

Joseph M. DeSimone

Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering
 Departments of Radiology and Chemical Engineering
 Department of Chemistry (by Courtesy)
 Department of Materials Science and Engineering (by Courtesy)
 Graduate School of Business (by Courtesy)
 Stanford University

Career Summary: In *The Second Mountain*, David Brooks emphasizes a surrender to something larger in the second half of one's career—a dedication to embracing deeper roles with more meaning and purpose toward the summit of a second mountain that looks much different from the first. Coming out of my six-year position as Co-founder and Chief Executive Officer at Carbon, Inc., I have focused on the people and intellectual pursuits that can make the most impact in the organizations that I chose to be associated with, as well as the causes that matter most to me. Today, the central organizations, and causes, for me include:

- Stanford University—where I have started the *Center for STEMM Mentorship*, where I teach a course on *Career Impact*, where I lead the Canary (PHIND) Center (with our focus on spotting the potential for disease earlier, preventing it from taking hold, or treating it more effectively, with less cost and less intrusion into YOUR life), and where I do new research with a team of about 15 trainees and staff;
- Ursinus College—my *alma mater*, where I chair the Board of Trustees, and where I honed my core values through the experience of a liberal arts education;
- The National Geographic Society—where I am a member of the Board of Trustees and serve on the Finance Committee, and where we “...use the power of science, exploration, education, and storytelling to illuminate and protect the wonder of our world” (goosebumps!);
- Deep tech startups—Carbon, Inc. (advanced manufacturing), Focal Medical, Inc. (local drug delivery, pancreatic cancer treatment), Blue Current, Inc. (solid state batteries), Teal Health, Inc. (at-home cervical cancer screening), Unless, Inc. (plant-based clothes); and
- My students past and present—80 Ph.D. graduates, half of whom are women and members of underrepresented groups in STEM; current and former members of my lab inspire constant learning and represent a wide range of human and disciplinary diversity—a result of a relentless focus on diversity and innovation in my career.

I began my career at the University of North Carolina at Chapel Hill (UNC) in 1990 after completing my undergraduate and doctoral degrees in chemistry at Ursinus College and Virginia Tech, respectively. At UNC, as well as at NC State University, where I had a dual appointment in engineering, I built a diverse, interdisciplinary research group focused on advances in polymer science and their applications in industrial and clinical settings. A total of 80 Ph.D. students graduated from my UNC/NC State lab and moved into leadership positions in both industry and academia, including my very first student, Valerie Ashby, now president of the University of Maryland, Baltimore County (my introduction of Valerie at her inauguration <https://youtu.be/IPCREPcIpXk?si=zGTS2mx0BS38NoX1>).

Built on our vision that carbon dioxide could ultimately replace environmental pollutants used in a wide range of industrial manufacturing processes, my group's early work demonstrated the ability to synthesize high-quality fluoropolymers, like Teflon, in supercritical CO₂. This contributed to a fundamental understanding of solvent viscosity in diffusion-controlled free radical reactions and the impact of solvent quality on the hydrodynamic radius of polymers dissolved in compressible media like CO₂. Building on this research, we pioneered the design of amphiphilic molecules for CO₂, also starting companies from this work. We further pioneered the synthesis of highly functional perfluoropolyethers (PFPEs) in CO₂ using photo-oxidation routes, leading to the use of PFPEs as a high-performance alternative to silicones in microfluidics and soft lithography. Our work in these

areas helped lead to the creation of the NSF Science and Technology Center for Environmentally Responsible Solvents and Processes at UNC, of which I served as director from 1999 to 2009.

By exploiting the unique properties of cured PFPEs, my students and I then invented a novel, nanoparticle molding technology—particle replication in non-wetting templates (PRINT), an imprint lithography-based process that affords independent control over particle size, shape, composition, surface chemistry, modulus, and charge. PRINT brought the precision and uniformity of computer industry fabrication processes to medicine, enabled new research avenues in drug delivery and vaccine platform development, and led us to found Liquidia Technologies (NASDAQ: LQDA), a biopharmaceutical company focused on the development and commercialization of products directed towards the treatment of pulmonary arterial hypertension (PAH). PRINT also became the basis for the NCI-funded Carolina Center for Nanotechnology Excellence at UNC, which I co-led from 2005 to 2015.

Seeing the power of using a static pattern of light to make medical products in two dimensions, we then leveraged dynamically changing patterns of light to fabricate objects in three dimensions by inventing the polymer 3D printing technology, continuous liquid interface production (CLIP). I co-founded, and was CEO of for six years, Carbon, Inc., now a global company that uses CLIP to advance the manufacturing of novel products in industries such as automotive, footwear, medical, dental, and human protection. CLIP, joined with our inventions of new classes of 3D printing materials, delivered significant improvements in the field with respect to print speed, part quality, and material properties. As CEO I raised \$680 million in venture capital at Carbon (Sequoia, Silver Lake, Google Ventures, Ballie Gifford, Madrone Capital, Temasek), and my son is now in the Office of the CEO. They currently have >400 employees and did >\$100 million in revenue last year with expected strong growth in 2023.

My academic laboratory is now leveraging CLIP to probe new approaches to, designs for, and capabilities of medical device technologies. Further, we have achieved new multi-materials printing advances, as well as new high-resolution printing capabilities, providing even greater opportunity to create devices with previously unmakeable geometries for a range of applications, including microarray patches for vaccine and health monitoring applications. Additionally, I serve as co-director of Stanford's Precision Health and Integrated Diagnostics Center (PHIND - soon to be renamed the Canary Center) and as founding faculty director of the Center for STEMM Mentorship at Stanford, which takes a team-based approach to elevating mentorship for academic researchers.

Current Research Interests: Polymer science; Microneedle vaccine and drug delivery; New 3D Printing strategies; Loco-regional Therapies: Interventional oncology, Digitally designed therapeutic devices and software treatment planning; Applying the lithographic fabrication technologies from the computer industry for the design and synthesis of new medicines and vaccines; Nanomedicine; Fluoropolymers: photolithography, batteries, microfluidics, minimally adhesive surfaces; Colloid, surfactant and surface chemistry; Role of diversity in innovation; Entrepreneurship; Mentorship; Public – private partnerships; Sustainability and a circular economy; Business models in tech.

Contact Information:

18203 Saratoga-Los Gatos Rd.
Monte Sereno, CA 95030

jmdesimone@stanford.edu
<https://profiles.stanford.edu/joseph-desimone>

Education:

B.S. Chemistry, Ursinus College, May 1986

Ph.D. Chemistry, Virginia Polytechnic Institute and State University, March 1990
(Advisor: James E. McGrath, NAE)

Professional Positions:

- 2020 – Present Sanjiv Sam Gambhir Professor of Translational Medicine & Chemical Engineering, Department of Radiology, Department of Chemical Engineering, Department of Chemistry (by Courtesy), Department of Materials Science and Engineering (by Courtesy), and the Graduate School of Business (by Courtesy), Stanford University
- 2022 – Present Co-Director, Precision Health and Integrated Diagnostics Center (PHIND), including the Canary Center
- 2022 – Present Founding Faculty Director, Center for STEMM Mentorship, Stanford University
- 2021 – Present Faculty Fellow, Stanford Chemistry, Engineering and Medicine for Human Health (ChEM-H), Stanford University
- 2021 – Present Member, Wu Tsai Human Performance Alliance, Stanford University
- 2021 – Present Member, Stanford Cancer Institute, Stanford University, Stanford University
- 2020 – Present Member, Stanford Bio-X, Stanford University
- 2020 – Present Chancellor's Eminent Professor of Chemistry Emeritus at the University of North Carolina at Chapel Hill (UNC-CH) and William R. Kenan, Jr. Distinguished Professor of Chemical Engineering Emeritus at North Carolina State University (NCSU)
- 2014 – Present Co-Founder, Carbon, Inc., Redwood City, CA with Ed Samulski & Alex Ermoshkin; President and CEO (2014 – 2019); current Board Member
- 2008 – 2020 Chancellor's Eminent Professor of Chemistry at UNC-CH and William R. Kenan, Jr. Distinguished Professor of Chemical Engineering at NCSU & of Chemistry at UNC-CH
- 2005 – 2020 Faculty Member, Lineberger Comprehensive Cancer Center and Department of Pharmacology, School of Medicine, UNC-Chapel Hill
- 2005 – 2015 Co-PI, Carolina Center of Cancer Nanotechnology Excellence, UNC-Chapel Hill
- 2008 – 2014 Founding Director, Institute for Nanomedicine at UNC-Chapel Hill
- 2010 – 2014 Adjunct Member, Memorial Sloan Kettering Cancer Center and Sloan-Kettering Institute for Cancer Research
- 2012 – 2013 Director, Kenan Institute of Private Enterprise, Kenan Flagler Business School,
- 2003 – 2012 Founding Director, Institute for Advanced Materials, Nanoscience and Technology at UNC-Chapel Hill
- 1999 – 2009 Director, NSF Science and Technology Center for Environmentally Responsible Solvents and Processes, UNC-Chapel Hill
- 1999 – 2008 William R. Kenan Jr. Distinguished Professor of Chemistry at UNC-Chapel Hill and Chemical Engineering at NC State University
- 1996 – 1999 Mary Ann Smith Professor of Chemistry at UNC-Chapel Hill and Professor of Chemical Engineering at NC State University
- 1995 Mary Ann Smith Associate Professor of Chemistry at UNC-Chapel Hill and Chemical Engineering at NC State University
- 1990 – 1994 Assistant Professor of Chemistry at UNC-Chapel Hill

Election to Learned Societies:

- Member of the National Academy of Medicine (2014)
- Member of the National Academy of Sciences (2012)
- Member of the National Academy of Engineering (2005)
- Member of the American Academy of Arts and Sciences (2005)
- Fellow, American Association for the Advancement of Science (AAAS) (2006)

Awards and Honors:

- 2022 E. V. Murphree Award in Industrial and Engineering Chemistry**, ACS National Award
- 2021** Charles Goodyear Medal, highest honor of the American Chemical Society Rubber Division
- 2020 Harvey Prize in Science and Technology**, highest honor of the Technion-Israel Institute of Technology
- 2020** Beacon Award Winner for Outstanding Achievement by NC TECH
- 2019 EY Entrepreneur of the Year U.S. Overall National Winner**
- 2019 Wilhelm Exner Medal**, by the Austrian Industry Association, for achievements in science and research that have had an impact on business and industry
- 2018 National Academy of Sciences Award for Convergent Science**
- 2017 Heinz Award in the Technology, the Economy and Employment**
- 2017** Faculty Service Award, University of North Carolina General Alumni Association
- 2017** Frost & Sullivan Manufacturing Leadership Award for Visionary Leadership
- U.S. National Medal of Technology and Innovation**, the highest honor in the United States for achievement and leadership in advancing technological progress, presented by President Barack Obama in 2016
- 2016** University Distinguished Achievement Award, Virginia Tech
- 2015 Kabiller Prize in Nanoscience and Nanomedicine** from Northwestern University
- 2015 Dickson Prize for Science** from Carnegie Mellon University
- 2014** Industrial Research Institute Medalist
- 2014** College of Science Hall of Distinction, Virginia Tech
- 2014 Kathryn C. Hach Award for Entrepreneurial Success**, ACS National Award (w/ Ben Maynor and Jason Rolland, for developing the PRINT imprint lithography technology and founding Liquidia Technologies)
- 2013 Fellow National Academy of Inventors**
- 2012** Walston Chubb Award for Innovation, presented by Sigma Xi, The Scientific Research Society, to honor and promote creativity in science and engineering.
- 2012** Fellow, American Chemical Society
- Paul Harris Fellow by the Rotary Foundation of Rotary International “in appreciation of tangible & significance assistance given for the furtherance of better understanding & friendly relations among peoples of the world”
- 2011** Mendel Medal from Villanova University
- 2011 Harrison Howe Award** by the Rochester Section of the American Chemical Society
- 2011** PMSE Fellow, Division of Polymeric Material Science & Engineering, American Chemical Society
- 2010 AAAS Mentor Award**, recognizing members of the American Association for the Advancement of Science who have mentored significant numbers of students from underrepresented groups towards a Ph.D. in the sciences or who have changed the climate of a department, college or institution to significantly increase the diversity of students completing doctoral studies in the sciences.
- 2010** Founding POLY Fellow, Division of Polymer Chemistry, American Chemical Society
- 2009** National Institutes of Health Director’s Pioneer Award
- 2009** Tar Heel of the Year, Undergraduates at the school newspaper selection of the Person of the Year
- 2009 North Carolina Award**, the highest honor the State of North Carolina can bestow to recognize notable achievements of North Carolinians in the fields of Literature, Science, the Fine Arts and Public Service

2009 Distinguished Graduate Alumni Achievement Award, Virginia Tech

2009 Alexander M. Cruickshank Award, Gordon Research Conferences

2008 recipient of the \$500,000 **Lemelson-MIT Prize**

2008 Tar Heel of the Year, Raleigh News & Observer

Named one of the "One Hundred Engineers of the Modern Era" by the American Institute of Chemical Engineers (AIChE), marking the 100th Anniversary of the AIChE

2007 / 2008 Business Leader Magazine's Impact Entrepreneur of the Year for the Triangle

2008 Inductee into the Order of the Golden Fleece, the oldest honor society of its kind in the nation (since 1904) and the most prestigious honor society at the University of North Carolina at Chapel Hill

2007 Collaboration Success Award from The Council for Chemical Research

2006 Elected, College of Fellows, American Institute for Medical and Biological Engineering (AIMBE)

2006 H.F. Whalen, Jr. Award for Entrepreneurship, American Chemical Society (ACS) Division of Business Development & Management

2005 Entrepreneurial Excellence Award for Life Science Spin-out of the Year for Liquidia Technologies

2005 American Chemical Society Award for Creative Invention (ACS National Award)

2004 North Carolina Distinguished Lecturer Award from the NC Section of the ACS

2002 John Scott Award presented by the City Trusts, Philadelphia, given to "the most deserving" men and women whose inventions have contributed in some outstanding way to the "comfort, welfare and happiness" of mankind

2002 Engineering Excellence Award by DuPont for Successful Commercialization of Supercritical CO₂ Polymerization Plant at DuPont Fayetteville Works

2002 Wallace H. Carothers Award from the Delaware Section of the American Chemical Society to honor scientific innovators who have made outstanding contributions and advances in industrial applications of chemistry

2001 Ernst & Young Entrepreneur of the Year in Technology (Carolinas)

2001 Inventor of the Year Award from the Triangle Intellectual Property Law Association

2001 Governor's Entrepreneurial Company of the Year Award for Micell Technologies

2001 Esselen Award for Chemistry in the Public Interest by the American Chemical Society (ACS) Northeastern Division to recognize a chemist for outstanding achievement in scientific and technical work that contributes to the public well-being

2001 Outstanding Young Alumnus Award from the Virginia Tech Alumni Association

2000 Oliver Max Gardner Award from the University of North Carolina, given to that person, who in the opinion of the Board of Governors' Committee, "... during the current scholastic year, has made the greatest contribution to the welfare of the human race."

1999 Fresenius Award of the PHI LAMBDA UPSILON Honorary Chemical Society, presented annually to an outstanding young scientist who has attained national recognition in the areas of research and teaching

1999 Carl S. Marvel Creative Polymer Chemistry Award, American Chemical Society Division of Polymer Chemistry (ACS POLY) presented annually to recognize accomplishments and/or innovation of unusual merit in the field of basic or applied polymer science by younger scientists

Runner-up, 1999 Tar Heel of the Year Award (with Elizabeth Dole, Mia Hamm, and Bob Young of Red Hat)

1999 Honorary Doctorate of Science from Ursinus College

1998-2001 Alfred P. Sloan Research Fellowship

1998 R&D 100 Award with Micell Technologies

1997 U.S. Presidential Green Chemistry Challenge Award in recognition of outstanding chemical technologies (Surfactants for CO₂) that incorporate the principles of green chemistry into chemical design, manufacture, and use

1997 Governor's Award for Excellence

1997 Chancellor's Award for Excellence

1995 Waldo Semon Award Lecturer, The University of Akron

1995 Charles H. Stone Award

Finalist for the 1995 DISCOVER AWARD FOR TECHNOLOGICAL INNOVATION

1993 Presidential Faculty Fellow Award from the National Science Foundation (NSF)

1993 Philip and Ruth Hettleman Prize for Artistic and Scholarly Achievement

1992 National Science Foundation Young Investigator - Division of Materials Research

Technology Transfer and Entrepreneurial Activities:

Eigen Biosciences, Inc. (<http://www.eigen.bio>) Co-founder in 2022 with Tom Soh (Stanford) and Vijit Sabnis, CEO) based on DNA aptamer biosensors and microneedle array patches.

Carbon, Inc. (<http://www.carbon3d.com>); Co-founder in 2013 with A. Ermoshkin and E. Samulski based on invention of new approach to 3D printing that is >100 times faster than other 3D printers, employing a continuous liquid interface where 3D objects can literally rise out of the broth within minutes. Carbon's initial focus was on professional prototypers with aspirations to move to low- and medium-volume manufacturing and high valued products for the medical device and pharmaceutical industries. Carbon now provides the world's leading digital manufacturing platform and is a 400-person global company that has received a \$2 billion+ valuation.

Focal Medical, Inc. (<http://www.focalmedical.co>, formerly Advanced Chemotherapy Technologies, <https://advancedchemotech.com/>) co-founded with J. J. Yeh at UNC, is advancing a device that uses iontophoresis with the capability to deliver a wide range of chemotherapy drugs to solid tumors that can be otherwise difficult to reach via intravenous drug delivery due to the dense surrounding tissue of the tumors. The company is targeting pancreatic cancer in their first trials after achieving \$5M+ in Series A financing from Khosla Ventures in 2020 and \$2.5M in from Spectrum Financial in 2021.

Blue Current Technologies (<https://www.bluecurrent.com/>), co-founded with Nitash Balsara at UC Berkeley, is developing nonflammable electrolyte materials for batteries and in 2022 announced a \$30M investment by Koch Strategic Platforms to advance the company's first megawatt-scale factory in California.

Liquidia Technologies, Inc. (<http://www.liquidia.com>) Member, Board of Directors (2004-2013), Consultant & Co-Founder (w/ J. Rolland, G. Denison, B. Maynor, E. Samulski and Bruce Boucher); Liquidia is co-opting the fabrication technologies from the computer industry to make vaccines and medicines. The manufacturing process called PRINT™ is licensed from DeSimone's labs at UNC-CH / NCSU. Liquidia develops and manufactures precisely engineered nanoparticles and films for use in a broad range of life and materials science industries. Areas of focus include targeted delivery of nucleic acids and cytotoxic small molecules; ocular and inhaled therapeutics; vaccines; and featured films for displays. Liquidia raised over \$75 million as a private company, including the first ever equity investment by the Bill and Melinda Gates Foundation in a for-profit biotech. Liquidia's first vaccine product entered clinical trials in Q4 2010. In 2018 Liquidia went public (NASDAQ: LQDA), raising \$50 million in a successful IPO, and now has multiple products in clinical trials and one product to treat PAH awaiting final FDA approval after receiving tentative approval in late 2021.

Hatteras Venture Partners (<http://hatterasvp.com>); Member, Scientific Advisory Board; along with Herb Boyer, Founder of Genentech; Jim Powell, Founder of LabCorp; Charlie Sanders, Former CEO Glaxo; David King, CEO of LabCorp; Arnie Levine, Former President and CEO of Rockefeller University; Martin Murphy, former CEO of Hipple Cancer Center.

Reviewer, “Managing University Intellectual Property in the Public Interest”; Committee on Management of University Intellectual Property: Lessons from a Generation of Experience, Research, and Dialogue”, National Research Council, 2011.

Co-Author, “Facilitating the Commercialization of University Innovation: The Carolina Express License Agreement”; a position paper co-authored with Lesa Mitchell, Ewing Marion Kauffman Foundation, April 2010.

Partner with Synecor (<http://www.synecor.com/>), a medical devices company which creates new generations of diagnostic/therapeutic technologies and promotes their rapid dissemination into the marketplace. Synecor is led by R. Stack, W. Starling and M. Williams. Companies spun out by us include:

Bioabsorbable Vascular Solutions, Co-Founder (w/ R. Stack, W. Starling, M. Williams, & R. Langer) and Sci. Adv. Board Member (Founded in August, 2002; Acquired by Guidant Corporation [NYSE: GDT] in March, 2003); Technology is based a fully bioabsorbable polymeric drug eluting stents. Now part of Abbott Vascular. In January 2011, Abbott received CE Mark Approval for the sale of our stents in Europe. In January 2013 Abbott began a randomized clinical trial in the USA enrolling 2,250 patients.

MICELL Technologies, Inc., (<http://www.micell.com>) Co-Founder (w/ J. B. McClain and T. J. Romack) and Chairman (1996-2003); Technology is based on liquid and supercritical CO₂ for microelectronics fabrication and high performance low surface energy coatings. Micell also pioneered and launched the first liquid CO₂-based garment dry cleaning technology through Hangers Cleaners (Micell sold Hangers to Cool Clean, LLC in 2001). Micell is now actively applying the supercritical coating know-how to medical devices including stents. In 2009 Micell raised an additional \$20 million from VCs and strategic investors.

Supercritical CO₂ Fluoroolefin Polymerization Technology; Licensed exclusively to DuPont in 1996; DuPont announced investment of \$275 million to commercialize the technology; 2 million lbs/year plant successfully brought on line in March 2002.

Selected Government and Professional Service:

2022	Director, Visiting Committee, Division of Chemistry and Chemical Engineering, Caltech
2022 – Present	Chair, Board of Trustees, Ursinus College (since 2022), Member, Board of Trustees (2001- present); Vice Chair (2012-2013); Vice Chair Enrollment and Marketing Committee (2010); Presidential Search Committee (2010)
2020 – Present	Member, Racial Justice and Equity (RJ&E) Subcommittee on NAE Membership, National Academy of Engineering
2020 – Present	Member, Committee on Enhancing the U.S. Chemical Economy Through Investments in Fundamental Research in the Chemical Sciences on behalf of the U.S. National Academies
2020 – Present	Member, Board of Trustees, National Geographic Society
2009 – Present	Scientific Advisory Board, David H. Koch Institute for Integrative Cancer Research at MIT
2013	Chair, National Academies Committee on “Convergence” in Biomedical Research
2013	Co-chair, NSF Committee to Assist Faculty Early Career Development (CAREER) Awardees in continuing their path to research leadership in their fields

2012 – 2016 Member-at-Large, American Association for the Advancement of Science, Section on General Interest in Science and Engineering

2012 Chair, Gordon Research Conference on Drug Carriers in Medicine and Biology

2011 – 2013 Member, Committee on Advancing Institutional Transformation for Minority Women in Academia on behalf of the National Research Council of the National Academies

2011 – 2013 Member, Advisory Commission, North Carolina Museum of Natural Sciences

2010 – 2016 GRC Council Selection and Scheduling Committee (S&S) of the Gordon Research Conferences

2010 Member, Executive Advisory Committee, United States Manufacturing Competitiveness Initiative, US Council on Competitiveness

2010 – 2012 Member, College of Reviewers (by invitation only), Center for Scientific Review, NIH

2009 – 2012 Member, Advisory Committee for the NSF Directorate of Mathematical and Physical Sciences (MPSAC) (2009-2012)

2008 – 2009 Co-Chair, Committee on Effectiveness of National Biosurveillance Systems: BioWatch and the Public Health System, National Academy of Sciences and the National Research Council

2006 – 2009 Co-Chair, Materials Engineering Section Peer Committee, National Academy of Engineering

2007 – 2008 Member, Nanotechnology Technical Advisory Group (nTAG) to the President's Council of Advisors on Science and Technology (PCAST)

2007 / 2008 Co-Chair, National Network of Cancer Centers of Nanotechnology Excellence funded by the National Cancer Institute (w/ Sam Gambhir, Stanford)

2006 – 2010 Member, DARPA's Defense Sciences Research Council (DSRC)

2005 – 2008 Member, Board of Directors, Council for Entrepreneurial Development (CED)

2005 – 2010 Scientific Advisory Committee, Center for Nanophase Material Sciences, Oak Ridge National Laboratory (ORNL)

2005 Strategic Planning Group on Materials, Duke University

2004 – 2006 Fellow, Defense Sciences Research Council (DSRC) of DARPA

2002 – 2003 Defense Sciences Study Group, Institute for Defense Analysis funded by DARPA

2001 – 2010 Member, Advisory Council, Department of Chemistry, Virginia Tech

2001 Chair, National Network of NSF Science and Technology Center Directors

2000 – 2004 Member, National Research Council (NRC) Board on Chemical Sciences and Technology

2000 – 2004 Board of Directors, Research Triangle Foundation of North Carolina; The Research Triangle Park is the leading and largest high technology research and science park in North America. Founded in 1959, RTP is developed and managed by the non-profit Research Triangle Foundation of North Carolina. The Foundation is responsible for building and maintaining the physical aspects of the Park (7,000 acres); attracting and retaining Park companies; and enhancing the competitive position of the Park and the Triangle region.

2000 – 2003 Founding Member, Board of Directors, Center for Environmentally Advanced Technologies

- 1999 – 2001 Green Chemistry Institute Founding Board Member
1996 – 1999 Synthesis Technical Advisory Board, The DOW Chemical Company

Selected University Service:

- 2021 – 2022 Member, Stanford Department of Chemical Engineering Diversity, Equity, and Inclusion (DEI) committee
2020 – 2023 Member, Stanford University Committee of Shared Advanced Research Platforms (C-ShARP)
2020 – 2022 UNC Institute for Convergent Sciences Advisory Board Member
2010 – 2014 Cancer Strategic Planning Advisory Group, UNC Health Care System
2010 Faculty Working Group Steering Committee, Chancellor's Innovation Circle
2009 – 2014 University Cancer Research Fund Oversight Committee (2009 – 2014) w/ Dean of College of Arts and Sciences, Dean of the School of Pharmacy, Dean of the School of Medicine (Chair), Dean School of Public Health, Director of the Lineberger Cancer Center, Vice Chancellor for Research and Economic Development, Chair Department of Medicine, and Executive Associate Dean for Finance and Administration for the School of Medicine, University of North Carolina
2009 – 2014 Curing Cancer Theme Team Co-leader, University Cancer Research Fund
2010 – 2014 Executive Advisory Committee, Department of Chemistry, University of North Carolina
2008 – 2014 Program Planning Committee, Lineberger Comprehensive Cancer Center
2009 Chair, Committee to Facilitate the Launching of Start-up Companies at UNC; Created the Carolina Express License Agreement (<https://otc.unc.edu/wp-content/uploads/sites/295/2021/05/Carolina-Express-License-USER-GUIDE-2021-FINAL.pdf>)
2008 Founded the Institute for Nanomedicine, UNC; Director
2003 Founded the Institute for Advanced Materials, Nano Science and Technology, UNC; Director
2006 Member, Core Planning Committee, Science Complex, UNC

Journal Editorial & Advisory Boards:

- International Advisory Board, *Angewandte Chemie* (2014 - 2020)
Editorial Advisory Board, *ACS Nano* (2012 - present)
Editorial Board, *Nanomedicine: Nanotechnology, Biology and Medicine* (2013 - present)
Editorial Advisory Board, *Small* (2012 - present)
Editorial Advisory Board, *ACS Central Science* (2015 - 2018)
Advisory Board, *Chemical & Engineering News* (2012 - 2014)
Editorial Advisory Board, *Langmuir* (American Chemical Society: 2012 - 2014)
International Advisory Board, *ChemSusChem* (2007 - 2012)
Editorial Board, *Journal of Supercritical Fluids* (2005 - 2008)
Editorial Board, *Macromolecules* (2001 - 2003)

Editorial Advisory Board, *Industrial and Engineering Chemistry Research* (2000 - 2003)

Editorial Board, *Journal of Polymer Science* (1999 - present)

Editorial Board, *Polymer Bulletin* (2002 - 2004)

Editorial Board, *Journal of Applied Polymer Science* (1992 - 1999)

Editorial Advisory Board, *High Performance Polymers* (1994 - 1999)

Distinguished Lectureships and Public Presentations:

- 2023 John C. and Florence W. Holtz Lecture, Johns Hopkins University
- 2023 Keynote Lecture, AAAS SEA Change program, Washington, D.C.
- 2022 Alan S. Michaels Lectureship, Massachusetts Institute of Technology
- 2022 Keynote Lecture, Keynote Lecture, Advances in Materials and Manufacturing, Materials Research Society
- 2021 Warren L. McCabe Lecture, NC State University
- 2021 Keynote Lecture, Society of Scientific Advancement
- 2021 Distinguished Lectureship, International & American Associations for Dental Research
- 2021 Keynote Lecture, SPIE Laser 3D Manufacturing, The International Society for Optics & Photonics
- 2021 AAAS Annual Meeting: Understanding Dynamic Ecosystems
- 2020 Penn State Department of Chemical Engineering Distinguished Lectureship
- 2020 Stanford Graduate School of Business, Value Chains in Turbulent Times conference
- 2020 Soft Matter for All, Keynote Lecture, organized by Princeton University and the University of Delaware
- 2020 Road to Reinvention Conference, UC-Irvine
- 2020 Inaugural Organic Seminar, UC-Irvine
- 2019 Brumley D. Pritchett Lecture, Georgia Tech
- 2018 Wilhelm Lecture, Princeton University
- 2018 W. N. Lacey Lectureship in Chemical Engineering, Caltech
- 2017 Fred Kavli Distinguished Lectureship in Materials Science, Materials Research Society (MRS)
- 2016 Distinguished Lecturer, RTI International
- 2015 Maroney-Bryan Distinguished Lecture, UC-Davis
- 2015 38th Annual Carl F. Schmidt Lecture, University of Pennsylvania School of Medicine
- 2015 27th Annual Robert F. Rushmer Lecture, University of Washington, Department of Bioengineering
- 2015 W. Allan Powell Lectureship in Chemistry, University of Richmond
- 2015 TED Talk, "What if 3D printing were 100X faster?"
- 2014 Dean's Distinguished Lecture Series, NC A&T SU
- 2014 Distinguished Lecturer for the Parker H. Petit Institute for Bioengineering and Bioscience at Georgia Tech

2014 Bayer Lecture, University of Pittsburgh

2014 Novartis Lectureship, Columbia University

2014 Distinguished Lecturer, U. S. Naval Research Laboratory

2013 Inaugural Entrepreneurship and Innovation Lecture, Ursinus College, 2013

2013 University Distinguished Lecture in Science & Engineering at Stony Brook University

2012 NCIIA Plenary Lecture "Translating Basic Science into Products and the Role of Diversity in Making that Happen"

2012 Stieglitz Lecture, Chicago Section of the ACS

2012 Innovations in Public Health Lecture, Gillings School of Global Public Health, UNC-Chapel Hill

2012 Distinguished Lecturer, Materials Research Science and Engineering Center (MRSEC) lecture series, University of Massachusetts Amherst

2012 Keynote Lecture, Luther Hodges Ethics Luncheon, Research Triangle Park, NC

2012 Shell Science Seminar, National Science Teachers Association (NSTA) National Conference on Sci. Education

2012 Marker Lecture in the Department of Chemistry at Penn State

2011 Speaker, TEDMED "...where the world's most creative minds meet healthcare's most innovative science..." San Diego

2011 Distinguished Speaker Colloquium, Department of Electrical and Computer Engineering, NC State University

2011 Henry McGee Lecture at Virginia Commonwealth University

2010-2011 Aggarwal Lectures in Polymer Science, Department of Chemistry, Cornell University

2010 President's Council Symposium Lecturer, Cold Spring Harbor Laboratory (with R. S. Langer and G. Whitesides)

2010 Pigford Lecture, Department of Chemical Engineering, University of Delaware

2010 Danny Thomas Lecturer, St. Jude Children's Research Hospital

2010 Dow Lecture, Northwestern University

2010 Lecturer, Novartis Institutes for Biomedical Research

2010 NIST Colloquium Series Lecturer

2010 Plenary Speaker, 10th Annual Oncology Research Symposium at MIT's Koch Institute for Integrative Cancer Research

2009 Ullyot Lecturer sponsored by the Delaware and Philadelphia Sections of the ACS, University of Pennsylvania and the Chemical Heritage Foundation

2009 M. Cruickshank Lecturer at the Gordon Research Conference on Polymers

2009 Turner Alfrey Visiting Professor Lectures at Michigan Molecular Institute (MMI)

2009 Chevron Phillip Lecture at Virginia Tech

2008 Distinguished Lecture in Materials at Penn State University

2008 Distinguished Lecturer in Frontiers of Cancer Nanotechnology at Emory University

2008 Su Distinguished Lecture in Chemical Engineering, University of Rochester

2007-2008	Herman S. Bloch Memorial Lecture and the Bloch Medal, University of Chicago
2007	Ernest C. Mercier Lecture in Entrepreneurial Chemistry, York University
2006	Trent Lott Center Entrepreneurs in Polymer Science Lecture, University of Southern Mississippi
2006	Walter Weber Jr. Lectureship, University of Michigan (Inaugural Speaker)
2006	Distinguished Lecturer, The 65th Frontiers in Chemistry, Case Western Reserve University
2006	MacLean Lecturer, McMaster University
2005-2006	Nelson J. Leonard Distinguished Lectures, School of Chemical Sciences, University of Illinois
2005	Phi Lamda Upsilon / Glaxo Smith Kline Distinguished Lectureship at NC State University
2004	William H. Rauscher Lecture in Chemistry, Rensselaer Polytechnic Institute
2004	Milkovich Memorial Lectures, Department of Polymer Science, University of Akron

Refereed Publications:

(DeSimone has over 380 refereed scientific publications with ~55,000 citations to his work as measured by *Google Scholar* in September 2023; DeSimone's Hirsch Index "*h-Index*" = 113, that is, he has 113 publications with 113 or more citations; see Hirsch, J. E. *Proc. Nat. Acad. Sci.* **2005**, *46*, 16569)

1. "Review of high-performance sustainable polymers in additive manufacturing"; Chyr, G.; DeSimone, J. M. *Green Chemistry* **2023**, *25*, 453-466. (# of citations = 7)
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Funded Research Projects: (Total grants raised: \$108,943,608)

1. "MAPS 3.0 Research and Development"; Bill and Melinda Gates Foundation; \$2,400,000; 09/01/22 – 08/31/25
2. "Additive Manufacturing and Shared Prototyping Facility"; Stanford c-ShARP; \$596,000; 09/01/22 – 08/31/25
3. "Use of Carbon Dioxide as a Solvent and Water Replacement for "Dry" Manufacturing in the Microelectronics, Industrials and Pharmaceuticals Processing Industries"; Stanford Doerr School of Sustainability Accelerator; \$100,000; 05/01/22 – 04/30/23
4. "Next Generation Strain Sensors: 3D Printed Lattice Structures for Multi-directional Sensing"; Stanford Human Performance Alliance; \$200,000; 05/01/22 – 04/30/24
5. "Interstitial Fluid for Monitoring Health and Wellness"; The Precision Health and Integrated Diagnostics Center at Stanford (PHIND); \$200,000; 07/01/22 – 06/30/24
6. "Solid-State RNA-based Products Delivered by 3D-Printed Microneedle Patches"; Wellcome Leap; \$3,700,000; 12/1/21-11/31/24
7. "The Center for STEMM Mentorship at Stanford"; The Shanahan Foundation; \$1,500,000; 1/1/22 – 12/31/24
8. "Getting in Front of the Additive Manufacturing Revolution: Enabling the Automotive Industry to be Completely Chemically Circular"; Precourt Institute for Energy, Stanford University; \$450,000; 10/1/21 – 9/30/23
9. "Harnessing CLIP to Improve Tumor-homing Stem Cell Therapy for Post-Surgical Brain Cancer"; National Institutes of Health; Stanford University subcontract from University of North Carolina at Chapel Hill; \$583,000; 4/1/22 – 3/31/26
10. "3D MOSAIC: A Co-Design Approach Spanning Device and Integration Technologies, Architectures, and Algorithms for Large Energy Benefits"; Precourt Institute for Energy, Stanford University; \$450,000; 10/1/21 – 9/30/24
11. "Microneedle-based Vaccine Development for Rapid Response: Accelerating Deployment of Vaccines to the World"; Wellcome Leap; \$881,000; 4/1/21 – 9/30/21

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13. "Nano Approaches to Modulate Host Cell Response for Cancer Therapy: Project 2 – Nanoparticle-based Immune Modulators in Cancer Therapy & Vaccines," National Institutes of Health, \$440,489, 9/2015 – 7/2021
14. "University Cancer Research Fund"; \$175,000; 7/2010 – 6/2017
15. "Nanoparticle formulations of DNA repair inhibitors to improve chemoradiotherapy"; NIH/NCI; \$78,578; 8/2013 – 5/2018
16. "Preclinical Therapeutic Development for Multiple Sclerosis"; National Multiple Sclerosis Society; \$150,000; 4/2014 – 3/2019
17. "Collaborative Research: SusChEM: Perfluoroether-based Polymer Electrolytes for Lithium Batteries"; NSF; \$66,004; 9/2015 – 8/2018
18. "PRINT Butyrylcholinesterase Delivery"; \$4,477,660; 10/2013 – 9/30/2018
19. "Urinary Tract Infection Prevention and Spinal Cord Injury"; \$1,001,008; DeSimone Co-PI; 7/2013 – 6/2016
20. "Molecular Mosquitocides: Development of a robust, platform-based approach for sustainable insecticidal control of Anopheline mosquitoes; Particle based delivery of nucleic acid sequences for control of mosquitoes"; DeSimone (Co-PI), \$297,495; 7/1/11 – 6/30/14.
21. "Nanoparticle-Targeted Peptide Vaccines for Prostate Cancer: The Harvard-Hopkins-Carolina Consortium"; J.M. DeSimone (Co-PI), \$500,000/year for 2 years; \$154,902/year at UNC-CH.
22. "Carolina Center of Cancer Nanotechnology" Chapel Hill, NC, J.M. DeSimone (Co-PI), 9/30/2005-9/30/2015; 1-U54-CA151652-01; 530282; \$31,719,352
23. "Delivery of Biological Therapeutics" Office of the Director, Pioneer Award, National Institutes of Health, Chapel Hill, NC, J.M. DeSimone (PI), 9/30/2009-7/31/2014; 1DP1OD006432; 530416; \$3,750,000
24. "Novel Perfluoropolyether and Fouling Release Coatings: Investigation of Structure" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone (PI), 2/1/2010-1/31/2013; N00014-07-1-02612; 535775; \$435,525
25. "Engineered Organic Particles of Controlled Size, Shape and Surface Chemistry" National Institute of Biomedical Imaging and Bioengineering, Chapel Hill, NC, J.M. DeSimone (PI), 5/1/2009-4/30/2013; 1R01EB009565; \$653,766
26. "Red Blood Cells Mimic", National Heart, Lung, and Blood Institute, Chapel Hill, NC, J.M. DeSimone (PI), 3/11/2010-2/29/2012; 1R21HL092814; \$201,684
27. "University Cancer Research Fund" Chapel Hill, NC, J.M. DeSimone (Co-PI), 2007-2011; \$1,200,000
28. "ARRA – Biomimetic Approach to the Fabrication of Red Blood Cell Mimics" National Heart, Lung and Blood Institute, Chapel Hill, NC, J.M. DeSimone (PI) 7/1/2009-6/30/2011; 1-R21-HL092814-01; 552277; \$361,926
29. "EAGER: Meso-Polymers" NSF Research, Chapel Hill, NC, J.M. DeSimone (PI), 5/1/2009-4/30/2011; DMR-0923604; 554766; \$278,973
30. "Research Agreement between UNC and Liquidia in the area of PFPE, Lithography, Microfluidics, Nanostudies and membrane studies" Liquidia Technologies, Chapel Hill, NC, J.M. DeSimone (PI) 9/1/2005-8/31/2010; \$1,537,819
31. "UNC-CH EFRC: Solar Fuels and Next Generation" US Department of Energy, Chapel Hill, NC, J.M. DeSimone (Co-PI), 8/1/2009-7/31/2010; 535930; \$70,000
32. "NSF Science & Technology Center for Environmental Responsible Solvents and Processes" NSF, Chapel Hill, NC, J.M. DeSimone (PI), 11/1/1999-4/30/2010; 537494; \$36,117,733
33. "Novel Perfluoropolyether and Fouling Release Coatings: Investigation of Structure" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone (PI), 11/1/2006-5/31/2010; 535763; \$450,000

34. "Designer Functional Particles for Controlled Jamming: First Step Toward Soft Robotics"; Sub contract from University of Chicago, Chapel Hill, NC, J.M. DeSimone (PI), 5/21/2008-6/20/2010;543091; \$541,596
35. "Fabrication and Characterization of Well-Ordered Polymer Composite Dielectric" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone (PI), 5/1/2008-8/31/2010; \$186,274
36. "Polymerization of Fluoromonomers in Supercritical Fluids, E.I.DuPont NeNemours&Co., Chapel Hill, NC, J.M. DeSimone (PI), 12/17/1992-1/1/2009; \$2,555,000
37. "The Pharmacodynamics of Genes and Oligonucleotides" National Institute of General Medicine Science, Chapel Hill, NC, J.M. DeSimone (Co-PI), 4/1/2000-3/31/2009;532218; \$560,000.
38. "Proton Exchange Membranes for Next Generation Fuel Cells" US Department of Energy, Chapel Hill, NC, J.M. DeSimone (PI), 9/15/2005-9/14/2009; 535908, \$900,000
39. "Integrated Nanofluidic Electronic Sensor Technologies for Army Applications" US Army Research Office, Chapel Hill, NC, J.M. DeSimone (PI), 8/15/2005-3/31/2009;536848; W911NF-05-2-0047 \$3,006,000
40. "Environmentally Responsible Processes for High Resolution Dry Lithography of Semiconductor Wafers", US Environmental Protection Agency, Chapel Hill, NC, J.M. DeSimone (PI), 8/1/2005-7/31/2007; R083245401; \$678,600
41. "Replicating Viral Particles Using Nano-molding Techniques: The Particle Foundry" US Army Research Office, Chapel Hill, NC, J.M. DeSimone (PI), 7/25/2006-7/24/2007; W911NF-06-1-0343; \$200,000
42. "Targeted Delivery Via Protein-Carbohydrate Interactions", National Cancer Institute, Chapel Hill, NC, J.M. DeSimone (PI), 12/1/2000-2/2/2007; \$43,996
43. "Novel Perfluoropolyether Fouling Release Coatings: Investigations into the Effect of Polymer Structure & Material Properties on Surface Properties" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone; 12/1/2001-9/30/2006; 535763; \$700,670
44. "Microfluidic Devices - Aaryn Jones Scholarship" US Environmental Protection Agency, Chapel Hill, NC, J.M. DeSimone (PI), 9/8/2003-9/8/2006; \$264,030
45. "Supported Research Agreement with Synecor", Synecor, Chapel Hill, NC, J.M. DeSimone (PI), 5/1/2005-4/30/2006; \$37,284
46. "Dry Lithography: Environmentally Responsible Processes for High Resolution Pattern Transfer & Elimination of Image Collapse" US Environmental Protection Agency/NSF, Chapel Hill, NC, J.M. DeSimone (PI), 3/11/2002-3/10/2005; \$349,966
47. "Processing for sub-micron imaging on supercritical CO₂: An integrated approach to the deposition and development of photoresists" NSF; Chapel Hill, NC, J.M. DeSimone (PI), 2/15/2002-1/31/2005; \$22,749
48. "Request for Proposal for Independent Technical Consultation of Low Adhesive Coatings to the Shuttle External Tank" Swales Aerospace, Chapel Hill, NC, J.M. DeSimone (PI), 5/5/2005-7/30/2005; \$17,844
49. "Carbon Dioxide in Nature and Technology Internships in Public Education" North Carolina State University, Chapel Hill, NC, J.M. DeSimone (PI) 1/1/2002-12/31/2004; \$27,933
50. "Very Low Surface Energy Heterophase Polymeric Materials Separations" University of Texas at Austin, US Navy; Chapel Hill, NC, J.M. DeSimone (PI) 5/1/2002-9/30/2004; \$184,935
51. "Nitoxide Assisted Living Free Radical Polymerization of Block Copolymers in Supercritical CO₂. Characterization by Light Scattering Techniques" NSF Training, Chapel Hill, NC, J.M. DeSimone (PI), 7/1/2001-6/30/2004; \$13,080
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54. "Very Low Surface Energy Heterophase Polymeric Materials for Membranes" North Carolina State University, Chapel Hill, NC, J.M. DeSimone (PI), 3/1/2000-11/30/2002; 546754; 94-0574-01; \$145,000
55. "2000 Research and Engineering Apprenticeship Program" Academy of Applied Science, Chapel Hill, NC, J.M. DeSimone (PI), 7/1/2000-8/31/2001; \$2,500
56. "Research Agreement with Solvay (SAPI PVF Project), Solvay Advanced Polymers, Inc., Chapel Hill, NC, J.M. DeSimone (PI), 10/1/1997-6/30/2001; \$281,000
57. "Presidential Faculty Fellow Award", 5-37123; DMR-9350334NSF, Chapel Hill, NC, J.M. DeSimone (PI), 8/15/1993-1/31/1998; \$337,500
58. "NSF Young Investigator's Award"; 537048; DMR-9258571Chapel Hill, NC, J.M. DeSimone (PI), 8/15/1992-1/31/1995, \$100,000
59. "Synthesis Strategies for Tailored Energetic Polymers" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone (PI), 6/1/1992-5/31/1993; 535770; N00014-92-J-1758; \$32,657
60. "New Thiophene Based Materials" Office of Naval Research, Chapel Hill, NC, J.M. DeSimone (PI) 12/1/1991-11/30/1994,535766 N00014-92-J-1374; \$361,988

Issued Patents: (Approximately 240 issued patents, 300 pending patent applications)

1. US Patent 5,496,901 March 5, 1996; "Method of Making Fluoropolymers in Carbon Dioxide"; Inventor - J. M. DeSimone; Filed: March 27, 1992.
2. US Patent 5,312,882; May 17, 1994; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Y. Z. Menceloglu, J. R. Combes.
3. US Patent 5,266,677; November 30, 1993; "Thiophene-based Materials"; Inventors - E. T. Samulski and J. M. DeSimone.
4. US Patent 5,354,836; November 11, 1994; "Thiophene-based Materials"; Inventors - E. T. Samulski and J. M. DeSimone.
5. US Patent 5,358,836; October 21, 1994; "Thiophene-based Materials"; Inventors - E. T. Samulski and J. M. DeSimone.
6. US Patent 5,360,869; November 1, 1994; "Method of Making Fluorinated Copolymers"; Inventors - J. M. DeSimone and M. O. Hunt, Jr.
7. US Patent 5,410,013; April 25, 1995; "Thiophene-containing Poly(arylene ether) Sulfones"; Inventors - E. T. Samulski and J. M. DeSimone.
8. US Patent 5,420,224; May 30, 1995; "Thiophene-based Polymers: Polybenzoxazoles"; Inventors - E. T. Samulski and J. M. DeSimone.
9. US Patent 5,382,623; January 17, 1995; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Y. Z. Menceloglu, J. R. Combes.
10. US Patent 5,514,759; May 7, 1996; "Multi-phase Polymerization Process"; Inventors - J. M. DeSimone, T. J. Romack.
11. US Patent 5,451,633; September 19, 1995; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Menceloglu, J. R. Combes.
12. US Patent 5,506,317; April 9, 1996; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Y. Z. Menceloglu, J. R. Combes.

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14. US Patent 5,530,077; June 25, 1996; "Multi-phase Polymerization Process"; Inventors - J. M. DeSimone, T. J. Romack.
15. US Patent 5,561,216; October 1, 1996; "Late Transition Metal Catalysts for the Co- and Terpolymerization of Olefins and Alkyne Monomers with Carbon Monoxide"; Inventors - J. C. Barborak, M. S. Brookhart, and J. M. DeSimone.
16. US Patent 5,589,105; December 31, 1996; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Y. Z. Menceloglu, J. R. Combes.
17. US Patent 5,618,894; April 8, 1997; "Non-aqueous Polymerization of Fluoromonomers"; Inventors - J. M. DeSimone, T. J. Romack.
18. US Patent 5,639,836; June 17, 1997; "Heterogeneous Polymerizations in Carbon Dioxide"; Inventors - J. M. DeSimone, E. E. Maury, Y. Z. Menceloglu, J. R. Combes.
19. South African Patent 96/4546; February 26, 1997; "Process for the Preparation of Polyester in Carbon Dioxide"; Inventors: J. M. DeSimone and Gerhard Maier.
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234. US Patent 11,358,342; Issued June 14, 2022; "Methods of producing three-dimensional objects from materials having multiple mechanisms of hardening"; JP Rolland, K Chen, J Poelma, J Goodrich, RK Pinschmidt, JM DeSimone, LM Robeson.
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239. US Patent 11,433,613; Issued September 6, 2022; “Integrated additive manufacturing systems”; JM DeSimone, R Goldman, SK Pollack.
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241. US Patent 11,642,313; Issued May 9, 2023; “Methods for fabricating isolated micro-or nano-structures using soft or imprint lithography”; JM DeSimone, JP Rolland, BW Maynore, LE Euliss, GD Rothrock, AE Dennis, ET Samulski, RJ Samulski.
242. US Patent 11,707,839; Issued July 25, 2023; “Methods for producing three-dimensional objects with apparatus having feed channels”; JP Rolland, K Chen, J Poelma, J Goodrich, RK Pinschmidt, JM DeSimone, LM Robeson.

Current Research Group: DeSimone has mentored 80+ students through Ph.D. completion, half of whom are women and members of underrepresented groups in STEM.

<u>Name</u>	<u>Position</u>	<u>Previous Institution</u>
Coates, Ian	Graduate Student, Chemical Engineering	Bucknell University
Char, Gloria Un	Graduate Student, Materials Science & Engineering	Massachusetts Institute of Technology
Driskill, Madison	Graduate Student, Chemical Engineering	University of Arizona
Dulay, Maria	Sr. Scientist and Lab Manager; Co-Associate Director, Center for STEMM Mentorship	Stanford University (Zare Lab, Chemistry)
Efobi, Jo Ann	Master’s Student, Bioengineering	Northwestern University
Farrell, Crista	Director, Strategic Programs & Engagement; Co-Associate Director, Center for STEMM Mentorship	University of North Carolina; Carbon
Hsiao, Kaiwen	Postdoctoral Scholar	Apple; Intel; U of Illinois Urbana-Champaign
Hung, Andy	Postdoctoral Scholar & Clinical Scholar	Northwestern University
Ilyan, Dan	Graduate Student, Mechanical Engineering	Caltech
Jacobson, Gunilla	Director of Translational Medicine	Stanford University (Deputy Director, MIPS)
Kim, Jae Yun	Visiting Scholar	Sungkyunkwan University (SKKU), Korea
Kronenfeld, Jason	Graduate Student, Chemistry	University of Arizona
Kwak, Jean	Postdoctoral Scholar (joint with Tom Soh)	Northwestern University
Kuo, Renesmee	PhD Student, Electrical Engineering	UC-Berkeley
Latarski, Amy	PhD Student, Chemistry	York University
Lipkowitz, Gabriel	Graduate Student, Mechanical Engineering	Imperial College, London; Princeton University

Markar-Limanov, Anna	Graduate Student, Chemistry	Amherst College
Misquez, Eileen	Administrative Assistant	Stanford Medicine
Onffroy, Philip	PhD Student, Chemical Engineering	Bucknell University
Pan, William	Undergraduate Researcher	High School
Perry, Jillian	Research Assistant Professor (UNC)	U. of Florida; Postdoc, UNC
Rajesh, Netra Unni	Graduate Student, Bioengineering	Univ. of Toronto; MIT
Saccone, Max	Postdoctoral Scholar	Caltech
Samuelson, Tim	Graduate Student, Mechanical Engineering	Missouri S&T
Shea, Cooper	Undergraduate → Master's Researcher	High School
Spitler, Ryan	Deputy Director, Precision Health and Integrated Diagnostics (PHIND) Center	Stanford (postdoc)
Tian, Shaomin	Research Assistant Professor (UNC)	UNC-CH Microbiology
Wise, Roger	Director, Additive Manufacturing and Prototyping Facility	Carbon
Xu, Yue	Life Science Research Professional	Stanford

Past Research Group Members:

A) Past Group Members, summary:

83	Postdocs
58	Ph.D. Degrees in Chemistry
9	Ph.D. Degrees in Pharmaceutical Sciences
1	Ph.D. Degree in Biomedical Engineering
1	Ph.D. Degree in Microbiology & Immunology
13	Ph.D. Degrees in Chemical Engineering
13	M.S. Degrees in Chemistry
1	M.S. Degree in Mechanical Engineering
1	M.S. Degree in Chemical Engineering
25	B.S. Chemistry and Applied Science fields
1	B.S. Materials Science and Engineering

B) Past Ph.D. Graduates

* denotes person went on to achieve faculty position

* Ashby, Valerie; Thesis: Synthesis and characterization of thiophene-based high performance polymers; Graduated 1994

* Guan, Zhibin; Thesis: Homogeneous free radical polymerizations in supercritical carbon dioxide; Graduated: 1994

Peters, Mark; Thesis: Molecular engineering of well-defined heterophase materials; Graduated: 1994

Hunt, Michael; Thesis: Studies on the end-functionalization of living anionic polymerization; Graduated: 1995

Maury, Elise; Thesis: Heterogeneous free radical polymerizations in supercritical carbon dioxide; Graduated: 1995

Tahiliani, Shonali; Thesis: Living alternating copolymerizations of styrenic monomers and carbon monoxide using a Pd(II) catalyst; Graduated: 1995

Dukes, Katerina ; Thesis : Reactivity and dynamics of spin-polarized radical pairs ; Graduated: 1996

Mistele, Chad; Thesis: Metathesis and oxidative coupling polymerizations in carbon dioxide; Graduated: 1996

* Canelas, Dorian; Thesis: Dispersion polymerization of vinyl monomers using nonionic surfactants in liquid and supercritical CO₂; Graduated: 1997

Clark, Michael; Thesis: Studies of cationic processes in carbon dioxide; Graduated: 1997

Kassis, Camille; Thesis: Surface and mass spectral analysis of polymeric materials utilizing XPS and MALDI; Graduated: 1997

* Romack, Tim; Thesis: Polymerization of fluoro-olefins in liquid and supercritical carbon dioxide; Graduated: 1997

Tanner, Martha; Thesis: Mechanistic studies of Co(III)-catalyzed reactions: Living polymerization of ethylene; Graduated: 1997

Betts, Douglas; Thesis: The synthesis, characterization, and application of CO₂-soluble, non-ionic amphiphilic block copolymers; Graduated: 1998

Kipp, Brian; Thesis: The synthesis of fluoropolymers in carbon dioxide and carbon dioxide/aqueous systems; Graduated: 1998

Phillips, Rich; Thesis: The synthesis of poly(arylene)s via nickel(0)-catalysis: Homopolymers and copolymers; Graduated: 1998

Maxwell, Kim; Thesis: Antenna polymer mimics for energy and electron transfer processes in photosynthesis; Graduated: 1999

Bunyard, Clay; Thesis: Novel methods for synthesis of perfluoropolyethers; Graduated: 2000

Carson, Terri; Thesis: The preparation of fluorinated and water-soluble materials via heterogeneous polymerizations in CO₂; Graduated: 2000

* Gross, Stephen; Thesis: Step-growth polymerizations facilitated by scCO₂: The synthesis of poly(bisphenol A carbonate); Graduated: 2000

McClain, Jim; Thesis: Characterization of polymers and amphiphiles in liquid and supercritical carbon dioxide; Graduated: 2000

Royer, Joseph; Thesis: Supercritical fluid assisted polymer processing: Plasticization, swelling and rheology; Graduated: 2000

Wells-Kennedy, Sharon; Thesis: The study of amphiphilic block copolymers in selective solvents; Graduated: 2000

Crette, Stephanie; Thesis: Solid supports for catalysis and separation processes in compressed carbon dioxide; Graduated: 2001

Shultz, Scott; Thesis: Mechanistic investigations of Ni(II) and Pd(II) catalyzed copolymerization of carbon monoxide & olefins; Graduated: 2001

Erford, Karen (McAllister) Thesis : Polymeric nanogels produced via inverse micromulsion polymerization for gene and antisense delivery Graduated: 2002

Flowers, Devin; Thesis: Designing photoresist systems for dry microlithography in carbon dioxide; Graduated: 2002

Hoggan, Eric; Thesis: Spin coating and photolithography using liquid and supercritical carbon dioxide; Graduated: 2002

Ye, Weijun; Thesis: Well-defined sugar-containing amphiphiles & application to heterogeneous polymerizations in scCO₂; Graduated: 2002

Folk, Sarah; Thesis: Fluorinated and siloxane-based homopolymers and surfactants: Characterization of interactions and aggregation by scattering techniques in compressed carbon dioxide; Graduated: 2003

Kennedy, Karen; Thesis: Characterization of phase equilibrium associated with heterogeneous polymerizations in scCO₂; Graduated: 2003

Novick, Brian; Thesis: Free meniscus coating using compressed carbon dioxide; Graduated: 2003

Behles, Jacqueline; Thesis: Synthesis of hollow core-shell polymer particles and the synthesis of phosphate fluorosurfactants for use in carbon dioxide; Graduated: 2004

Jones, Charles; Thesis: Etching of silicon dioxide thin films and synthesis of novolac resins in supercritical carbon dioxide; Graduated: 2004

Visintin, Pamela; Thesis: Slurry design towards a "dry" carbon dioxide-based copper chemical mechanical planarization process for device fabrication; Graduated: 2004

Xu, Bin; Thesis: High pressure nuclear magnetic resonance studies of self-assembly structures formed with phosphorous fluorosurfactants in liquid/supercritical carbon dioxide; Graduated: 2004

Young, Jennifer; Thesis: Composite polymer particles in supercritical carbon dioxide: Synthesis and characterization; Graduated: 2004

Zannoni, Luke; Thesis: Fluoroolefin copolymerizations in scCO₂ towards the development of a 157 nm photoresist; Graduated: 2004

Astrum-Acevedo, Jim; Thesis: Synthesis and characterization of linear AB diblock copolymeric styrenic-based energy conducting polymers with pendant ruthenium (II) trisbipyridyl chromophores; Graduated: 2005

Denison, Ginger; Thesis: Carbon dioxide based etchant solutions for copper chemical mechanical planarization; Graduated: 2005

Kim Jaehoon; Thesis: Deposition of thin organic and metal films from carbon dioxide by free meniscus and solvent displacement methods; Graduated: 2005

Liu, Tao; Thesis: Continuous precipitation polymerization of acrylic acid in supercritical carbon dioxide; Graduated: 2005

Rolland, Jason; Thesis: Functional perfluoropolyethers for novel applications; Graduated: 2005

Boggiano, Mary Kate; Thesis: Addition polymerization toward the synthesis of photoresists for microlithography with CO₂ development; Graduated: 2006

Guo, Ji; Thesis: Design chemistry for the environment: From processing fluoropolymers in supercritical carbon dioxide to new nonbiopersistent fluorinated coating materials; Graduated: 2006

Zhou, Zhilian; Thesis: Novel polymer electrolyte membranes for fuel cell applications; Graduated: 2006

Ahmed, Tamer; Thesis: Copolymerization of vinylidene Fluoride with Hexafluoropropylene in supercritical carbon dioxide; Graduated: 2007

Gratton, Stephanie; Thesis: In vitro and in vivo studies of nanomolded PRINT particles of precisely controlled size, shape, and surface chemistry; Graduated: 2008

Kelly, Jennifer; Thesis: Novel fluoroelastomers composed of tetrafluoroethylene and vinylidene fluoride oligomers synthesized in carbon dioxide for use in soft lithography to enable a platform for the fabrication of shape- and size-specific, monodisperse biomaterials.; Graduated: 2008

Herlihy, Kevin; Thesis: Shape and size specific: Fabrication, characterization, and application of highly tailored biocompatible hydrogel particles for use in materials and biomedical settings; Graduated: 2009

Hu, Zhaokang; Thesis: Novel perfluoropolyethers as fouling-release coatings; Graduated: 2009

Enlow, Elizabeth; Thesis : Engineering PLGA particles for advanced drug delivery ; Graduated: 2010

Hampton, Meredith; Thesis: Nano-patterning of inorganic materials for photovoltaic applications; Graduated: 2010

Nunes, Janine; Thesis: Controlled manipulation of engineered colloidal particles; Graduated: 2010

Williams, Stuart; Thesis: Nanopatterining with PFPE elastomers: Materials and photovoltaic applications; Graduated: 2010

Yadav, Rameshwar; Thesis: Chemically crosslinked polymer electrolyte membranes from fluorinated liquid precursors for application in fuel cells; Graduated: 2010

Merkel, Timothy; Thesis: Biologically Inspired PRINT particles: Design, Fabrication, in vitro and in vivo evaluations of extremely soft particles; Graduated: 2011

Brosnan, Sarah; Thesis: Development of novel polyesters as unique biomaterials; Graduated: 2012

McGowan, Chang, Kelly; Thesis: Targeted PRINT nanoparticles for effective cancer therapy; Graduated: 2012

Dunn, Stuart; Thesis: Shape-specific hydrogel nanoparticles with defined composition & surface properties for gene silencing ; Graduated: 2012

* Xu, Jing; Thesis: Precisely engineered protein-based PRINT particles for delivery of nucleic acids; Graduated: 2012

Roberts, Reid; Thesis: Harnessing what lies within: Programming immunity with biocompatible devices to treat human disease; Graduated: 2013

Chu, Kevin; Thesis: PRINT nanoparticle parameters to improve docetaxel PK/PD; Graduated: 2013

Chen, Kai; Thesis: A biomimetic approach toward red blood cell substitutes based on PRINT hydrogels; Graduated: 2013

Khodabandehlou, Khosrow; Thesis: Slowly-dissolving aqueous suspensions of functionalized protein antibody PRINT particles for therapeutic applications; Graduated: 2014

Roode, Luke; Thesis: Sub-tumor distribution of PRINT nanoparticles and its application for nucleic acid delivery; Graduated: 2014

* Byrne, James; Thesis: Iontophoretic delivery of cytotoxic agents for the treatment of solid tumors; Graduated: 2014

Kai, Marc P.; Thesis: Development and applications of a cisplatin-containing hydrogel nanoparticle; Graduated: 2014

*Fromen, Catherine A.; Thesis: Monodisperse, uniformly-shaped particles for controlled respiratory vaccine delivery; Graduated: 2014

Mueller, Sarah; Thesis: Polymeric PRINT hydrogel nanoparticles as a delivery platform for subunit vaccine antigens and adjuvants; Graduated: 2014

Shen, Tammy; Thesis: Development and characterization of PRINT particles as drug delivery vehicles in the lung; Graduated: 2014

Reuter, Kevin; Thesis: PRINT nanoparticle parameters to improve docetaxel PK/PD; Graduated: 2015

Wong, Dominica H. C.; Thesis: Perfluoropolyether-based electrolytes for lithium battery applications; Graduated: 2015

* Moga, Katherine A.; Thesis: Rapidly dissolvable PRINT microneedles for the transdermal delivery of therapeutics; Graduated: 2015

Johnson, Ashley R.; Thesis: Continuous Liquid Interface Production of Microneedles for Transdermal Drug Delivery; Graduated: 2016

Kapadia, Chintan. H.; Thesis: Engineering PRINT Nanoparticle Subunit Vaccine to Induce Antitumor Immune Response; Graduated: 2016

* Rahhal, Tojan. B.; Thesis: Engineering PRINT Particles for Pulmonary Delivery of Therapeutics; Graduated: 2016

Bloomquist, Cameron; Thesis: Continuous Liquid Interface Production of Medical Devices for Drug Delivery and Cancer Therapy; Graduated: 2017

Caudill, Cassie; Thesis: Engineering Microneedles for the Transdermal Delivery of Therapeutics; Graduated: 2017

Coffman, Jason; Thesis: Engineering Antigen Display for a PRINT Particulate Dengue Subunit Vaccine Platform; Graduated: 2017

Olson, Kevin; Thesis: Nonflammable Perfluoropolyether Electrolytes for Safer Lithium-Based Batteries; Graduated: 2017

Quintanilla, Adam; Thesis: Fundamentals of Particulate-Filled Polymer Composite via Continuous Liquid Interface Production; Graduated: 2017

Wilson, Erin; Thesis: Developing PRINT Dry Powders for Pulmonary Protein Delivery; Graduated: 2017

Janusiewicz, Rima; Thesis: Continuous Liquid Interface Production (CLIP) for the Fabrication of Porous Architected Structures; Graduated: 2018

C) Past M.S. Graduates

Givens, Ramone; Thesis: Step-growth polymerization in supercritical fluids; Graduated: 1997

Jones, Tamara; Thesis: Synthesis for low dielectric solvents; Graduated: 1997

Burke, Amy; Thesis: Step-growth polymerizations using supercritical carbon dioxide; Graduated: 1998

Burns, Sonja; Thesis: Non-thesis; Graduated: 1999

Saraf Manish; Thesis: Polymerization of vinylidene fluoride in supercritical carbon dioxide: Molecular weight distribution; Graduated: 2001

Polley, Jennifer; Thesis: The carbon dioxide technology platform: From surfactants to microelectronics; Graduated: 2002

Hicks, Randall, Evan; Thesis: Synthesis of Tetrafluoroethylene tetrapolymers in supercritical carbon dioxide; Graduated: 2003

Exener, Ansley; Thesis: Experiments utilizing the new nanofabrication method PRINT; Graduated: 2005

Traud, Ron; Thesis: Proton exchange membranes improved mechanical properties and direct membrane fabrication; Graduated: 2008

Gao, Xin; Thesis: RNA-based drug delivery using PRINT nanoparticles; Graduated: 2009

Hinson, William; Thesis: In vitro and in vivo studies of biodegradable thermoplastic PRINT particles of controlled size, shape, and formulation; Graduated: 2010

Forman, Nicole; Thesis: PRINT particles for inhaled therapies; Graduated: 2011

Fain, John; Thesis: PRINT nanoparticle design and fabrication for imaging application & delivery of antibiotic payloads; Graduated: 2012

Mooney, Heather Joy; Thesis: Development of a PRINT nanoparticle platform for use in vaccine applications; Graduated: 2013

Tim Samuelsen; Stanford Mechanical Engineering, 2022

D) Past Undergraduate Researchers

<u>Name</u>	<u>Degree</u>	<u>Next Location</u>
Anderson, Chris	B.S. Chemistry	Caltech
Archuleta, Christine	B.S. Chemistry	World Pediatric Project
Askew, Kim	B.S. Chemistry	Medical School
Bhattacharya, Arjun	B.S. Mathematics	UNC Biostatistics for PhD
Batten, Heather	B.S. Chemistry	UMass - Amherst
Berndt, Steve	B.S. Chemistry	NC Molding Company
Bertrand, Elizabeth	B.S. Chemistry	University of Montpellier
Brooks, Ryan	B.S. Exercise & Sport Sci.	Graduate School
Bulgin, Andrew	B.S. Chemistry	Medical School
Butcher, Eric	B.S. Pharmacy	Pharmacy School
Cangelosi, Michael	B.S. in Applied Sciences	Cardinal Health
Detter, Matthew	B.S. Chemistry; Research Asst.	Duke University (MD/PhD)
Dunn, Erin	B.S. Chemistry	Graduate School
Fakhouri, Sami	B.S. Chemistry	UMass – Polymer Science
Flannery, Tommy	B.A. Global Studies/ Chemistry minor	Weill Cornell Medical College
Genova, Jennifer	B.S. Chemistry	Medical School
Glover, Rebecca	B.A. Chemistry	Dental School
Harbinson, Chris	B.S. Chemistry	Micell Technologies
Haynie, Mindy	B.S. Chemistry	Micell Technologies
Karkanawi, Sarah	B.S. Pharmacy	Pharmacy School
Killian, Susan	B.S. Chemistry	Northwestern University
King, Tiffany	B.S. Chemistry/ Mathematics	Univ. of Chicago (Dept. of Biochem. & Molec. Bio.)
Lee, William	B.S. Chem./ B.A. Economics	GSK
Lizotte, Jeremy	B.S. Chemistry	Virginia Tech
Marshall, Kelly	B.S. Chemistry	University of California - Berkeley
Mofrad, Peter	B.S. Chemistry	Medical School
Orgel, Ryan	B.S. Chemistry	Wake Forest University
Paradzinsky, Mark	B.S. Chemistry	Medical School
Pickens, Andrew	B.S. Biochemistry	Virginia Tech (for Ph.D.)
Pollitis, Jeffery	B.S. Chemistry	Medical School
Portnow, Lauren	B.S. Chemistry	University of Michigan
Sailer, David	B.S. Biochemistry	UNC-CH School of Medicine
Seus, Allison	B.A. Chemistry	UNC-CH Research Assistant & Lab Manager
Short, Patrick	B.S. Applied Math./ Quant. Bio.	Graduate School
Snead, David	B.S. Chemistry	Univ. of Cambridge for Ph.D.
Smith, Renee	B.S. Chemistry	Graduate School
Stein, Emily	B.S. Materials Science & Engineering	MIT Graduate School
Stranko, Matt	B.S. Chemistry	Medical School
Sullivan, David	B.S. Chemistry	Graduate School
Thompson, Drew	B.S. Chemistry	UC – Berkeley
Trecek, John	B.S. Chemistry	Medical School
Weston, Ken	B.S. Chemistry	UC – Santa Barbara
White, Jesse	B.S. Chemistry	Architecture School

E) Past Postdoctoral Researchers and Staff

* denotes subsequent or current faculty position

<u>Name</u>	<u>Position</u>	<u>Next Location</u>
Andre, Pascal	Postdoc	Industry in France
Archibald, Scott	Postdoc	UniRoyal
Barliya, Tilda	Postdoc	Rabin Medical Center
Bessel, Carol	Sabbatical Leave	Villanova
* Byrne, James	Postdoc (after Ph.D.)	UNC (M.D.); Harvard Radiation Oncology (residency)
* Bickford, Lissett	Postdoc	Asst. Prof. VA Tech
Blake, Steven	Postdoc	Postdoc at MIT
Bowerman, Charlie	Postdoc; Research Assoc.	Moderna Therapeutics
Brannen, Candice	Postdoc	Lord Corporation
Buhler, Eric	Postdoc	CNRS – Grenoble, France
Caudill, Cassie	Postdoc (after Ph.D.)	Vaxess Technologies
Cha, Junhoe	Postdoc	University of Singapore
Chernyak, Yuri	Postdoc NCSU	Huntsman Chemical Company, RTI
* Charpentier, Paul	Postdoc NCSU	Univ. of Western Ontario
Cheung, Roland	Postdoc	Octoplus (Netherlands)
* Choi, Jai-Pil	Postdoc	Professor, CalState Univ., Fresno
Combes, Jimmy	Postdoc	Xerox Research Centre of Canada
Conwell, Christine	Postdoc	Consulting
* Cooper, Andy	Postdoc	Cambridge University, Liverpool
Dardin, Alex	Postdoc	RohMax
* Davidson, Tammy	Postdoc	Middle Tennessee State
Dessipri, Geni	Postdoc	ARI - Greece
DeYoung, James	Postdoc	Micell Technologies
Dominey, Raymond	Sabbatical Leave	University of Richmond
Du, Libin	Postdoc	Lubrizol
Dunn, Stuart	Postdoc & Research Associate	UNC-CH
DuPont, Julie	Postdoc	Organic Synthesis Company
Elsesser, Mark	Postdoc	Science Policy Fellow, State of CA
Ermoshkin, Alexander	Postdoc	Liquidia Technologies
Ertas, Merve	Postdoc	Wright-Patterson AFRL
Eulis, Larken	Postdoc	Postdoc, Radiology, UNC-CH
Finniss, Mathew	Research Assistant	Dalhousie University (Med School)
Galloway, Ashley	Postdoc	Liquidia Technologies
Gavrilov, Kseniya	Postdoc	Triangle Insights Group
Goodner, Mike	Postdoc	Intel
Gullapalli, Anuradha	Research Specialist	Return to India
Guo, Ji	Postdoc	FDA
Haithcock, Vicki	Administrative Manager	Retired
Hasan, Warefta	Postdoc	AuraSense Therapeutics
Herman, Delores	Postdoc	Duke Law School
Huang, Lihong	Research Associate	South Carolina
Hsiao, Yu-Ling	Postdoc	Bayer
Iliadis, Kimon	Lab Assistant	UNC-CH
Jeong, Wonhee	Postdoc	LG (Korea)
Jikei, Mishi	Postdoc	Tokyo Institute of Technology

* Kadla, John	Visiting Scientist	NC State University
Kapellen, Kerstin	Postdoc	Industry, Germany
Keiper, Jason	Postdoc	Stepan
Kendall, Jonathan	Postdoc	Lord Corporation
Kersey, Farrell	Postdoc	UNC-CH
* Lee, Brian	Postdoc	Sungkyunkwan Univ., South Korea
* Lee, Dongil	Postdoc (Joint with Murray)	Western Michigan University
Lemert, Rich	Postdoc	Consultant
Lin, Jun	Postdoc	Consultant
Luft, Chris	Senior Research Associate	Liquidia / Premirr Plastics
* Ma, Da	Postdoc	Fudan University
Maier, Gerhard	Postdoc	Technische Universitat Muenchen
Maynor, Ben	Postdoc	Liquidia Technologies
Mecham, Sue	Research Associate	UNC-CH & NALA Systems, Inc.
* Menciloglu, Yusuf	Postdoc	Gemsan - Turkey
Michel, Udo	Postdoc	Degussa Stockhausen
* Min, Yuanzeng	Postdoc	Univ. of Science & Technology, China
Murphy, Andrew	Postdoc	Liquidia Technologies
Napier, Mary	Research Assoc. Prof./Project Manager	Exec. Dir., Kenan Inst. of Private Enterprise (UNC)
Nebipasagil, Ali	Postdoc	Formlabs
Ni, Yizeng	Postdoc	Supelco
O'Neill, Adrian	Postdoc	Quintiles
Paisner, Sara	Postdoc	GE Plastics
Pandya, Ashish	Lab Mgr. and Sr. Res. Ass.	Science House
* Parrott, Matthew	Postdoc	Assistant Prof., UNC SOM, Radiology
* Petros, Rob	Postdoc	University of North Texas
Pillai, Jonathan	Postdoc	Stanford-India Biodesign Fellowship
Pinschmidt, Bob	Research Associate	UNC-CH
Pohlhaus, Patrick	Postdoc	Liquidia
Poppe, Dirk	Postdoc	Industry in Germany
Powell, Kim	Postdoc	Savannah River
Quadir, Murat	Postdoc/Lab Manager	Nalco
Robbins, Greg	Research Associate	Carbon, Inc.
Savage, John	Postdoc	Liquidia
Schorzman, Derek	Postdoc	Bausch and Lomb
* Shaffer, Katherine	Postdoc	Wayne State College
Shi, Chunmei	NCSU Postdoc	NCSU Postdoc w/ Roberts
Shiho, Hiroshi	Visiting Scientist	JSR Corporation
Stewart, Gina	Postdoc	Micell Technologies, Consultant
* Taylor, Darlene	STC Tech. Coordinator	Assist. Prof. NC Central University
Tessema, Addis	Postdoc	UNC-CH
Tysinger, Matt	Lab Tech	EY
Tzeng, Mei-Chun	LEAP Visiting Scholar	Eternal Materials Co Ltd, Taiwan
Wang, Danni	Postdoc	Supelco
Wang, Jie-Yu	Postdoc	Beijing University
* Wang, Jin	Postdoc	Baylor College of Medicine
Wang, Ke	Postdoc (w/ Carbonell)	Guidant Corporation
* Wang, Yapei	Postdoc	Professor, Renmin University
Wang, Ying	Postdoc	Univ. of Toronto
Wei, Han-Chao	Postdoc	Exfluor Incorporated

Wojcinski, Lou	Postdoc	Postdoc, Univ. of Kentucky
Wood, Colin	Postdoc	Researcher, Univ. of Liverpool
Yarbrough, Jason	Postdoc	Sealed Air Corporation
* Yi, Xianwen	Research Associate	UNC (Research Asst. Prof.)
* Yoshida, Eri	Postdoc	Asst Professor – Kyoto University
Zhang, Hanjun (Henry)	Postdoc	Postdoc at LBNL
Zhang, Rui	Postdoc	Storagenenergy Technologies