



## Joseph M. DeSimone

Sanjiv Sam Gambhir Professor of Translational Medicine, Professor of Chemical Engineering and, by courtesy, of Chemistry, of Materials Science and Engineering, and of Operations, Information and Technology at the Graduate School of Business

Radiology

 Curriculum Vitae available Online

### CONTACT INFORMATION

#### • Administrative Contact

Eileen Misquez - Administrative Assistant to Joseph M. DeSimone

**Email** [emisquez@stanford.edu](mailto:emisquez@stanford.edu)

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### Bio

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#### BIO

Joseph M. DeSimone is the Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering at Stanford University. He holds appointments in the Departments of Radiology and Chemical Engineering with courtesy appointments in the Department of Chemistry and in Stanford's Graduate School of Business.

The DeSimone laboratory's research efforts are focused on developing innovative, interdisciplinary solutions to complex problems centered around advanced polymer 3D fabrication methods. In Chemical Engineering and Materials Science, the lab is pursuing new capabilities in digital 3D printing, as well as the synthesis of new polymers for use in advanced additive technologies. In Translational Medicine, research is focused on exploiting 3D digital fabrication tools to engineer new vaccine platforms, enhanced drug delivery approaches, and improved medical devices for numerous conditions, with a current major focus in pediatrics. Complementing these research areas, the DeSimone group has a third focus in Entrepreneurship, Digital Transformation, and Manufacturing.

Before joining Stanford in 2020, DeSimone was a professor of chemistry at the University of North Carolina at Chapel Hill and of chemical engineering at North Carolina State University. He is also Co-founder, Board Chair, and former CEO (2014 - 2019) of the additive manufacturing company, Carbon. DeSimone is responsible for numerous breakthroughs in his career in areas including green chemistry, medical devices, nanomedicine, and 3D printing. He has published over 350 scientific articles and is a named inventor on over 200 issued patents. Additionally, he has mentored 80 students through Ph.D. completion in his career, half of whom are women and members of underrepresented groups in STEM.

In 2016 DeSimone was recognized by President Barack Obama with the National Medal of Technology and Innovation, the highest U.S. honor for achievement and leadership in advancing technological progress. He has received numerous other major awards in his career, including the U.S. Presidential Green Chemistry Challenge Award (1997); the American Chemical Society Award for Creative Invention (2005); the Lemelson-MIT Prize

(2008); the NIH Director's Pioneer Award (2009); the AAAS Mentor Award (2010); the Heinz Award for Technology, the Economy and Employment (2017); the Wilhelm Exner Medal (2019); the EY Entrepreneur of the Year Award (2019 U.S. Overall National Winner); and the Harvey Prize in Science and Technology (2020). He is one of only 25 individuals elected to all three branches of the U.S. National Academies (Sciences, Medicine, Engineering). DeSimone received his B.S. in Chemistry in 1986 from Ursinus College and his Ph.D. in Chemistry in 1990 from Virginia Tech.

## **ACADEMIC APPOINTMENTS**

- Professor, Radiology
- Professor, Chemical Engineering
- Professor (By courtesy), Operations, Information & Technology
- Professor (By courtesy), Chemistry
- Professor (By courtesy), Materials Science and Engineering
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H
- Member, Stanford Cancer Institute

## **ADMINISTRATIVE APPOINTMENTS**

- Vice Chair of Strategy, Department of Radiology, (2024- present)
- Co-Director, Canary Center, (2022- present)
- Co-Director, Cancer Imaging & Early Detection Program, Stanford Cancer Institute, (2025- present)
- Founding Faculty Director, Center for STEMM Mentorship at Stanford, (2022- present)

## **HONORS AND AWARDS**

- U.S. National Medal of Technology and Innovation, Office of the President of the United States (Obama) (2016)
- Member, National Academy of Engineering (2005)
- Member, National Academy of Sciences (2012)
- Member, National Academy of Medicine (2014)
- Member, American Academy of Arts and Sciences (2005)
- Harvey Prize in Science and Technology, Technion-Israel Institute of Technology (2020)
- NAS Award for Convergent Science, National Academy of Science (2018)
- AAAS Mentor Award, American Academy of Arts and Sciences (2010)
- Dickson Prize for Science, Carnegie Mellon University (2015)
- Wilhelm Exner Medal, Austrian Industry Association (2019)
- EY Entrepreneur of the Year U.S. Overall National Winner, EY (2019)
- Heinz Award in Technology, the Economy and Employment, Heinz Foundation (2017)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Co-Founder, Board Member, and former CEO, Carbon, Inc (2013 - present)
- Co-Founder, Chairman of the Board, PinPrint, Inc (2024 - present)
- Board Member, Focal Medical (2014 - present)
- Co-Founder and Board Member, OmniPulse, Inc (2023 - present)

- Founding Board Member, Teal Health (2021 - present)

## PROFESSIONAL EDUCATION

- Ph.D., Virginia Tech , Chemistry (1990)
- B.S., Ursinus College , Chemistry (1986)

## LINKS

- My Lab site: <https://desimonegroup.stanford.edu/>

## Teaching

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### COURSES

#### 2025-26

- Career Building: Entrepreneurship / Intrapreneurship, People, Innovation, Decision-Making and Impact: CHEMENG 189, CHEMENG 289, ENGR 289, RAD 189, RAD 289 (Spr)

#### 2024-25

- Career Building: Entrepreneurship / Intrapreneurship, People, Innovation, Decision-Making and Impact: CHEMENG 189, CHEMENG 289, ENGR 289, RAD 189, RAD 289 (Spr)

#### 2023-24

- Career Building: Entrepreneurship / Intrapreneurship, People, Innovation, Decision-Making and Impact: CHEMENG 189, CHEMENG 289, ENGR 289, RAD 189, RAD 289 (Win)

#### 2022-23

- Career Building: Entrepreneurship / Intrapreneurship, People, Innovation, Decision-Making and Impact: CHEMENG 189, CHEMENG 289, ENGR 289, RAD 189, RAD 289 (Win)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Yuan Jia, Sam Khasnavis, Annie Nguyen, Prima Dewi Sinawang

#### Doctoral Dissertation Advisor (AC)

Elli Brna, Ian Coates, Jize Dai, Jacob Dobson, Luna Hwang, Dan Ilyn, Ved Sachin Karawale, Amy Laturski, Philip Onffroy, Yee Lin Tan

#### Doctoral Dissertation Co-Advisor (AC)

Noah Eckman, Carl Kohnke, Austin Kwan, Joshua Martinez-Navarro, Annie Nguyen, Vedika Shenoy

#### Postdoctoral Research Mentor

Jean Kwak

## Publications

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### PUBLICATIONS

- **A microneedle device for rapid dermal interstitial fluid sampling.** *Science advances*  
Hung, A. H., Kamat, N. U., Bermudez, A., Boczek, S. M., Garcia-Marqués, F. J., Tan, Y. L., Hwang, J. L., Sinawang, P. D., Ilyn, D., Jacobson, G. B., Demirci, U., Poplack, S. P., Pitteri, et al  
2025; 11 (39): eadx5492
- **Fabrication of 3D-Printed Carbon Microarchitected Structures with High Yield from Polyacrylonitrile Composites via Gel Infusion and Pyrolysis** *CHEMISTRY OF MATERIALS*  
Onffroy, P. R., Lagat, M., Schroeder, D., Dobson, J. A., Chiovoloni, S., Bortner, M. J., Lu, J. Q., Saccone, M. A., DeSimone, J. M.  
2025

- **Free-Form Microfluidic Microneedle Array Patches** *ADVANCED FUNCTIONAL MATERIALS*  
Coates, I. A., Driskill, M. M., Rajesh, N. U., Lipkowitz, G., Ilyn, D., Xu, Y., Dulay, M. T., Jacobson, G. B., Tumbleston, J. R., Perry, J. L., Tian, S., DeSimone, J. M.  
2025
- **Lyophilized SARS-CoV-2 self-amplifying RNA vaccines for microneedle Array patch delivery.** *Journal of controlled release : official journal of the Controlled Release Society*  
Driskill, M. M., Coates, I. A., Hurst, P. J., Rajesh, N. U., Dulay, M. T., Waymouth, R. M., Akahata, W., Matsuda, K., Smith, J. F., Jacobson, G. B., Perry, J. L., Tian, S., DeSimone, et al  
2025: 113944
- **High-resolution stereolithography: Negative spaces enabled by control of fluid mechanics.** *Proceedings of the National Academy of Sciences of the United States of America*  
Coates, I. A., Pan, W., Saccone, M. A., Lipkowitz, G., Ilyn, D., Driskill, M. M., Dulay, M. T., Frank, C. W., Shaqfeh, E. S., DeSimone, J. M.  
2024; 121 (37): e2405382121
- **Growing three-dimensional objects with light.** *Proceedings of the National Academy of Sciences of the United States of America*  
Lipkowitz, G., Saccone, M. A., Panzer, M. A., Coates, I. A., Hsiao, K., Ilyn, D., Kronenfeld, J. M., Tumbleston, J. R., Shaqfeh, E. S., DeSimone, J. M.  
2024; 121 (28): e2303648121
- **Roll-to-roll, high-resolution 3D printing of shape-specific particles.** *Nature*  
Kronenfeld, J. M., Rother, L., Saccone, M. A., Dulay, M. T., DeSimone, J. M.  
2024; 627 (8003): 306-312
- **Single-digit-micrometer-resolution continuous liquid interface production.** *Science advances*  
Hsiao, K., Lee, B. J., Samuelsen, T., Lipkowitz, G., Kronenfeld, J. M., Ilyn, D., Shih, A., Dulay, M. T., Tate, L., Shaqfeh, E. S., DeSimone, J. M.  
2022; 8 (46): eabq2846
- **3D-Printed Microarray Patches for Transdermal Applications** *JACS AU*  
Rajesh, N. U., Coates, I., Driskill, M. M., Dulay, M. T., Hsiao, K., Ilyn, D., Jacobson, G. B., Kwak, J., Lawrence, M., Perry, J., Shea, C. O., Tian, S., DeSimone, et al  
2022
- **Injection continuous liquid interface production of 3D objects.** *Science advances*  
Lipkowitz, G., Samuelsen, T., Hsiao, K., Lee, B., Dulay, M. T., Coates, I., Lin, H., Pan, W., Toth, G., Tate, L., Shaqfeh, E. S., DeSimone, J. M.  
2022; 8 (39): eabq3917
- **Characterization of a 30 m pixel size CLIP-based 3D printer and its enhancement through dynamic printing optimization.** *Additive manufacturing*  
Lee, B. J., Hsiao, K., Lipkowitz, G., Samuelsen, T., Tate, L., DeSimone, J. M.  
2022; 55
- **Transdermal vaccination via 3D-printed microneedles induces potent humoral and cellular immunity.** *Proceedings of the National Academy of Sciences of the United States of America*  
Caudill, C., Perry, J. L., Iliadis, K., Tessema, A. T., Lee, B. J., Mecham, B. S., Tian, S., DeSimone, J. M.  
2021; 118 (39)
- **Engineering Ultra-Soft Porous Hydrogel Scaffolds via High-Resolution 3D Printing to Enhance Cell-Based Therapy for Glioblastoma** *ADVANCED MATERIALS TECHNOLOGIES*  
Garcia-Avila, J., Zhang, Y., Carlberg, L. E., Stockwell, C., Hwang, J., Dulay, M. T., Hingtgen, S. D., Perry, J. L., DeSimone, J. M.  
2026
- **Engineered 3D micro-architected carbon structures via conformal deposition of multifunctional transition metal catalysts** *CARBON*  
Kuo, H., Onffroy, P. R., Chiovoloni, S. P., Williams, L., DeSimone, J. M., Lu, J.  
2026; 247
- **Transfection via RNA-Based Nanoparticles: Comparing Encapsulation vs Adsorption Approaches of RNA Incorporation.** *Bioconjugate chemistry*  
Latuski, A. E., Dulay, M. T., Perry, J. L., DeSimone, J. M.  
2025

- **Tunable mechanical properties and air-based lubrication in an acoustically levitated granular material** *GRANULAR MATTER*  
Brown, N. M., Vansaders, B., Kronenfeld, J. M., Desimone, J. M., Jaeger, H. M.  
2025; 27 (1)
- **Opportunities at the Intersection of 3D Printed Polymers and Pyrolysis for the Microfabrication of Carbon-Based Energy Materials.** *JACS Au*  
Onffroy, P. R., Chiovoloni, S., Kuo, H. L., Saccone, M. A., Lu, J. Q., DeSimone, J. M.  
2024; 4 (10): 3706-3726
- **Additively manufactured micro-lattice dielectrics for multiaxial capacitive sensors.** *Science advances*  
Berman, A., Hsiao, K., Root, S. E., Choi, H., Ilyn, D., Xu, C., Stein, E., Cutkosky, M., DeSimone, J. M., Bao, Z.  
2024; 10 (40): eadq8866
- **Opportunities at the Intersection of 3D Printed Polymers and Pyrolysis for the Microfabrication of Carbon-Based Energy Materials** *JACS Au*  
Onffroy, P. R., Chiovoloni, S., Kuo, H., Saccone, M. A., Lu, J. Q., DeSimone, J. M.  
2024
- **3D-Printed Latticed Microneedle Array Patches for Tunable and Versatile Intradermal Delivery.** *Advanced materials (Deerfield Beach, Fla.)*  
Rajesh, N. U., Luna Hwang, J., Xu, Y., Saccone, M. A., Hung, A. H., Hernandez, R. A., Coates, I. A., Driskill, M. M., Dulay, M. T., Jacobson, G. B., Tian, S., Perry, J. L., DeSimone, et al  
2024: e2404606
- **Direct measurement of forces in air-based acoustic levitation systems.** *The Review of scientific instruments*  
Brown, N. M., VanSaders, B., Kronenfeld, J. M., DeSimone, J. M., Jaeger, H. M.  
2024; 95 (9)
- **Methods for modeling and real-time visualization of CLIP and iCLIP-based 3D printing** *GIANT*  
Lipkowitz, G., Coates, I., Krishna, N., Shaqfeh, E. S. G., DeSimone, J. M.  
2024; 17
- **Palette-PrintAR: augmented reality design and simulation for multicolor resin 3D printing**  
Lipkowitz, G., DeSimone, J. M., ACM  
ASSOC COMPUTING MACHINERY.2024
- **Stretchable, recyclable thermosets via photopolymerization and 3D printing of hemiacetal ester-based resins.** *Chemical science*  
Wu, Y. M., Chyr, G., Park, H., Makar-Limanov, A., Shi, Y., DeSimone, J. M., Bao, Z.  
2023; 14 (44): 12535-12540
- **Stretchable, recyclable thermosets <i>via</i> photopolymerization and 3D printing of hemiacetal ester-based resins** *CHEMICAL SCIENCE*  
Wu, Y., Chyr, G., Park, H., Makar-Limanov, A., Shi, Y., Desimone, J. M., Bao, Z.  
2023
- **Palete-PrintAR: an augmented reality fluidic design tool for multicolor resin 3D printing**  
Lipkowitz, G., Shaqfeh, E. S. G., DeSimone, J. M., ACM  
ASSOC COMPUTING MACHINERY.2023
- **Fluidics-Informed Fabrication: A Novel Co-design for Additive Manufacturing Framework**  
Lipkowitz, G., Shaqfeh, E. S. G., DeSimone, J. M.  
edited by Li, W. C., Harris, D.  
SPRINGER INTERNATIONAL PUBLISHING AG.2023: 454-466
- **Printing atom-efficiently: faster fabrication of farther unsupported overhangs by fluid dynamics simulation**  
Lipkowitz, G., Krishna, N., Coates, I., Shaqfeh, E. S. G., DeSimone, J. M.  
edited by Spencer, S. N.  
ASSOC COMPUTING MACHINERY.2023
- **Review of high-performance sustainable polymers in additive manufacturing** *GREEN CHEMISTRY*  
Chyr, G., DeSimone, J. M.  
2022

- **3D-Printed Microarray Patches for Transdermal Applications.** *JACS Au*  
Rajesh, N. U., Coates, I., Driskill, M. M., Dulay, M. T., Hsiao, K., Ilyin, D., Jacobson, G. B., Kwak, J. W., Lawrence, M., Perry, J., Shea, C. O., Tian, S., DeSimone, et al  
2022; 2 (11): 2426-2445
- **INNOVATION IN MENTORSHIP ISSUES IN SCIENCE AND TECHNOLOGY**  
Farrell, C. L., Dulay, M. T., DeSimone, J. M.  
2022; 39 (1): 10-11
- **3D Printing Medical Devices** *AMERICAN SCIENTIST*  
DeSimone, J.  
2022; 110 (4): 235-237
- **Continuous Liquid Interface Production of 3D Printed Drug-Loaded Spacers to Improve Prostate Cancer Brachytherapy Treatment.** *Acta biomaterialia*  
Hagan, C. T., Bloomquist, C., Kim, I., Knape, N. M., Byrne, J. D., Tu, L., Wagner, K., Mecham, S., DeSimone, J., Wang, A. Z.  
2022
- **3D printed drug-loaded implantable devices for intraoperative treatment of cancer.** *Journal of controlled release : official journal of the Controlled Release Society*  
Tilden Hagan, C. 4., Bloomquist, C., Warner, S., Knape, N. M., Kim, I., Foley, H., Wagner, K., Mecham, S., DeSimone, J., Wang, A. Z.  
2022
- **Generative co-design for microfluidics-accelerated 3D printing**  
Lipkowitz, G., Shaqfeh, E. S. G., DeSimone, J. M.  
edited by Spencer, S. N.  
ASSOC COMPUTING MACHINERY.2022
- **Transdermal vaccination via 3D-printed microneedles induces potent humoral and cellular immunity** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Caudill, C., Perry, J. L., Iliadis, K., Tessema, A. T., Lee, B. J., Mecham, B. S., Tian, S., DeSimone, J. M.  
2021; 118 (39)
- **Antigen-capturing nanoparticles improve the abscopal effect and cancer immunotherapy (vol 12, pg 877, 2017)** *NATURE NANOTECHNOLOGY*  
Min, Y., Roche, K. C., Tian, S., Eblan, M. J., McKinnon, K. P., Caster, J. M., Chai, S., Herring, L. E., Zhang, L., Zhang, T., DeSimone, J. M., Tepper, J. E., Vincent, et al  
2021; 16 (6): 743-744
- **Impact of Frictional Interactions on Conductivity, Diffusion, and Transference Number in Ether- and Perfluoroether-Based Electrolytes** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*  
Grundy, L. S., Shah, D. B., Nguyen, H. Q., Diederichsen, K. M., Celik, H., DeSimone, J. M., McCloskey, B. D., Balsara, N. P.  
2020; 167 (12)
- **Role of Linker Length and Antigen Density in Nanoparticle Peptide Vaccine** *ACS OMEGA*  
Kapadia, C. H., Tian, S., Perry, J. L., Luft, J., Desimone, J. M.  
2019; 4 (3): 5547-5555
- **Formulation of High-Performance Dry Powder Aerosols for Pulmonary Protein Delivery** *PHARMACEUTICAL RESEARCH*  
Wilson, E. M., Luft, J., DeSimone, J. M.  
2018; 35 (10): 195
- **Use of iontophoresis for the treatment of cancer** *JOURNAL OF CONTROLLED RELEASE*  
Byrne, J. D., Yeh, J., DeSimone, J. M.  
2018; 284: 144-151
- **Impact of formulation on the iontophoretic delivery of the FOLFIRINOX regimen for the treatment of pancreatic cancer** *CANCER CHEMOTHERAPY AND PHARMACOLOGY*  
Byrne, J. D., Jajja, M. R. N., O'Neill, A. T., Schorzman, A. N., Keeler, A. W., Luft, J., Zamboni, W. C., DeSimone, J. M., Yeh, J.  
2018; 81 (6): 991-998

- **Controlling release from 3D printed medical devices using CLIP and drug-loaded liquid resins** *JOURNAL OF CONTROLLED RELEASE*  
Bloomquist, C. J., Mecham, M. B., Paradzinsky, M. D., Januszewicz, R., Warner, S. B., Luft, J., Mecham, S. J., Wang, A. Z., DeSimone, J. M.  
2018; 278: 9-23
- **Extending antigen release from particulate vaccines results in enhanced antitumor immune response** *JOURNAL OF CONTROLLED RELEASE*  
Kapadia, C. H., Tian, S., Perry, J. L., Sailer, D., Luft, J., DeSimone, J. M.  
2018; 269: 393-404
- **Crosslinked perfluoropolyether solid electrolytes for lithium ion transport** *SOLID STATE IONICS*  
Devaux, D., Villaluenga, I., Bhatt, M., Shah, D., Chen, X., Thelen, J. L., DeSimone, J. M., Balsara, N. P.  
2017; 310: 71-80
- **Antigen-capturing nanoparticles improve the abscopal effect and cancer immunotherapy** *NATURE NANOTECHNOLOGY*  
Min, Y., Roche, K. C., Tian, S., Eblan, M. J., McKinnon, K. P., Caster, J. M., Chai, S., Herring, L. E., Zhang, L., Zhang, T., DeSimone, J. M., Tepper, J. E., Vincent, et al  
2017; 12 (9): 877-+
- **Mechanism of ion transport in perfluoropolyether electrolytes with a lithium salt** *SOFT MATTER*  
Timachova, K., Chintapalli, M., Olson, K. R., Mecham, S. J., DeSimone, J. M., Balsara, N. P.  
2017; 13 (32): 5389-5396
- **Incipient microphase separation in short chain perfluoropolyether-*block*-poly(ethylene oxide) copolymers** *SOFT MATTER*  
Chintapalli, M., Timachova, K., Olson, K. R., Banaszak, M., Thelen, J. L., Mecham, S. J., DeSimone, J. M., Balsara, N. P.  
2017; 13 (22): 4047-4056
- **Effect of Anion Size on Conductivity and Transference Number of Perfluoroether Electrolytes with Lithium Salts** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*  
Shah, D. B., Olson, K. R., Karny, A., Mecham, S. J., DeSimone, J. M., Balsara, N. P.  
2017; 164 (14): A3511-A3517
- **Docetaxel-Loaded PLGA Nanoparticles Improve Efficacy in Taxane-Resistant Triple-Negative Breast Cancer** *NANO LETTERS*  
Bowerman, C. J., Byrne, J. D., Chu, K. S., Schorzman, A. N., Keeler, A. W., Sherwood, C. A., Perry, J. L., Luft, J. C., Darr, D. B., Deal, A. M., Napier, M. E., Zamboni, W. C., Sharpless, et al  
2017; 17 (1): 242-248
- **Layerless fabrication with continuous liquid interface production** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Januszewicz, R., Tumbleston, J. R., Quintanilla, A. L., Mecham, S. J., DeSimone, J. M.  
2016; 113 (42): 11703-11708
- **Liquid perfluoropolyether electrolytes with enhanced ionic conductivity for lithium battery applications** *POLYMER*  
Olson, K. R., Wong, D. H. C., Chintapalli, M., Timachova, K., Januszewicz, R., Daniel, W. F. M., Mecham, S., Sheiko, S., Balsara, N. P., DeSimone, J. M.  
2016; 100: 126-133
- **Single-Step Fabrication of Computationally Designed Microneedles by Continuous Liquid Interface Production** *PLOS ONE*  
Johnson, A. R., Caudill, C. L., Tumbleston, J. R., Bloomquist, C. J., Moga, K. A., Ermoshkin, A., Shirvanyants, D., Mecham, S. J., Luft, J., DeSimone, J. M.  
2016; 11 (9): e0162518
- **Conductivity of carbonate- and perfluoropolyether-based electrolytes in porous separators** *JOURNAL OF POWER SOURCES*  
Devaux, D., Chang, Y. H., Villaluenga, I., Chen, X., Chintapalli, M., DeSimone, J. M., Balsara, N. P.  
2016; 323: 158-165
- **Pulmonary Delivery of Butyrylcholinesterase as a Model Protein to the Lung** *MOLECULAR PHARMACEUTICS*  
Rahhal, T. B., Fromen, C. A., Wilson, E. M., Kai, M. P., Shen, T. W., Luft, J., DeSimone, J. M.  
2016; 13 (5): 1626-1635
- **Nanoparticle surface charge impacts distribution, uptake and lymph node trafficking by pulmonary antigen-presenting cells** *NANOMEDICINE-NANOTECHNOLOGY BIOLOGY AND MEDICINE*

- Fromen, C. A., Rahhal, T. B., Robbins, G. R., Kai, M. P., Shen, T. W., Luft, J., DeSimone, J. M.  
2016; 12 (3): 677-687
- **Iontophoretic device delivery for the localized treatment of pancreatic ductal adenocarcinoma** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Byrne, J. D., Jajja, M. R. N., Schorzman, A. N., Keeler, A. W., Luft, J., Zamboni, W. C., DeSimone, J. M., Yeh, J.  
2016; 113 (8): 2200-2205
  - **Compliant glass-polymer hybrid single ion-conducting electrolytes for lithium batteries** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Villaluenga, I., Wujcik, K. H., Tong, W., Devaux, D., Wong, D. H. C., DeSimone, J. M., Balsara, N. P.  
2016; 113 (1): 52-57
  - **Towards programming immune tolerance through geometric manipulation of phosphatidylserine** *BIOMATERIALS*  
Roberts, R. A., Eitas, T. K., Byrne, J. D., Johnson, B. M., Short, P. J., McKinnon, K. P., Reisdorf, S., Luft, J., DeSimone, J. M., Ting, J. P.  
2015; 72: 1-10
  - **Distribution and Cellular Uptake of PEGylated Polymeric Particles in the Lung Towards Cell-Specific Targeted Delivery** *PHARMACEUTICAL RESEARCH*  
Shen, T. W., Fromen, C. A., Kai, M. P., Luft, J., Rahhal, T. B., Robbins, G. R., DeSimone, J. M.  
2015; 32 (10): 3248-3260
  - **Biodistribution and Trafficking of Hydrogel Nanoparticles in Adult Mosquitoes** *PLOS NEGLECTED TROPICAL DISEASES*  
Paquette, C. C. H., Phanse, Y., Perry, J. L., Sanchez-Vargas, I., Airs, P. M., Dunphy, B. M., Xu, J., Carlson, J. O., Luft, J., DeSimone, J. M., Bartholomay, L. C., Beaty, B. J.  
2015; 9 (5): e0003745
  - **Biodistribution and Toxicity Studies of PRINT Hydrogel Nanoparticles in Mosquito Larvae and Cells** *PLOS NEGLECTED TROPICAL DISEASES*  
Phanse, Y., Dunphy, B. M., Perry, J. L., Airs, P. M., Paquette, C. C. H., Carlson, J. O., Xu, J., Luft, J., DeSimone, J. M., Beaty, B. J., Bartholomay, L. C.  
2015; 9 (5): e0003735
  - **Evaluation of drug loading, pharmacokinetic behavior, and toxicity of a cisplatin-containing hydrogel nanoparticle** *JOURNAL OF CONTROLLED RELEASE*  
Kai, M. P., Keeler, A. W., Perry, J. L., Reuter, K. G., Luft, J., O'Neal, S. K., Zamboni, W. C., DeSimone, J. M.  
2015; 204: 70-77
  - **Preparation and biological evaluation of synthetic and polymer-encapsulated congeners of the antitumor agent pactamycin: Insight into functional group effects and biological activity** *BIOORGANIC & MEDICINAL CHEMISTRY*  
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