvatothermal synthesis
Massachusetts Institute of Technology	Gregory C. Fu	Development of organometallic catalysts for stereoselective organic synthesis
California Institute of Technology	Konstantinos P. Giapis	Scattering dynamics at complex surfaces with applications to semiconductor etching and deposition
University of Michigan	Richard A. Goldstein	Evolutionary perspectives on protein structure formation
Yale University	John F. Hartwig	Metal-mediated amine, ether, and borane production
University of Illinois at Urbana-Champaign	Nancy Makri	Path-integral methods for condensed-phase quantum dynamics
Northwestern University	Frank E. McDonald	New synthesis methods and strategies for oligosaccharides and polycyclic ethers
Clark University	Dale F. Mierke	Design, synthesis, and structural characterization of peptidomimetics for drug design

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
The Pennsylvania State University	Karl T. Mueller	Development of solid-state NMR methods with applications for polycrystalline, amorphous, and biomolecular solids
Rensselaer Polytechnic Institute	Todd M. Przybycien	Rational manipulation of protein aggregation behavior
University of Massachusetts Amherst	Vincent M. Rotello	Model systems for flavoenzyme activity, recognition and catalysis in sol-gel matrices
Purdue University	Igal Szleifer	Theoretical studies of the structural and thermodynamic properties of chain molecules in confined environments
University of Pennsylvania	Michael J. Therien	The biomimetic chemistry of light harvesting, energy migration, and electron transfer: mechanism, theory, molecular design, and biomaterials
The University of Tennessee	Ziling (Ben) Xue	Synthetic and mechanistic organometallic chemistry in molecular approaches to advanced materials
1996		
University of Rochester	Guillermo C. Bazan	Development of synthetic methodology based on transition-metal complexes for preparation of macromolecules with prespecified electronic properties or secondary structures
University of Wyoming	D. Scott Bohle	Mechanistic chemistry of peroxynitrite
University of Colorado Boulder	Christopher N. Bowman	Photopolymerization of multifunctional monomers: characterization of reaction diffusion kinetics, materials structure and properties
Duke University	Mark J. Burk	Design, development, and application of asymmetric catalytic processes
California Institute of Technology	Erick M. Carreira	Studies in asymmetric catalysis
University of California, San Diego	Robert E. Continetti	Energetics and dissociation dynamics of transient species and dynamics of elementary termolecular reactions
Indiana University	Andrew D. Ellington	Evolutionary engineering of metabolism: transfer of yeast lysine biosynthesis to bacteria and selective optimization of metabolic flux
University of Illinois at Chicago	Lucio Frydman	Development of new methods in NMR analysis and their application to chemical and biochemical studies
Stanford University	John H. Griffin	Molecular recognition and catalysis in naturally occurring and designed synthetic systems
University of Wisconsin–Madison	Laura L. Kiessling	Chemical approaches to structure/function relationships in protein-carbohydrate interactions
Northwestern University	Chad A. Mirkin	Self-assembled surface structures and redox-switchable electrocatalytic materials
University of Minnesota	Karin Musier-Forsyth	Biophysical approaches to study of RNA structure and function
University of California, Irvine	James S. Nowick	Protein structure, new catalyst creation, and drug delivery to intracellular targets
University of Pennsylvania	Norbert F. Scherer	Experimental chemical physics

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Illinois at Urbana-Champaign	Jonathan V. Sweedler	Increased sensitivity of capillary zone electrophoresis by improving optical detection methods: fundamental studies of resolution and efficiency
University of California, Davis	Susan C. Tucker	Theoretical and computational studies of supercritical fluid solvent effects on chemical reaction rates
Massachusetts Institute of Technology	Jackie Y. Ying	Processing of mesoporous transition-metal oxide catalysis and permselective inorganic membranes
1995		
University of Michigan	Gary D. Glick	New approaches to the study of structure-function relationships in biological macromolecules
The University of Texas at Austin	Brent L. Iverson	Manipulation of recognition and catalysis in biological macromolecules
Wayne State University	Robert J. Levis	Chemistry in high coulombic fields: the nature of the surface chemical bond, and laser vaporization and femtosecond photoionization of DNA
Rutgers, The State University of New Jersey	Gaetano T. Montelione	Heteronuclear three-dimensional-NMR studies of protein-protein and protein-nucleic acid complexes
University of California, Irvine	Reginald M. Penner	Nanostructure-based investigations of metal surfaces by scanning tunneling microscopy
Yale University	Lynne Regan	Protein design as a tool to study structures and function
The University of Chicago	Lawrence R. Sita	Synthesis, characterization, and investigation of new classes of organic and organometallic oligomers and polymers in solution and at interfaces
University of Pennsylvania	Timothy M. Swager	Development of novel conducting polymers and liquid crystals
The University of North Carolina at Chapel Hill	H. Holden Thorp	Transition-metal redox reactions of biological significance
University of Minnesota	William B. Tolman	Bioinorganic and organometallic chemistry
Duke University	Eric J. Toone	Biocatalysis and protein-carbohydrate interactions
California Institute of Technology	Zhen-Gang Wang	Statistical mechanics of structures, phase transitions and dynamics of complex fluids
Massachusetts Institute of Technology	James R. Williamson	Structure and function of RNA and RNA-protein complexes
University of Pittsburgh	Peter Wipf	Total synthesis of natural products
University of Maryland, College Park	Sarah A. Woodson	Folding of catalytic RNA from thermophiles
New York University	John Z. H. Zhang	Time-dependent quantum dynamics study for chemical reactions
1994		
The University of Texas at Austin	Eric V. Anslyn	Development and use of combinatorial libraries for use in gene therapy
The University of Utah	Thomas P. Beebe, Jr.	Surface chemistry of DNA and other large molecules

Camille Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
California Institute of Technology	Pamela J. Bjorkman	Three-dimensional structural and functional studies of cell-surface proteins involved in the immune response
University of California, Berkeley	Arup K. Chakraborty	Quantum and statistical mechanical modeling of polymer-metal interfaces, zeolites, and complexation with macrocyclic ethers
The Ohio State University	James A. Cowan	Structural, mechanistic, and regulatory roles of metal cofactors in biological redox chemistry, nucleic acid biochemistry, and immunochemistry
Boston College	Amir H. Hoveyda	Catalytic and asymmetric transformations and their application to synthesis of medicinally important agents
Texas A&M University	Jeffery W. Kelly	Synthetic, physical organic, and spectroscopic approaches to evaluate the folding, structure, and function of b-sheet peptides and proteins
University of Southern California	Chi H. Mak	Theoretical understanding of quantum tunneling in condensed phase chemical and biological reactions
University of California, Los Angeles	Craig A. Merlic	Discovery, development and application of organometallic chemistry for bioactive natural products synthesis and materials research
University of Illinois at Urbana-Champaign	Jeffrey S. Moore	Molecular synthesis of porous crystals, liquid crystals, organic monolayers, and structure-controlled macromolecules
University of California, San Diego	Michael J. Sailor	Synthesis and study of materials with novel electrical and photochemical properties
Stanford University	Eric S. G. Shaqfeh	Investigation of fluid mechanics, non-linear transport phenomena, viscoelastic fluid instabilities, and reactive ion etching
University of Colorado Boulder	Margaret A. Tolbert	Atmospheric chemistry: heterogeneous reactions on polar stratospheric clouds and sulfuric acid aerosols
Yale University	Patrick H. Vaccaro	State-selective preparation and characterization of energetic molecular species and studies of reaction dynamics and relaxation
University of Pennsylvania	Gregory A. Voth	Theoretical and computational studies of dynamical processes in condensed matter
Indiana University	Theodore S. Widlanski	Protein-DNA interactions: chemical methods for controlling and studying signal transduction

1993

Rutgers, The State University of New Jersey	Jean S. Baum	NMR studies of protein folding and protein binding sites, including NMR structure determination and dynamics studies of partially denatured proteins and triple helical peptides
Columbia University	Brian E. Bent	Kinetic and mechanistic studies of reactions on surfaces; trapping and identification of absorbed intermediates
The University of Texas at Austin	Jennifer S. Brodbelt	Host-guest chemistry in the gas phase by various mass spectrometric techniques in order to obtain a solvent-free perspective on intrinsic aspects of molecular recognition
Harvey Mudd College	Robert J. Cave	Applications of electronic structure theory to the study of excited states of molecules; development of correlation methods for the treatment of excited states

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Stanford University	Christopher E. D. Chidsey	In-situ scanning tunneling microscopy to probe structural changes driven by electrochemical processes; interfacial electron transfer in self-assembled monomolecular films to understand fundamental mechanisms and engineer selective biochemical sensors
University of California, Santa Barbara	Bradley F. Chmelka	Identification and description of molecular processes governing macroscopic properties of advanced catalysts, optical devices, and polymeric solids, with emphasis on spectroscopic measurements of material microstructure and dynamics
University of Pennsylvania	David W. Christianson	Structure-assisted protein design using x-ray crystallography, with a focus on metalloenzymes and protein-protein recognition
Carnegie Mellon University	William S. Hammack	Crystallography of amorphous solids: high pressure behavior of solids to develop a general viewpoint of the structure of amorphous materials
University of New Mexico	Mark J. Hampden-Smith	Organometallic Chemistry
California Institute of Technology	Barbara Imperiali	Design and synthesis of functional polypeptides motifs; stereoselective synthesis of novel amino acids; mechanistic studies on specificity and origins of reactivity in enzyme-catalyzed protein modification reactions
Michigan State University	Mercouri G. Kanatzidis	Synthesis of new compunds of S, Se, and Te; conductive polymers; chemistry in constrained environments; intercalation chemistry, crystal growth, hydrothermal synthesis
University of Rochester	Eric T. Kool	Design of synthetic nucleotide-based compounds which mimic dynamic binding and catalytic behavior of natural proteins and nucleic acids, with potential applications as molecular probes, catalysts, and therapeutics
Dartmouth College	Jane E. G. Lipson	Statistical mechanics of liquids and their mixtures; equilibrium properties of polymers; simulations of polymers having interesting topologies
Northwestern University	Thomas V. O'Halloran	Bioinorganic chemistry and molecular biology, including issues related to metal receptor proteins that regulate gene expression
Brandeis University	Thomas C. Pochapsky	Structure and dynamics of self-assembling systems. NMR determination of the solution structure of putidaredoxin (Pdx), and interactions between it and its redox partners. Ion pair structure with applications to catalyst design
Yale University	Alanna Schepartz	Organic chemistry and molecular biology applied to determining chemical principles that govern protein folding, RNA recognition, and DNA-protein interactions
University of California, Irvine	Athan J. Shaka	Multiple-pulse NMR in liquids and determination of molecular structures in solution; development of spectrometer hardware and software
Iowa State University	L. Keith Woo	Electron-transfer reactions, oxygen activation, catalysis, electrode surface modifications
Brown University	Matthew B. Zimmt	Development and application of techniques that monitor energy transfer, absorption and dissipation to understand and control chemical reactivity and material properties

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
1992		
The Pennsylvania State University	Patricia A. Bianconi	Synthesis of composite materials with properties of biological hard tissue
University of California, Los Angeles	Emily A. Carter	Ab initio and molecular dynamics calculations on hydrocarbons, organometallics, metal clusters, and solid surfaces.
Rutgers, The State University of New Jersey	Alan S. Goldman	Transition-metal mediated reactions of organic molecules
University of Nebraska-Lincoln	Gerard S. Harbison	Solid-state and zero-field magnetic resonance of biological systems, materials and molecular crystals.
University of Virginia	W. Dean Harman	Transition-metal based synthetic methodology: development of π-base-promoted activation of aromatic molecules.
University of California, Berkeley	Joel M. Hawkins	New methods of asymmetric synthesis; chemistry of non-planar π systems
University of Illinois at Urbana-Champaign	Eric N. Jacobsen	Synthetic Methodologies, Emphasizing Asymmetric Catalysis
University of Rochester	Anne B. Myers	Spectroscopic studies of ultrafast photochemical reactions in gases, solutions, and polymers, and the dynamics of solvent-solute interactions
University of Wisconsin–Madison	Gilbert M. Nathanson	Molecular beam scattering studies at liquid surfaces
Cornell University	Athanassios Z. Panagiotopoulos	Molecular simulation of phase equilibria for complex fluids; self-assembly in surfactant solutions; structural transitions in polymers and proteins.
Rice University	Gustavo E. Scuseria	Coupled cluster methods to solve the molecular Schrodinger equation; implementation of state-of-the-art computational programs with applications to chemical sciences
Harvard University	Gregory L. Verdine	Biological organic chemistry: protein-nucleic acid interactions, DNA modification and repair, nucleic acid structure, function, and dynamics
University of California, Santa Barbara	Alec M. Wodtke	Spectroscopic investigations of highly vibrationally excited molecules.
1991		
University of Illinois at Chicago	Victoria Buch	Computational studies of disordered molecular solids and clusters
The University of Chicago	Jeffrey A. Cina	Adiabaticity in molecules; coherent optical transients in rarefied and condensed phases; molecular geometric phases; optical impulsive excitation in polyatomic systems; spectral line shapes in solid hydrogen
University of Miami	Ariel Fernández	Application of statistical mechanics to the kinetics of folding in biopolymers, specifically RNA folding
University of California, Santa Barbara	Glenn H. Fredrickson	Theoretical statistical mechanical studies of condensed phases, glass transition phenomena, equilibrium and non-equilibrium phase transition in polymers, suspension mechanics, theory of block and random copolymers, and polymer dynamics and rheology

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Amherst College	David E. Hansen	Isolation of antibodies with sequence-specific protease activity; rational design of inhibitors for a variety of therapeutically important enzymes
Northwestern University	Joseph T. Hupp	Electron transfer reactivity
University of California, Los Angeles	Richard B. Kaner	Synthesis and characterization of layered compounds, refractory ceramics, conducting polymers, and highly charged dopants through rapid solid-solid metathesis reactions
Massachusetts Institute of Technology	Peter T. Lansbury, Jr.	Investigation of the conformational behavior of peptides, glycoaminoglycans, and glycopeptides.
Cornell University	Roger F. Loring	Investigation of dynamics of molecular electronic and vibrational excited states in condensed phases; solvation effects in electronic spectroscopy; theory of nonlinear spectroscopy; structures and dynamics of macromolecular fluids; nonequilibrium statistical mechanics
University of California, Berkeley	Daniel M. Neumark	Spectroscopic investigation of transition states of bimolecular reactions, and high resolution photoelectron spectroscopy of clusters
Columbia University	Gerard Parkin	Inorganic and coordination chemistry of main group metals, transition metals, and anions
Kansas State University	Andrzej T. Rajca	Experimental and theoretical characterization of organic materials with magnetic, conducting and nonlinear optical properties
1990		
Harvard University	Peter Chen	Spectroscopy, Kinetics, and Thermochemistry of Reactive Intermediates
Michigan State University	Kim R. Dunbar	Preparation of New Reactive Mono- and Binuclear Transition Metal Complexes
University of California, Los Angeles	Juli F. Feigon	Structural Studies of DNA Triplexes
Wayne State University	Joseph S. Francisco	Molecular Photodissociation Dynamics and Spectroscopy of Stable Molecules and Transient Free Radicals
Yale University	Mark A. Johnson	Molecular Level Effect of Solvent on Electron Transfers Between Donors and Acceptors
University of Illinois at Chicago	Michael Kahn	A Molecular Understanding of the Structure Function Relationship of Peptides and Proteins
Columbia University	Charles M. Lieber	Atomic Level Factors Determining Structural and Electronic Properties of Novel Low-Dimensional Materaials
California Institute of Technology	Andrew G. Myers	Synthesis and Study of Complex Organic Molecules of Importance in Biology and Human Mediine
University of Minnesota	Scott D. Rychnovsky	Studying Ion-Channels to Improve Antibiotic and Antifungal Drug Design
Johns Hopkins University	W. Mark Saltzman	Biocompatible Polymers for the Controlled Release of Drugs and Polymers that Support the Growth and Sustained Function of Attached Cells

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Maryland, College Park	Devarajan Thirumalai	1) Understanding Protein Folding 2) Stability of Colloidal Dispersions in the Presence of Polymers
The University of North Carolina at Chapel Hill	Nancy L. Thompson	Structure and Dynamics of Antibody Molecules at Cell Surfaces
1989		
Stony Brook University	Scott L. Anderson	Spectroscopic Cluster Reaction Studies
The University of Chicago	Laurie J. Butler	Chemical Reaction Dynamics
University of Pittsburgh	Rob D. Coalson	Theory of Molecular Rate Processes
The Ohio State University	Anthony W. Czarnik	1) Catalysis via Reversible Covalent Bond Formation 2) Synthetic Catalysts that Act on Mononucleosides 3) Precomplexation andActivation of Carbohydrate Phosphate Esters 4) Chelation-Enhanced Fluorescence 5) Polymers and Molecular Receptors Based on Hexaazatripheylene
University of Pennsylvania	Hai-Lung Dai	Studies of Vibrationally Excited, Isolated Molecules and Molecules Adsorbed on Surfaces
Princeton University	Pablo G. Debenedetti	The Molecular Basis Underlying the Solvent Power of Supercritical Fluids
The Pennsylvania State University	Andrew G. Ewing	Neurochemical Communcation
Stanford University	Alice P. Gast	Physical Properties of Colloidal Suspensions and Polymer Solutions
Florida State University	Marie E. Krafft	Stoichiometric Organometallic Reactions
Cornell University	Atsuo Kuki	Oligopeptide Synthesis
The University of Texas at Austin	Thomas E. Mallouk	Artificial Photosynthetic Systems
University of California, San Diego	John D. Simon	1) Condensed Phase Chemical Dynamics 2) Techniques for Examining Conformational Changes in Proteins Following Photoinitiated Processes
University of Illinois at Chicago	Michael Trenary	Spectroscopic Studies of Molecules Chemisorbed on Transition Metal Surfaces
University of Illinois at Urbana-Champaign	Steven C. Zimmerman	1) Model Enzymes and Biomimetic Systems 2) Synthetic Receptors for Molecules Ranging in Size from Substituted Benzenes to DNA 3) Novel DNA Polyintercalators with Potential Anticancer Activity
1988		
University of Arkansas	Donald R. Bobbitt	1) Photothermal Detection of Circular Dichromism: Application to the Study of DNA Intercalation Complexes 2) Dynamically Modified, Biospecific Optical Fiber Sensors
Massachusetts Institute of Technology	Stephen L. Buchwald	Developing New Methods for the Preparation of Transition Metal Complexes of Unsaturated Organic Compounds
Indiana University	Charles T. Campbell	Surface/Function Relationships in Catalysis

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
The Pennsylvania State University	Ken Feldman	New Methods for Organic Synthesis
Carnegie Mellon University	Paul L. Frattini	"Rheo-optics" Relating the Microstructure of Complex Fluids to the Macroscopic Flow Behavior
University of Illinois at Urbana-Champaign	Gregory S. Girolami	1) Synthesis and Characterization of Coordinately Unsaturated Alkyls of Early Transition Elements as Models in Industrial Olefin Polymerization Catalysts 2) Design of Organometallic Species as Precursors to Low-Temperature Chemical Vapor Deposition Materild
Texas A&M University	Robert R. Lucchese	Electron-Molecule Scattering and Gas-Surface Interaction Dynamics
University of Rochester	R. J. Dwayne Miller	Picosecond Spectroscopy and Surface Electron Transfer Processes
The University of Texas at Austin	Jonathan L. Sessler	The Chemistry of Porphyrins and Related Compounds
Hope College	Michael E. Silver	Exploration of Early-Transition Metal Compounds
University of California, Berkeley	Angelica Maria Stacy	Solid State Chemistry
Johns Hopkins University	Thomas D. Tullius	1) Understanding Structural Details for DNA Molecules in Unusual Circumstances 2) Use of Hydroxyl Radical Chemistry to Determine Structures and Energetics of Complicated DNA-Protein Complexes
California Institute of Technology	Daniel P. Weitekamp	Nonlinear Spectroscopy as a Tool for Chemical Studies
Yale University	Kurt W. Zilm	The Development and Application of Solid State NMR Methods to Problems at the Forefront of Organic and Inorganic Chemistry

1987

The University of Utah	Peter B. Armentrout	Bridging the Fields of Ion, Organometallic, and Physical Chemistry
Northwestern University	Anthony G. M. Barrett	Synthetic Organic and Organometallic Chemistry
University of Arizona	Peter F. Bernath	Spectroscopic Characterization of Unusual Species
Indiana University	George Christou	1) Elucidation of the Structure and Mechanism of Action of the Water Oxidation Enzyme in Green Plants and Cyanobacteria 2) Elucidating Mechanistic Aspects of Catalyst Posining During Industrial Refining of Heavy Crude Oils
Harvard University	Bruce Demple	Understanding Moleucular Mechanisms Cells Employ to Overcome Damage to Genetic Material
University of California, Los Angeles	François N. Diederich	1) Supramolecular Complxation and Catalysis 2) Extended Aromatic and Hertoaromatic Surfaces
University of Washington	Gary P. Drobny	NMR Spectroscopic Studies of the Ordering and Conformation of Flexible Chain Molecules in Ordered Fluid Phases
Cornell University	Gregory S. Ezra	Intramolecular Dynamics and the Properties of Clusters
Stanford University	John W. Frost	Enzymatic Decontamination and Biodegredation of Organophosphonates

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
The University of Texas at Austin	Keith P. Johnston	Investigating the Rate Constant Changes of a Homogeneous Chemical Reaction in a Supercritical Fluid by a Small Change in Pressure
Princeton University	Kevin K. Lehmann	IR-optical Double Resonance Studies
University of California, Berkeley	Jeffrey A. Reimer	Electro-Optical Properties of Amphorous and Polycrystalline Semiconductors
1986		
Columbia University	Jacqueline K. Barton	Biological Polymers
California Institute of Technology	John F. Brady	Transport Properties of Heterogenous, Fluid-Particle Systems
Massachusetts Institute of Technology	Sylvia T. Ceyer	Surface Science
University of Wisconsin–Madison	Michael M. Cox	The Mechanism of Genetic Recombination Derived from E. coli and yeast
The University of Texas at Austin	Richard A. Friesner	Development and Application of New Methods for Calculating Dynamical and Spectroscopic Properties of Molecules in Biological Systems
University of Notre Dame	Jeffrey C. Kantor	Chemical Process Control
University of Pennsylvania	Marsha I. Lester	Dissociation Dynamics of van der Waals Complexes
Yale University	William J. McGinnis	Fundamental Questions Related to the Homeo Box and Development
University of Oregon	Geraldine L. Richmond	Studying Molecular Structure and Interactions in Condensed Media
University of California, Berkeley	Jasper Rine	Position Effects on Gene Expression
Stanford University	Richard H. Scheller	Understanding the Biogenesis and Actions of Biologically Active Peptides in the Brain
Iowa State University	Patricia A. Thiel	Surface Chemistry
1985		
Arizona State University	Krishnan Balasubramanian	Relativistic Quantum Chemistry, Chemical Applications of Group Theory, Graph Theory, and Chemical Applications of Artificial Intelligence
Yale University	Gary W. Brudvig	The Application of Physical Techniques to the Study of Biological Electron Transfer Reactions
California Institute of Technology	Terrence J. Collins	Oxidizing Chemical Systems
University of Pittsburgh	Dennis P. Curran	Biomedically Important Natural Products
University of Minnesota	Klavs F. Jensen	1) Chemical Mechanisms and Transport Processes Involved in Processing Microelectronic Materials 2) Transport Phenomena and Chemical Reactions in Pkorous Media 3) Nonlinear Behavior of Chemically Reacting Systems

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Rochester	William D. Jones	The Mechanisms of Organometallic Chemistry
Stanford University	Nathan S. Lewis	Investigating the Properties of Semiconductor/Liquid Junctions
Emory University	Lanny S. Liebeskind	Functionalized Metallacycles
Harvard University	David M. Ronis	1) Molecular Theory of Membrane Transport 2) Dynamics and Fluctuations in Nonequilibrium Systems 3) Structure and Dynamics of Dilute Colloidal Suspensions in and out of Equilibrium 4) Energy Transfer Mechanisms in Lineshape Phenomena
Purdue University	Ian P. Rothwell	Inorganic and Organometallic Chemistry of Early d-block Elements
The Ohio State University	Ming-Daw Tsai	Membrane Biochemistry and Biophysics
Columbia University	Bonnie Ann Wallace	Membrane Proteins
1984		
The Ohio State University	Bruce E. Bursten	The Electronic Structure of Inorganic and Organometallic Complexes
California Institute of Technology	Dennis A. Dougherty	Direct Observation and Characterization of Organic Biradicals and Design and Synthesis of Hydrophobic Binding Sites
The Pennsylvania State University	Barbara J. Garrison	Surface Science
Georgetown University	Miklos Kertesz	The Governing Principles of Structural Stability
University of California, Santa Barbara	Bruce H. Lipshutz	Synthetic Methods/Natural Products Chemistry
The University of Chicago	David G. Lynn	Developing Methods to Contribute to Our Basic Understanding of Plant Cell Division and Differentiation
University of Maryland, College Park	Alice C. Mignerey	Intermediate-Energy Heavy-Ion Reactions
The University of Texas at Austin	Peter J. Rossky	Molecular Descriptions of Aqueous Solutions
Wayne State University	H. Bernard Schlegel	ab initio Molecular Orbital Calculations
Yale University	Stuart L. Schreiber	Natural Product Synthesis
Columbia University	James L. Skinner	Optical Properties of Molecular Crystals and Supercooled Liquid-Glass Transition
University of California, Berkeley	David S. Soane	Polymer Research
1983		
Massachusetts Institute of Technology	Robert A. Brown	Pattern Formation in Non-Linear Flows of Newtonian and Viscoelastic Liquids and Solidification form the Melt of Alloy Materials
Iowa State University	Andrew E. DePristo	1. Semiclassical Theory of Exchange Reactions 2. Molecule-Solid Surface Dynamics 3. Molecular Electron Transfer Reactions 4. Quantum Number Scaling Theories

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
California Institute of Technology	Kenneth C. Janda	Intramolecular Energy Distribution
University of Wisconsin-Eau Claire	Frederick W. King	1) Electronic Density 2) Nonlinear Programming Approach to the Variational Method 3) Bounds on Optical Properties
Colorado State University	Branka M. Ladanyi	Molecular Theory of Liquids
University of Rochester	Shaul Mukamel	Methods of Nonequilibrium Statistical Mechanics Toward the Microscopic Understanding of Molecular Relaxation Phenomena
The Ohio State University	Matthew S. Platz	Carbene Chemistry
Indiana University	James P. Reilly	Laser Induced Surface Ionization
University of California, San Diego	Mark H. Thiemens	Early Solar System Processes
Johns Hopkins University	Craig A. Townsend	Natural Product Biosynthesis
Harvard University	Veronica Vaida	Stereoscopic Methods for the Investigation of Excited State Properties of Reactive Molecules
University of Colorado Boulder	David M. Walba	Methods for Directed Organic Synthesis
University of California, Los Angeles	R. Stanley Williams	The Kinetics of Chemical Reactions on Surfaces by Monitoring Adsorbed Reactants, Products, and Intermediates in a Pulse-Beam Experiment

1982

The University of Texas at Austin	Alan Campion	Surface Raman Scattering
University of Wisconsin–Madison	F. Fleming Crim	Laser Studies of Molecular Energy Transfer and Unimolecular Reaction
Harvey Mudd College	G. William Daub	1) Synthetic Organic Chemistry on the Ketal Clasisen Rearrangement 2) General Synthetic Routes to Vinylic Fluorides
University of South Carolina	John H. Dawson	Spectroscopic Studies of P-450 and Related Oxygen-Utilizing Proteins
Oregon State University	Glenn T. Evans	Dynamics of Rigid and Non-Rigid Poly-Atomic Molecules in the Liquid State
The University of Chicago	Graham R. Fleming	Direct Time Resolved Studies of Relaxation Processes in Physical Chemical and Biological Systems
Boston College	Evan R. Kantrowitz	The Pyrimidine Pathway
University of Houston	J. Andrew McCammon	Studies of Atomic Liberations in Protiens
The Ohio State University	C. William McCurdy	Resonance Collision Processes and Surface Collisions
Iowa State University	Cheuk-Yiu Ng	Experimental Molecular Reaction Dynamics
University of Southern California	Maria C. Pellegrini	Ribosomal Relationships, Expression, and Organization
Harvard University	Kevin S. Peters	The Mechanism of Organic Reactions Involving Ionic Intermediates and the Mechanism of the Initiation of Visual Transduction

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Illinois at Urbana-Champaign	Thomas B. Rauchfuss	Synthetic and Mechanistic Studies on Nonmetallic Derivatives of Transition Metals
Brandeis University	Barry B. Snider	Development of New Synthetic Methods and the Synthesis of Natural Products and Molecules with Unusual Properties
California Institute of Technology	Gregory Stephanopoulos	1) On-line Identification and Control of Biochemical Reactors 2) Study of the Behavior of Recombinant Microorganisms Under Large-Scale Cultivation Conditions

1981

The University of Chicago	Robert C. Aller	Marine Sedimentary Field Studies
Georgia State University	Alfons L. Baumstark	Chemistry of Organic Peroxides
Harvard University	Lewis C. Cantley	Structure and Regulation of Membrane Transport Systems
University of California, Berkeley	John H. Clark	Determining the Effect of Molecular Orientation on Chemical Reactions in Solution
Yale University	Robert H. Crabtree	Hydrogenation and Hydroformylation Catalysts
University of Oregon	Richard G. Finke	Synthetic and Mechanistic Organotransition Metal Chemistry
Rutgers, The State University of New Jersey	Stephan S. Isied	Using Metal Ion Reactivity to Synthesize and Study Specific Peptide Sequences
University of Pittsburgh	Alan P. Kozikowski	Synthetic Organic Chemistry
Emory University	Dennis Liotta	Diels-Alder Reactions Involving p-Quinones
St. Olaf College	Gary L. Miessler	Mixed Dihiolene-Dithiocarbamate Complexes
Stony Brook University	Glenn D. Prestwich	Termite Chemical Evolution
University of Colorado Boulder	Mary C. Rakowski DuBois	Mechanistic Studies of Various Molybdeum Complexes
Stanford University	James E. Rothman	Assembly of Cellular Membranes
Northwestern University	George C. Schatz	Surface Dynamics and Spectroscopy
University of California, Davis	Neil E. Schore	Organotransition-metal Chemistry: 1) Application of Known Chemistry to Current Problems 2) Design of New Compounds
Massachusetts Institute of Technology	Costas G. Vayenas	High Temperature Electrocatalysis
University of California, San Francisco	Keith R. Yamamoto	1) Detection and Characterization of Specific DNA Binding Sites for Steroid Hormone Receptors 2) Establishment and Maintenance of Structural Domains Within Chromosomes

1980

University of Cincinnati	Bruce S. Ault	Identifying Intermediates in Catalytic Cycles
Stanford University	Steven G. Boxer	The Application of Physical Methods to Study Complex Biological Systems
Seton Hall University	Harry G. Brittain	Lanthanide Ion Optical Actvity
Michigan State University	Chris K. Chang	Photophysics and Photochemistry of Chlorophyll Clusters

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
The University of Texas at Austin	Marye Anne Fox	1) Photoelectrochemisty 2) Reactions and Spectroscopy of Excited Carbanions 3) Generation by Novel Routes of Reactive Free Radicals
University of California, Los Angeles	John A. Gladysz	Organometallic Compounds
Cornell University	Paul L. Houston	Surface Chemistry
Amherst College	Joseph N. Kushick	Computer Simulation of Molecular Behavior in Liquids
California Institute of Technology	Elias Lazarides	1) Immunological Probes for the Moleuclar Analysis of Structural Proteins in Cells 2) Biochemical Analysis of Desmin Filaments in Muscle Cells 3) Moleuclar Morphogenesis in Muscle Cells 4) Biochemical Regulation and Integration of Cellular Metbolic Activities 5) Autoimmunity, Intermediate Filaments, and Aging
Texas A&M University	Martin Newcomb	1) Electron Transfer in Carbanion Reactions 2) Asymmetric Electophilic Syntheses 3) Macrocyclic Poystannanes
University of Pennsylvania	Kyriacos C. Nicolaou	1) Organoselenium-Based Methodology 2) Synthesis and Biology of Eicosanoids 3) Total Synthesis of 16-Membered Ring Macrolide Antibiotics 4) Polycyclics from Q-Quinodimethanes Generated by Cheletrophic Elimination of SO2 and Applictions to the Total Synthesis of Natural Products
The University of Chicago	David W. Oxtoby	Molecular Relaxation Processes in Liquids and Phase Transitions
Massachusetts Institute of Technology	Mary Fedarko Roberts	Enzyme-Phospholipid Interactions
University of Minnesota	Matthew V. Tirrell, III	Polymer Dynamics and Polymerization Reactor Engineering
Harvard University	Paul A. Wender	Synthetic Chemistry
North Carolina State University	Myung-Hwan Whangbo	Development and Application of Theoretical Techniques to Problems of Interest in Organic, Inorgnic, and Solid State Chemistry.

1979

University of Houston	Thomas A. Albright	Organometallic Compounds
Stanford University	Douglas L. Brutlag	DNA Sequencing and Analysis
The University of Chicago	Jeremy K. Burdett	Organometallic Complexes
Indiana University	Malcolm H. Chisholm	Dinuclear Transition Metal Chemistry
The Ohio State University	Gary G. Christoph	Synthetic and Spectroscopic Techniques in Crystallography
Massachusetts Institute of Technology	Christos Georgakis	The Effect of Design Characteristics on Process Dynamics
Haverford College	Christopher G. Goff	Molecular Mechanisms Controlling Gene Expression
University of Oregon	David R. Herrick	Atomic and Molecular Structure Theory

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Brandeis University	Philip M. Keehn	1) Cylophane Chemistry 2) Diene Synthesis 3) Synthetic Methodology 4) Laser Chemistry 5) Singlet Oxygen Chemistry 6) Solid State Chemistry and Crystallography 7) Inclusion Complex Chemistry 8) Thermal Organic Reactions 9) Rigid Macrocycles
Harvard University	Nancy E. Kleckner	Transposon Mediated DNA Rearrangements
University of Rochester	George McLendon	1) Electron Transfer Reactions 2) Conformational Equilibria in Protein Function and Regulation
University of California, Santa Barbara	Horia Metiu	1) Kinetics of Phase Transition 2) Spectroscopy 3) Solid Surface Dynamical Processes
Brown University	Kathlyn A. Parker	Natural Product Synthesis
University of Wisconsin–Madison	Christian R. H. Raetz	Phospholipid Membranes
University of Illinois at Urbana-Champaign	Gary B. Schuster	Thermal and Photochemical Transformations of Organic Molecules
California Institute of Technology	Ahmed H. Zewail	Laser Chemistry, Spectroscopy, and Photovoltaic Energy Conversion
1978		
California Institute of Technology	Peter B. Dervan	Physical and Biophysical Organic Chemistry
University of Minnesota	David A. Dixon	Understanding Reaction Dynamics through Molecular Beam Chemistry
University of Wisconsin–Madison	James A. Dumesic	Heterogenous Catalyst Design
The University of Chicago	William J. Evans	Nonaqueous Reductive Lanthide Chemistry
Cornell University	Bruce Ganem	Total Synthesis of Natural Products
Purdue University	William L. Jorgensen	Computer Simulation of Molecular Liquids
University of California, Los Angeles	Michael E. Jung	Electrophilic Organosilicon Reagents
Yale University	Thomas F. Keyes	Studies of Clustering and Nucleation in Phase Transitions
Williams College	Daniel A. Kleier	Intramolecular Rearrangements, Electronic Structure of Nitrogen Heterocyles, and the Relation of Structure to Activity in Proteins
Columbia University	Walter G. Klemperer	Synthesis, Structure, and Reactivity of Polyoxoanions
Wellesley College	Nancy H. Kolodny	Molecular Interactions and Conformations
University of Arizona	F. Raymond Salemme	Structure-Function Relationships in Proteins and other Biological Macromolecular Assemblies
Massachusetts Institute of Technology	Richard R. Schrock	Transition Metal Catalysts

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Illinois at Urbana-Champaign	John R. Shapley	Studies of Caronyl Metal Cluster Compounds
University of Pennsylvania	Amos B. Smith, III	Natural Product Chemistry
University of California, Berkeley	K. Peter C. Vollhardt	Organometallic Catalysts

1977

California Institute of Technology	John E. Bercaw	Organotransition Metal Chemistry
Massachusetts Institute of Technology	Robert E. Cohen	Connections Between Polymer Chains and Chain Dynamics
Johns Hopkins University	Paul J. Dagdigian	Gas-Phase Collisional Process
Harvard University	David Dressler	Molecular Mechanisms of Replication
University of Florida	John R. Eyler	Laser Induced Ionic Processes
Stanford University	Michael D. Fayer	Energy Transport and Relaxation Mechanisms in Organic Solids and in Biologic Photosynthetic Materials
The Pennsylvania State University	Gregory L. Geoffroy	Inorganic and Organometallic Photochemistry
University of California, Los Angeles	Eric J. Heller	Dynamical Processes in Molecules
Yale University	Kenneth D. Jordan	Spectroscopic Studies of Negative Ions of Unsaturated Hydrocarbons
University of Houston	Harold L. Kohn	Biotin-Dependent Pathway for Carbon Dioxide Transfer to Biological Substrates
Duke University	Paul L. Modrich	Mechanisms and Biological Functions of Enzymes Involved in DNA Metabolism
University of California, Irvine	Mario J. Molina	Characterizing the Chemistry and Photochemistry of Trace Species Important in the Atmosphere
Rice University	John S. Olson	Functional Properties of Hemoglobins and Erythrocytes
The University of Utah	Hong Yong Sohn	Extractive Metallurgical Processes and Recovery of Fossil Fuels
University of Minnesota	George Stephanopoulos	Chemical Process Design and Control
Swarthmore College	Dwight A. Sweigart	1) Mechanisms of Ligand Substitution 2) Mechanistic Hydrocarbon Studies 3) Ligand Transfer in Biological Systems

1976

Stanford University	Ronald W. Davis	Elimination Processes in Organometallic Complexes
University of California, Los Angeles	William M. Gelbart	Light Scattering and Thermodynamic Properties of Single-Component Liquids and Solutions
Florida State University	George C. Levy	Carbon 13-NMR Spectroscopy
University of Delaware	Roger K. Murray, Jr.	Synthesis and Chemistry of Cage Compounds

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
Princeton University	Jack R. Norton	Regulation of Gene Expression in Saccharomyces cerevisiae
University of California, Irvine	Larry E. Overman	New Reactions and Methods for Organic Synthesis
University of California, Berkeley	Alexander Pines	10 Interactions Between Nuclear Spins in Solids 2) Liquid Crystal Studies
University of Southern California	Christopher A. Reed	Synthetic Chemistry
Washington University in St. Louis	Robert G. Roeder	Regulatory Mechanisms of Gene Expression During Embryonic Development and Cell Differentiation
Bucknell University	William H. Scouten	Multienzyme Complexes
Duke University	Barbara Ramsay Shaw	Biochemical Functions of Chromatin
The University of Utah	John P. Simons	Gas-phase Negative Molecular Ions
Massachusetts Institute of Technology	Christopher T. Walsh	1) Enzymatic Reaction Mechanisms 2) Membrane Chemistry and Biochemistry
California Institute of Technology	W. Henry Weinberg	Understanding the Mechanism of Heterogeneously Catalyzed Surface Reactions
Cornell University	John R. Wiesenfeld	The Chemistry of Electronically Excited Atoms and Molecules
1975		
Vanderbilt University	Larry R. Dalton	Nonlinear Spin Response Technology
University of Nebraska-Lincoln	Victor W. Day	Applications of X-Ray Crystallography
Dartmouth College	Robert Ditchfield	Theoretical Studies of Magnetic and Electric Properties of Molecules
The University of Utah	Elvera Ehrenfeld	Macromolecular Synthetic Interaction Between Animal Viruses and Host Cells
University of Rochester	Thomas F. George	Gas-Phase Chemical Kinetics
Furman University	William C. Harris	Conformational Problems Involving Novel C-N Containing Molecules
University of California, Berkeley	Wayne L. Hubbell	Rhodopsin Chemistry
Princeton University	Marc W. Kirschner	1) Chromosome Labeling Methodology 2) Xenopus Aster-Egg Assays of Isolated Centrioles
Harvard University	Lynn C. Klotz	DNA Renaturation
California Institute of Technology	L. Gary Leal	1) Atmosphere Dynamics in Small Bodies of Water 2) Small Particle Motion and Mechanics
University of Colorado Boulder	W. Carl Lineberger	Ineractions of Negative Ions with Photons
Texas A&M University	Patrick S. Mariano	Photochemical Methodology in the Synthesis of Useful Organic Compunds
Northwestern University	Tobin J. Marks	Synthetic and Mechanistic Inorganic and Organometallic Chemistry

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of California, San Francisco	James A. Spudich	Contractile Proteins in Dictyostelium discoideum
Massachusetts Institute of Technology	Mark S. Wrighton	Excited State Chemistry of Inorganic Substances

1974

University of Washington	Niels H. Andersen	Utilization of “ene reaction” in Synthesis
University of Houston	James E. Bailey	Reaction Engineering in the Process Industries and in Biological Systems
State University of New York at Buffalo	Robert D. Bereman	Bioinorganic Chemistry
University of Wisconsin–Madison	Michael Berry	Chemical Laser Studies of Energy Partitioning and Chemical Reaction Dynamics
University of Minnesota	Robert G. Bryant	Investigation of Water and the Surface Mobility of Proteins in Protein Crystals and Tissues
University of Notre Dame	Francis J. Castellino	Structure, Function, and Factors Influencing the Activation of Enzymes Involved in Blood Coagulation
Youngstown State University	Janet Del Bene	Application of Molecular Orbital Theory to Chemically Significant Problems
Michigan State University	Robert H. Grubbs	Transition Metal Organic Chemistry
California Institute of Technology	Leroy E. Hood	Protein Chemistry: 1) antibody molecules, 2) cell surface glycoproteins involved in vertebrate transplantation rejection process, and 3) micromethods for amino acid sequence analysis
Stanford University	Bruce S. Hudson	Excited Electronic States of Linear Conjugated Polyenes
University of Illinois at Urbana-Champaign	John A. Katzenellenbogen	Chemical Approaches for Studying the Interaction of Hormonal Steroids with Target Tissue Receptor Proteins
The University of Texas at Austin	Denis A. Kohl	Electron Diffraction Studies of Radical Species
University of California, Berkeley	Edward E. Penhoet	Deoxyribonucleases of Animal Cells Involved in the Replication and Repair of DNA
Princeton University	Herschel A. Rabitz	1) Collisional Relation in Gasses 2) A Diffusion Theory for Molecular Dynamics
Brandeis University	Robert F. Schleif	Bacterial Metabolism of L-arabinose
University of California, Los Angeles	Jeffrey L. Zink	1) Studies of Free Radicals Coordinated to Transition Metal Ions 2) Chemically Induced Dynamic Nuclear Polarization 3) Photochemistry and Photochromism

1973

The University of Utah	William H. Breckenridge	Resonance-Radiation Flash Photolysis
Hope College	Michael P. Doyle	1) Free Radical Rearrangements 2) Reactions of Nitrosonium and Nitronium Ions 3) Silane Reductions in Acidic Media
Brandeis University	Irving R. Epstein	Nonlinear Chemical Dynamics

Camille and Henry Dreyfus Teacher-Scholar Awards Program

Institution	Awardee	Project
University of Rochester	Martin R. Feinberg	Resolution of Complex Design Problems in Reaction Network
Northwestern University	Frederick D. Lewis	The Effects of Molecular Structure and Conformation on Photochemical Behavior
Harvard University	Richard M. Losick	The Mechanism of Gene Regulation During Bacterial Differentiation into Spores
University of California, Berkeley	William H. Miller	Theoretical Methods for Describing Chemical Reaction Dynamics
University of Wisconsin–Madison	David L. Nelson	Membrane Differentiation and Ion Transport in Isolated Acinar Cells
Princeton University	David F. Ollis	1) Inhibitor Detection via Enzyme Electrodes 2) Affinity Chromatography Columns for the Resolution of Cell and Particulate Mixtures
University of Oregon	Michael R. Philpott	Experimental Study and Theory of Refection Spectra of Organic Crystals
Johns Hopkins University	Douglas Poland	Statistical Mechanics of Cooperative Processes
Bryn Mawr College	David J. Prescott	Enzymology of Fatty Acid Biosynthesis
Virginia Polytechnic Institute and State University	Peter R. Rony	1) Hollow Fiber Enzyme Reactors 2) Catalytic Molten Electrolytes
Cornell University	Martin F. Semmelhack	Organic Synthesis
Massachusetts Institute of Technology	K. Barry Sharpless	Utilization of Inorganic Reagents to Effect New and Useful Synthetic Transformations in Organic Chemistry
California Institute of Technology	Robert W. Vaughan	Solid State and Surface Chemistry

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North Carolina State University	Jon Bordner	1) Structure and Synthesis of Insect Phermones 2) Conformation of Steroids and Terpenes 3) Structure and Function of Marijuana Components 4) Isolation and Identification of New Compounds from the Sea
Worcester Polytechnic Institute	C. Hackett Bushweller	Stereodynamics of Molecular Systems
Iowa State University	Jon C. Clardy	Direct Methods in Crystal Structure Analysis
Vassar College	Patricia A. Clark	Study of Charge-Transfer Spectra
Massachusetts Institute of Technology	Clark K. Colton	Transport Phenomena in Biomedical Systems and Enzyme Engineering
The University of Chicago	Karl F. Freed	1) Radiationless Processes and Photochemistry 2) Semi-Empirical Theories of the Electronic Structure of Polyatomic Molecules 3) Electronic Structure in Disordered Sustems 4) Statistical Mechanics of Polymer Systems
Haverford College	Robert M. Gavin	Excited State Properties of Polyemes and Polyene Derivatives
Michigan State University	James F. Harrison	Understanding the Electronic Structure of Reactive Intermediates in Chemical Reactions

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Institution	Awardee	Project
University of Illinois at Urbana-Champaign	David N. Hendrickson	Metal Sites in Metalloproteins and Studies of Model Inorganic Systems
Louisiana State University	Kendall N. Houk	1) Cycloaddition Reactions 2) Photochemistry 3) Photoelectron Spectroscopy and Molecular Orbital Calculations 4) Medicinal Chemistry
Princeton University	Arnold J. Levine	Isolation, Purification, and Characterization of Viral Proteins in Tumorigenic Cells
Yale University	J. Michael McBride	Free Radical Reactions in Organic Crystals
Williams College	William R. Moomaw	Excited States of Organic Molecules
Harvard University	William P. Reinhardt	Elastic and Inelastic Electron-Atom and Ion Scattering
University of Virginia	Frederick S. Richardson	Electronic Absorption and Circular Dichroism Spectroscopy of Molecules and Crystals
California Institute of Technology	John H. Seinfeld	Computer Simulation of Air Pollution
Stanford University	Frank A. Weinhold	Fundamental Problems in Quantum Mechanics and the Electronic Structure of Atoms and Molecules

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California Institute of Technology	Jesse L. Beauchamp	Reactions of Organic and Inorganic Ions in Gasses
University of California, Los Angeles	David A. Evans	Synthesis of Complex Organic Molecules
University of California, Santa Barbara	Peter C. Ford	Mechanistic Photochemistry of Transition Metal Complexes
The University of Chicago	Yuan Tseh Lee	Molecular Dynamics of Chemical Reactions
Columbia University	Stephen J. Lippard	Bioinorganic Chemistry
University of Minnesota	Kenneth G. Mann	Physico-chemical Studies of the Blood Coagulation Mechanism
Vanderbilt University	J. David Puett	Studies on Protein and Polypeptide Hormone Conformation and Metabolism of Glycoproteins, Hormones, and Human Platelets
University of Delaware	Stanley I. Sandler	Thermodynamic and Transport Properties of Fluids
University of Arkansas	Lothar Schäfer	Structural Studies of Unstable Systems
Massachusetts Institute of Technology	Robert Silbey	1) Conductivity and Optical Properties of Conjugated Polymers 2) Fundamental Processes in Catalysis 3) Physical Chemistry of the Visual Process
Yeshiva University	James Snyder	1) Structure and Chemical Transformations of cis-Azo and Azoxy Alkanes 2) Carcinogenic and Mutagnic N-O Containing Agents
The University of Utah	Leonard D. Spicer	Atmospheric Reaction Kinetics
Stanford University	Leonard M. Stephenson	Stereochemical Probes for Organic Reaction Mechanism
Stony Brook University	Edward I. Stiefel	Coordination Complexes of Transition Metal Ions

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Institution	Awardee	Project
The Ohio State University	John S. Swenton	Mechanistic Investigations in Pyrimidine Photochemistry
Franklin & Marshall College	Claude H. Yoder	Organometallic Amide Structure Tranamination Reactions

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California Institute of Technology	Robert G. Bergman	Diradicals and Orbital Symmetry Control
Rockefeller University	Bruce A. Cunningham	Primary Structure of Muscle Proteins
Amherst College	Richard D. Fink	Chemical Reactants and Variable Energy
Morehouse College	Joseph N. Gayles, Jr.	1) Structure and Biological Function in Protein Molecules 2) Ferroelectric Materials
University of Oregon	O. Hayes Griffith	1) Membrane Models 2) Photoelectron Imaging
Massachusetts Institute of Technology	Daniel S. Kemp	Catalytic Processes
Emory University	Fredric M. Menger	Physical Organic Chemistry
The University of Chicago	Paul B. Moore	Systematics of Inorganic Atomic Arrangements
Harvard University	John A. Osborn	Organometallic Complexes
University of California, Berkeley	Mitchel Shen	Polymer Crystals and Systems
University of Wisconsin–Madison	Barry M. Trost	Synthetic Approaches to Molecules of Biological Importance
Purdue University	Richard A. Walton	Transition Metal Halides
Hope College	F. Sheldon Wettack	Physical Photochemistry and Spectroscopy
University of Illinois at Urbana-Champaign	James T. Yardley	Molecular Energy Transfer and Dynamics