

## ATUL N. PARIKH

Professor, Biomedical Engineering, Materials Science & Engineering

University of California, Davis | phone: +1 (530) 304-7523 | email: [anparikh@ucdavis.edu](mailto:anparikh@ucdavis.edu) | web: <http://parikh.ucdavis.edu>

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### APPOINTMENTS

2011 – Present	University of California, Davis	Professor of Biomedical Engineering (50%, Primary)
2011– Present	University of California, Davis	Professor of Materials Science & Engineering (50%)
2018 – Present	University of California, Davis	Chair, Biophysics Graduate Group
2009 – 2012	University of California, Davis	Chair, Designated Emphasis in Biophotonics
2007 – 2011	University of California, Davis	Professor of Applied Science
2001 – 2007	University of California, Davis	Associate Professor, Applied Science ( <u>Tenured, 2001</u> )
1998 – 2001	Los Alamos National Laboratory	Technical Staff Member, Bioscience
1988 – 1994	Pennsylvania State University	Graduate Research Assistant

### EDUCATION

1996 – 1998	Los Alamos National Laboratory	Post-Doc., Chemical Science and Technology
1994 – 1996	Pennsylvania State University	Post-Doc. In Materials Science
1987 – 1994	Pennsylvania State University	Ph.D. in Polymer Science
1983 – 1987	University of Bombay (UDCT)	B. Chem. Eng. (Chemical Engineering)

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### PROFESSIONAL SERVICE, HONORS, AND AWARDS (Since 2009)

2018	Expert, Division of Materials Research, National Science Foundation
2017	Fellow, College of Fellows, American Institute of Medical & Biological Engineering (AIMBE)
2015-2018	External Advisory Board, Sandia Grand Challenge on NanoCRISPR, Sandia Laboratories
2018-	External Advisory Board, DR on Fate of Photons, Los Alamos National Laboratory, Los Alamos
2018-	Co-Chair, 2018 Summer Workshop in Physics and Chemistry of Lipid Interfaces, Telluride, CO
2014	Interdisciplinary Graduate School Distinguished Seminar Speaker, NTU, Singapore
2013	Keynote Lecture Award, Australian Society for Biophysics, Melbourne, Au
2013	College of Engineering Distinguished Visiting Lecture Award, NTU, Singapore
2011	Dissertation Opponent, Ph. D. Dissertation, Chalmers University, Sweden
2010-Present	Continuing Symposium Chair, ACS Division of Colloid & Interface Chemistry
2010	Program Review Panel, Materials Science, Lawrence Berkeley Lab, CA
2009	Program Review, Materials, Natl Renewable Energy Lab, Boulder, CO

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### ACADEMIC AFFAIRS - LEADERSHIP POSITIONS

2018-Present	Chair, Biophysics Graduate Group, College of Biological Sciences
2009-2012	Chair, Designated Emphasis in Biophotonics, Graduate Studies
2003-2008	Science Associate Director, NSF Center for Biophotonics Science & Technology
2004-2007	Faculty Co-Director, Northern California Nanotechnology Center, College of Engineering Microfabrication Facility

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## TEACHING (recent)

- 2002-Present      How Things Work: Conceptual Physics, Eng 010 – A lower division Undergraduate course with enrollments from several colleges and schools (2002-present)
- 2016-Present      Living Matter: Physical Biology of The Cell, A cross-listed graduate course in Biophysics, Materials Science, and Biomedical Engineering Graduate Groups/Programs.

## GRADUATE STUDENT MENTORING

- Graduate Students:    Wan-Chih Su (Ph.D. Candidate, Chemistry)  
Derrick Chang (M.S., Materials Science & Engineering)  
Zhongrui Liu (Ph. D., Materials Science & Engineering)  
Pallavi Sambre (M.S., Materials Science & Engineering)
- Post-Docs:            Dr. Sowmya Purushothaman (NTU/UC Davis, Ph.D., Cambridge)  
Dr. Stacy M. Copp (UC President's Post-Doctoral Fellow, Ph.D., UC Santa Barbara)
- Graduated Student Alumni (18, 2008-2016):    Dr. Jeremy Sanborn (Ph.D. Applied Science, 2017), Quantapore, Inc., Menlo Park, CA  
Dr. Sean Hong (Ph.D. Applied Science, 2016), Lawrence Livermore National Labs  
Dr. Doug L. Gettel (Ph.D., Chemical Engineering, 2016), Sutro Biopharma, Inc., San Francisco, CA  
Dr. Josh Hansen (Ph.D., Biophysics, 2015), Faculty, Pomona College  
Dr. Sean Gillmore (Ph.D., Applied Science, 2013), Post-Doc, LLNL  
Dr. Lobat Tayebi (Ph. D., Applied Science, 2012), Asst. Professor, Marquette University  
Dr. Eric Kendall (Ph. D., Chemical Engineering, 2011), Research Professor, Univ. of Maryland  
Dr. Daniel Bricarello (Ph.D. Applied Science, 2011), Fellow., FFHI, UC Davis  
Dr. Christopher Babayco (Ph.D., Chemistry, 2011) , Asst. Prof., Columbia Univ., MO  
Dr. Michael Howland (Ph. D., Chemical Engineering, 2010), Staff Scientist, Genentech  
Dr. Adrian M. Brozell (Ph.D., Biophysics, 2010), Co-Founder, NanoZ llc, Palo Alto, CA  
Dr. Rita El-Khouri (Ph.D., Chemistry, 2009), L'Oreal  
Dr. Alan Szmodis (Biophysics, Ph.D., 2008) Co-Founder, Nano-Oasis, CA.)  
Dr. Andrea Michelle Smith (Biophysics, Ph.D. 2008), Staff Scientist, Joint Bio-Energy Institute,  
Dr. Babak Sanii (Applied Science, Ph. D. 2008), Asst. Professor at Claremont McKenna College  
Calvin Yang, M.S., Biomedical Engineering)  
Cristina Tcheyan (M. S., Applied Science, Currently at Google)
- Post-Doc and Senior Researcher Alumni (6):            Dr. Chanel K. Yee (Now at Bayer Healthcare, Berkeley, CA);  
Dr. Madhuri Vinchurkar (Indian Institute Technology, Bombay (Mumbai), India);  
Dr. Sanhita Dixit (Now at SRI, Palo Alto, CA);  
Dr. Annapoorna Butti, Assoc. Prof., Guru Nanak University, Hyderabad, India;  
Ann Oliver (Ph. D., Zoology, UC Davis, Now Lecturer, American River College)  
Dr. Thomas Wilkop (Project Scientist, Ph.D., 2001, Sheffield Univ. UK)

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## PUBLICATIONS (Complete List). [ORCID ID: 0000-0002-5927-4968]

### Journal Articles

1.            “Carbon nanotube porins in amphiphilic block-copolymers as fully-synthetic mimics of biological membranes,” Jeremy R. Sanborn, Ramya H. Tunuguntla, Yuliang Zhang, Christina Newcomb, Jennifer Soltis, James J. De Yoreo, Atul N. Parikh, Aleksandr Noy, **Advanced Materials** 30, 1803355, 2018 [**Frontispiece**]
2.            “Permeability and line tension dependent response of polyunsaturated membranes to osmotic stresses, Shiva Emami, Wan-Chih Su, Viviane N. Ngassam, Sowmya Purushothaman, Atul N. Parikh, **Biophys. J.** 115, 1942-1955, 2018
3.            Losada-Pérez, P, Polat, O, Parikh, AN, Seker, E, Renner, FU. Engineering the interface between lipid membranes and nanoporous gold: A study by quartz crystal microbalance with dissipation monitoring. **Biointerphases**, 13, 011002, 2018

4. "Pulsatile Gating of Giant Vesicles Containing Macromolecular Crowding Agents induced by Colligative Non-ideality," Wan-Chih Su\*, Doug L. Gettel\*, Morgan Chabanon\*, Padmini Rangamani, Atul N. Parikh, **Journal of the American Chemical Society** 140, 691-699, 2018
5. "Pulsatile lipid vesicles under osmotic stress," Morgan Chabanon, James C.S. Ho, Bo Liedberg, Atul N. Parikh, Padmini Rangamani, **Biophysical Journal** 112, 1682–1691, 2017 [ **Cover**].
6. "Spontaneous formation of nanometer scale tubular vesicles in aqueous mixtures of lipid and block copolymer amphiphiles," Seng Koon Lim, Andrew Wong, Hans-Peter M. de Hoog, Padmini Rangamani, Atul N. Parikh, Madhavan Nallani, Sara Sandin, and Bo Liedberg, **Soft Matter** 13, 1107-1115 (2017) [ **Cover**].
7. "Spontaneous vesiculation and pH-induced disassembly of a lysosomotropic detergent: impacts on lysosomotropism and lysosomal delivery," Ana Maria Villamil Giraldo, Timmy Fyrner, Stefan Wennmalm, Atul N. Parikh, Karin Ollinger, and Thomas Ederth, **Langmuir** 32, 13566-13575 2016
8. "Brownian Dynamics of Electrostatically Adhering Nano-Vesicles on a Membrane Surface Induces Domains and Probes Viscosity," Seyed R. Tabaei, Jurriaan J. J. Gillissen, Min Chul Kim, James Ho C.S., Bo Liedberg, Atul N. Parikh, Nam-Joon Cho, **Langmuir** 32, 5445–5450, 2016
9. "Continuity of Monolayer-Bilayer Junctions for Localization of Lipid Raft Microdomains in Model Membranes," Yong-Sang Ryu, Nathan J. Wittenberg, Jeng-Hun Suh, Sang-Wook Lee, Youngjoo Sohn, Sang-Hyun Oh, Atul N. Parikh, and Sin-Doo Lee, **Scientific Reports** 6, Art. 26823, 2016
10. "Cholesterol Partition and Condensing Effect in Phase Separated Ternary Mixture Lipid Multilayers," Yicong Ma, Sajal K. Ghosh, David A. Dilena, Sambhunath Bera, Laurence B. Lurio, Atul N. Parikh, Sunil K. Sinha, **Biophysical Journal** 100, 1355–1366, 2016
11. "Mixing Water, Transducing Energy, Shaping Membranes: Autonomously Self-regulating Giant Vesicles," James Ho C. S., Padmini Rangamani, Bo Liedberg, Atul N. Parikh, **Langmuir** 32, 2151–2163, 2016 [ **Cover**] [ **Invited Feature Article**]
12. "Cholesterol-enriched microdomain formation induced by viral-encoded, membrane active amphipathic peptide," Joshua M. Hanson\*, Douglas L. Gettel\*, Seyed R. Tabaei, Joshua Jackman, Min Chul Kim, Darryl Y. Sasaki, Jay T. Groves, Bo Liedberg, Nam-Joon Cho, Atul N. Parikh, **Biophysical Journal** 110, 176-187, 2016
13. "Protein receptor-independent plasma membrane remodeling by HAMLET: a tumoricidal protein-lipid complex," Aftab Nadeem, Jeremy Sanborn, Douglas L. Gettel, James Ho C.S., Anna Rydström, Viviane N. Ngassam, Thomas Kjær Klausen, Stine Falsig Pedersen, Matti Lam, Atul N. Parikh\* Catharina Svanborg\*, **Scientific Reports** 5, Art. 16432, 2015.
14. "Medium Matters: Order through fluctuations? Atul N. Parikh, **Biophysical Journal** 108, 2751-2753, 2015 [ **New and Notable Commentary**]
15. " Lipid Membrane Deformation Accompanied by Disk-to-Ring Shape Transition of Cholesterol-rich Domains," Yong-Sang Ryu, Daehan Yoo, Nathan J Wittenberg, Luke R. Jordan, Sin-Doo Lee, Atul N. Parikh, and Sang-Hyun Oh, **Journal of the American Chemical Society** (Communication) 137, 8692–8695, 2015
16. "Influence of Vesicle Size and Aqueous Solvent on Intact Phospholipid Vesicle Adsorption on Oxidized Gold Monitored Using Attenuated Total Reflectance Fourier Transform Infrared Spectroscopy," Elyse N. Towns, Atul N. Parikh, and Donald P. Land, **Journal of Physical Chemistry C** 119, 2412-2418, 2015
17. "Observation of stripe superstructure in the beta-two-phase co-existence region of cholesterol-phospholipid mixtures in supported membranes," Seyed R. Tabaei, Joshua A. Jackman, Bo Liedberg, Atul N. Parikh\*, Nam-Joon Cho\*, **Journal of the American Chemical Society (communication)** 136, 16962–16965, 2014
18. "Oscillatory phase separation in giant lipid vesicles induced by transmembrane osmotic differentials," Kamila Ogłęcka, Padmini Rangamani, Bo Liedberg, Rachel S. Kraut & Atul N. Parikh **eLife** 3, e03695, 2014 [ **eCover**]
19. "Reconstituting ring-rafts in bud-mimicking topography of model membranes," Yong-Sang Ryu, In-Ho Lee, Jeng-Hun Suh, Seung Chul Park, Soojung Oh, Luke R. Jordan, Nathan J. Wittenberg, Sang-Hyun Oh, Noo Li Jeon, Byoung-ho Lee, Atul N. Parikh\* & Sin-Doo Lee\*, **Nature Communications** 5, Art. No. 4507, 2014
20. Formation of Cholesterol-Rich Supported Membranes Using Solvent-Assisted Lipid Self-Assembly," Seyed R. Tabaei, Joshua A Jackman, Seong-Oh Kim, Bo Liedberg, Wolfgang Knoll, Atul N. Parikh, and Nam-Joon Cho, **Langmuir** 30, 13345–13352, 2014

21. "Mixing, diffusion, and percolation in binary supported membranes containing mixtures of lipids and amphiphilic block copolymers," Douglas L. Gettel, Jeremy Sanborn, Mira Patel, Hans-Peter de Hoog, Bo Liedberg, Madhavan Nallani, and Atul N. Parikh, **Journal of the American Chemical Society (communication)** 136, 10186–10189, 2014
22. "Thermal annealing triggers collapse of biphasic supported lipid bilayers into multilayer islands," Sean F. Gilmore, Darryl Y. Sasaki, and Atul N. Parikh **Langmuir** 30, 4962-4969 2014
23. "Analysis of lipid phase behavior and proteinconformational changes in nanolipoprotein particles upon entrapment in sol-gel derived silica," Wade F Zeno, Silvia Hilt, Kannan K Aravagiri, Subhash Risbud, John C. Voss, Atul N. Parikh, and Marjorie L. Longo, **Langmuir** 30, 9780-9788, 2014
24. "On-demand self-assembly of supported membranes using sacrificial, anhydrobiotic sugar coats," Thomas Wilkop, Jeremy Sanborn, Ann Oliver, Josh Hanson, Atul N. Parikh, **Journal of the American Chemical Society (communication)** 136, 60-63 2014
25. "Characterization of Buried Metal-Molecule-Metal Junctions Using Fourier Transform Infrared Microspectroscopy," Christopher B. Babayco, Donald P. Land, Atul N. Parikh\*, and Richard A. Kiehl\*, **Review of Scientific Instruments** 85, 094103, 2014
26. "Third-Party ATP Sensing in Polymersomes: a label-free assay of enzyme reactions in vesicular compartments," Umit Hakan Yildiz, Hans-Peter M. De Hoog, Zhikang Fu, Nikodem Tomczak, Atul N. Parikh, Madhavan Nallani, Bo Liedberg, **Small** 10, 442-447, 2014 [Cover]
27. "Lithographically-defined macroscale modulation of lateral fluidity and phase separation realized via patterned nanoporous silica supported phospholipid bilayers," Eric L. Kendall, Viviane N. Ngassam, Sean F. Gilmore, C. Jeff Brinker, and Atul N. Parikh **Journal of the American Chemical Society (communication)** 135, 15718–15721 2013
28. "Interaction of sphingomyelinase with sphingomyelin-containing supported membranes," Viviane N. Ngassam, Ann E. Oliver, Phuong N. Dang, Eric L. Kendall, Sean F. Gilmore, and Atul N. Parikh **Soft Matter** 9, 10413-10420 2013
29. "The role of squalene in the organization of monolayers derived from lipid extracts of *Halobacterium salinarum*," Sean F. Gilmore, Andrew Yao, Zipora Tietel, Tobias Kind, Marc Facciotti, and Atul N. Parikh **Langmuir** 29, 7922–7930 (2013)
30. "Evolution of Conformational Order During Self-Assembly of n-Alkanethiols on Hg Droplets: An Infrared Spectro-microscopy Study," Christopher Babayco, Pauline Chang, Donald P. Land, Richard A. Kiehl, and Atul N. Parikh **Langmuir** 29, 8203–8207 (2013)
31. "Lipid Membrane Domains for the Selective Adsorption and Surface Patterning of Conjugated Polyelectrolytes," Darryl Y. Sasaki, Nicole Zawada, Sean F. Gilmore, Prihatha Narasimmaraj, Mari Angelica A. Sanchez, Jeanne C. Stachowiak, Carl C. Hayden, Hsing-Lin Wang, Atul N. Parikh, and Andrew P. Shreve **Langmuir** 29, 5214–5221 (2013)
32. "Transient pearling and vesiculation of membrane tubes under osmotic gradients," Jeremy Sanborn, Kamila Oglecka, Rachel S. Kraut, Atul N. Parikh, **Faraday Discussions** 161, 167-176 (2013) [+Discussion]
33. "Long-range inter-layer alignment of intra-layer domains in stacked lipid bilayers," Lobat Tayebi, Yicong Ma, Daryoosh Vashaee, Gang Chen, Sunil K. Sinha, Atul N. Parikh, **Nature Materials** 11, 1074–1080 (2012). [Cover] [News & Views]
34. "The Influence of Spin-Labeled Fluorene Compounds on the Assembly and Toxicity of the A-beta Peptide," Jitka Petrova, Tamás Kálai, Izumi Maezawa, Robin Altman, Ghimire Harishchandra, Hyun-Seok Hong, Daniel A. Bricarello, Atul N. Parikh, Gary A. Lorigan, Lee-Way Jin, Kálmán Hideg, John C. Voss, **Plos ONE** 7, e35443 (2012).
35. "Osmotic Gradients Induce Bio-reminiscent Morphological Transformations in Giant Unilamellar Vesicles," Kamila Oglecka, Jeremy Sanborn, Atul N. Parikh, Rachel S. Kraut, **Frontiers in Membrane Physiology and Biophysics** 3, Art. 120, 1-11 (2012).
36. "Preparation, Characterization, and Surface Immobilization of Native Vesicles Obtained by Mechanical Extrusion of Mammalian Cells," Huawen Wu, Ann E. Oliver, Viviane N. Ngassam, Chanel K. Yee, Atul N. Parikh\*, Yin Yeh\*, **Integrative Biology** 4, 685-692 (2012).

37. "Inhibiting Host-Pathogen Interactions Using Membrane-Based Nanostructures," Daniel Bricarello, Mira A. Patel, Atul N. Parikh, **Trends in Biotechnology**, 30, 323-330 (2012)
38. "Use of Attenuated Total Reflectance Fourier Transform Infrared Spectroscopy to Study Lactosylceramide and GD3 DMPC Bilayers," Mateo Hernandez, Elyse Towns, Jessica Moore, Hyeyoung Lee, Bruce German, Carlito Lebrilla, Atul N. Parikh, Donald P. Land, **Colloids and Surfaces B: Biointerfaces** 94, 374-377 (2012).
39. "Stability of Uni- and Multilamellar Spherical Vesicles," L. Tayebi, D. Vashae, and A. N. Parikh, **ChemPhysChem** 13, 314-22 (2012).
40. "A Comparison of Detergent Action on Supported Lipid Monolayers and Bilayers," V. N. Ngassam, M. C. Howland, A. Sapuri-Butti, N. Rosidi, and A. N. Parikh, **Soft Matter** 8, 3734-38 (2012).
41. "In Vivo Lipidomics Using Single-Cell Raman Spectroscopy," H. W. Wu, J. V. Volponi, A. E. Oliver, A. N. Parikh, B. A. Simmons, and S. Singh, **Proceedings of the National Academy of Sciences of the United States of America (PNAS)** 108, 3809-14 (2011).
42. "Lipophil-Supported Lipid Bilayers as a Hybrid Platform for Drug Delivery," S. K. Shen, E. Kendall, A. Oliver, V. Ngassam, D. D. Hu, and A. N. Parikh, **Soft Matter** 7, 1001-05 (2011).
43. "Programmed Bending Reveals Dynamic Mechanochemical Coupling in Supported Lipid Bilayers," S. F. Gilmore, H. Nanduri, and A. N. Parikh, **PLoS ONE** 6, (2011).
44. "A Stripe-to-Droplet Transition Driven by Conformational Transitions in a Binary Lipid-Lipopolymer Mixture at the Air-Water Interface," R. J. El-Khoury, S. L. Frey, A. W. Szmodis, E. Hall, K. J. Kauffman, T. E. Patten, K. Y. C. Lee, and A. N. Parikh, **Langmuir** 27, 1900-06 (2011).
45. "Ph Responsive Polymer Cushions for Probing Membrane Environment Interactions," R. J. El-Khoury, D. A. Bricarello, E. B. Watkins, C. Y. Kim, C. E. Miller, T. E. Patten, A. N. Parikh\*, and T. L. Kuhl\*, **Nano Letters** 11, 2169-72 (2011).
46. "Substrate Suppression of Thermal Roughness in Stacked Supported Bilayers," C. M. DeCaro, J. D. Berry, L. B. Lurio, Y. C. Ma, G. Chen, S. Sinha, L. Tayebi, A. N. Parikh, Z. Jiang, and A. R. Sandy, **Physical Review E** 84, (2011).
47. "The Targeted Delivery of Multicomponent Cargos to Cancer Cells by Nanoporous Particle-Supported Lipid Bilayers," C. E. Ashley, E. C. Carnes, G. K. Phillips, D. Padilla, P. N. Durfee, P. A. Brown, T. N. Hanna, J. W. Liu, B. Phillips, M. B. Carter, N. J. Carroll, X. M. Jiang, D. R. Dunphy, C. L. Willman, D. N. Petsev, D. G. Evans, A. N. Parikh, B. Chackerian, W. Wharton, D. S. Peabody, and C. J. Brinker, **Nature Materials** 10, 389-97 (2011). [Cover] [News & Views]
48. "Reconstituted lipoprotein: a versatile class of biologically-inspired nanostructures," Daniel A. Bricarello, Jennifer T. Smilowitz, Angela M. Zivkovic, J. Bruce German, Atul N. Parikh **ACS Nano** 5, 42-57 (2011)
49. "Thermally Induced Phase Separation in Supported Bilayers of Glycosphingolipid and Phospholipid Mixtures," A. W. Szmodis, C. D. Blanchette, M. L. Longo, C. A. Orme, and A. N. Parikh, **Biointerphases** 5, 120-30 (2010).
50. "Order at the Edge of the Bilayer: Membrane Remodeling at the Edge of a Planar Supported Bilayer Is Accompanied by a Localized Phase Change," A. M. Smith, M. Vinchurkar, N. Gronbech-Jensen, and A. N. Parikh, **Journal of the American Chemical Society** 132, 9320-27 (2010). [JACS Select]
51. "Substituent-Dominated Structure Evolution During Sol-Gel Synthesis: A Comparative Study of Sol-Gel Processing of 3-Glycidioxypropyltri-Methoxysilane and Methacryloxypropyltrimethoxysilane," S. K. Shen, P. P. Sun, W. Li, A. N. Parikh\*, and D. D. Hu\*, **Langmuir** 26, 7708-16 (2010).
52. "Frustrated Phase Transformations in Supported, Interdigitating Lipid Bilayers," B. Sani, A. W. Szmodis, D. A. Bricarello, A. E. Oliver, and A. N. Parikh, **Journal of Physical Chemistry B** 114, 215-19 (2010).
53. "Templating Membrane Assembly, Structure, and Dynamics Using Engineered Interfaces," A. E. Oliver, and A. N. Parikh, **Biochimica Et Biophysica Acta-Biomembranes** 1798, 839-50 (2010).

54. "Salt-Induced Lipid Transfer between Colloidal Supported Lipid Bilayers," E. L. Kendall, E. Mills, J. W. Liu, X. M. Jiang, C. J. Brinker, and A. N. Parikh, **Soft Matter** 6, 2628-32 (2010). [Cover]
55. "Model Studies of Membrane Disruption by Photogenerated Oxidative Assault," M. C. Howland, and A. N. Parikh, **Journal of Physical Chemistry B** 114, 6377-85 (2010).
56. "Lipid Bilayers on Topochemically Structured Planar Colloidal Crystals: A Versatile Platform for Optical Recording of Membrane-Mediated Ion Transport," A. M. Brozell, S. Inaba, and A. N. Parikh, **Soft Matter** 6, 5334-41 (2010).
57. "Ganglioside Embedded in Reconstituted Lipoprotein Binds Cholera Toxin with Elevated Affinity," D. A. Bricarello, E. J. Mills, J. Petrova, J. C. Voss, and A. N. Parikh, **Journal of Lipid Research** 51, 2731-38 (2010).
58. "A Comparison of Lateral Diffusion in Supported Lipid Monolayers and Bilayers," C. B. Babayco, S. Turgut, A. M. Smith, B. Sani, D. Land, and A. N. Parikh, **Soft Matter** 6, 5877-81 (2010).
59. "Lactosomes: Structural and Compositional Classification of Unique Nanometer-Sized Protein Lipid Particles of Human Milk," N. Argov-Argaman, J. T. Smilowitz, D. A. Bricarello, M. Barboza, L. Lerno, J. W. Froehlich, H. Lee, A. M. Zivkovic, D. G. Lemay, S. Freeman, C. B. Lebrilla, A. N. Parikh, and J. B. German, **Journal of Agricultural and Food Chemistry** 58, 11234-42 (2010).
60. "Nanofiber-Supported Phospholipid Bilayers," F. Yi, J. Xu, A. M. Smith, A. N. Parikh, and D. A. Lavan, **Soft Matter** 5, 5037-41 (2009).
61. "Early Stages of Oxidative Stress-Induced Membrane Permeabilization: A Neutron Reflectometry Study," H. L. Smith, M. C. Howland, A. W. Szmodis, Q. J. Li, L. L. Daemen, A. N. Parikh, and J. Majewski, **Journal of the American Chemical Society** 131, 3631-38 (2009).
62. "Amino Acid Catalyzed Bulk-Phase Gelation of Organoalkoxysilanes Via a Transient Co-Operative Self-Assembly," S. K. Shen, D. D. Hu, P. P. Sun, X. R. Zhang, and A. N. Parikh, **Journal of Physical Chemistry B** 113, 13491-98 (2009).
63. "Micropatterning of Proteins and Mammalian Cells on Indium Tin Oxide," S. S. Shah, M. C. Howland, L. J. Chen, J. Silangcruz, S. V. Verkhoturov, E. A. Schweikert, A. N. Parikh, and A. Revzin, **ACS Applied Materials & Interfaces** 1, 2592-601 (2009).
64. "Evidence for Interleaflet Slip During Spreading of Single Lipid Bilayers at Hydrophilic Solids," B. Sani, K. Nguyen, J. O. Radler, and A. N. Parikh, **ChemPhysChem** 10, 2787-90 (2009).
65. "Cell Attachment Behavior on Solid and Fluid Substrates Exhibiting Spatial Patterns of Physical Properties," A. E. Oliver, V. Ngassam, P. Dang, B. Sani, H. W. Wu, C. K. Yee, Y. Yeh, and A. N. Parikh, **Langmuir** 25, 6992-96 (2009).
66. "Integrating Sensing Hydrogel Microstructures into Micropatterned Hepatocellular Cocultures," J. Y. Lee, S. S. Shah, J. Yan, M. C. Howland, A. N. Parikh, T. R. Pan, and A. Revzin, **Langmuir** 25, 3880-86 (2009).
67. "Triglyceride-Rich Lipoprotein Lipolysis Increases Aggregation of Endothelial Cell Membrane Microdomains and Produces Reactive Oxygen Species," L. M. Wang, A. R. Sapuri-Butti, H. H. Aung, A. N. Parikh, and J. C. Rutledge, **American Journal of Physiology-Heart and Circulatory Physiology** 295, H237-H44 (2008).
68. "Bridging across Length Scales: Multi-Scale Ordering of Supported Lipid Bilayers Via Lipoprotein Self-Assembly and Surface Patterning," M. S. Vinchurkar, D. A. Bricarello, J. O. Lagerstedt, J. P. Buban, H. Stahlberg, M. N. Oda, J. C. Voss, and A. N. Parikh, **Journal of the American Chemical Society** 130, 11164-69 (2008).
69. "Direct Visualization of Phase Transition Dynamics in Binary Supported Phospholipid Bilayers Using Imaging Ellipsometry," A. W. Szmodis, C. D. Blanchette, A. A. Levchenko, A. Navrotsky, M. L. Longo, C. A. Orme, and A. N. Parikh, **Soft Matter** 4, 1161-64 (2008).
70. "Evidence for Leaflet-Dependent Redistribution of Charged Molecules in Fluid Supported Phospholipid Bilayers," A. P. Shreve, M. C. Howland, A. R. Sapuri-Butti, T. W. Allen, and A. N. Parikh, **Langmuir** 24, 13250-53 (2008).

71. "Bending Membranes on Demand: Fluid Phospholipid Bilayers on Topographically Deformable Substrates," B. Sanii, A. M. Smith, R. Butti, A. M. Brozell, and A. N. Parikh, **Nano Letters** 8, 866-71 (2008).
72. 'Patterning Fluid and Elastomeric Surfaces Using Short-Wavelength Uv Radiation and Photogenerated Reactive Oxygen Species', B. Sanii, and A. N. Parikh, **Annual Review of Physical Chemistry**, pp. 411-32. (2008)
73. "Membrane-Substrate Interface: Phospholipid Bilayers at Chemically and Topographically Structured Surfaces," A. N. Parikh, **Biointerphases** 3, FA22-FA32 (2008).
74. "Protecting, Patterning, and Scaffolding Supported Lipid Membranes Using Carbohydrate Glasses," A. E. Oliver, E. L. Kendall, M. C. Howland, B. Sanii, A. P. Shreve, and A. N. Parikh, **Lab on a Chip** 8, 892-97 (2008).
75. "Optical Detection of Ion-Channel-Induced Proton Transport in Supported Phospholipid Bilayers," T. H. Yang, C. K. Yee, M. L. Amweg, S. Singh, E. L. Kendall, A. M. Dattelbaum, A. P. Shreve, C. J. Brinker, and A. N. Parikh, **Nano Letters** 7, 2446-51 (2007).
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