

## ATUL N. PARIKH

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### (a) Professional Preparation

University of Bombay (UDCT)	Chemical Eng.	B.Chem. Eng.	1987
Penn State University	Materials Science	Ph.D.	1994
Los Alamos National Laboratory	Bioscience Division	Post-Doctoral	1996-1999

### (b) Appointments

2011-	<u>Professor</u> , Department of Biomedical Engineering, Univ. California, Davis
2011-	<u>Professor</u> , Chemical Engineering & Materials Science, UC Davis
2007- 2011	<u>Professor</u> , Applied Science, UC Davis
2001 – 2007	<u>Associate Professor</u> , Applied Science, UC Davis,
1999 – 2001	<u>Technical Staff Member</u> , Bioscience, Los Alamos National Laboratory

### (c) Selected Relevant Publications

#### 5 most relevant:

- 2014 *Oscillatory phase separation in giant lipid vesicles induced by transmembrane osmotic differentials*, Kamila Oglecka, Padmini Rangamani, Bo Liedberg, Rachel S Kraut, Atul N Parikh, **eLife** 3, e03695, **2014 [eCover]**
- 2014 *"On-demand self-assembly of supported membranes using sacrificial, anhydrobiotic sugar coats"*, T. Wilkop, J. Sanborn, A. E. Oliver, J. M. Hanson, and A. N. Parikh\*, **J. Amer. Chem. Soc.** 136, 60–63, 2014.
- 2011 *"Targeted Delivery of Multicomponent Cargos to Cancer via 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. Liu, B. Phillips, M. B. Carter, N. J. Carroll, X. Jiang, D. R. Dunphy, C. L. Willman, D. N. Petsev, D. G. Evans, A. N. Parikh, B. Chackerian, W. Wharton, D. S. Peabody, & C. J. Brinker\*, **Nature Materials** 10, 389-397 [**Front Cover**] [**News & Views**].
- 2014 *"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, ByoungHo Lee, Atul N. Parikh\* & Sin-Doo Lee\*, **Nature Communications** 5, 4507, 2014.
- 2012 *"Long-range inter-layer alignment of intra-layer domains in stacked lipid bilayers"*, L. Tayebi, Y. Ma, D. Vashae, G. Chen, S. K. Sinha, A. N. Parikh\*, **Nature Materials**, 11, 1074–1080, 2012 [**Front Cover**] [**News & Views**].

#### 5 others:

- 2006 *"Materials Science of Supported Lipid Membranes"*, A. N. Parikh, J. T. Groves, **MRS Bulletin**, 1-13 July, 2006. [**Guest Editorial**]
- 2008 *Protecting, Patterning, and Scaffolding Supported Lipid Membranes Using Carbohydrate Glasses*, A. E. Oliver\*, E. L. Kendall, M. C. Howland, B. Sanii, A. P. Shreve, A. N. Parikh\*, **Lab on a Chip** 8, 892 - 897, 2008
- 2008 *"Bending Membranes on Demand: Fluid Phospholipid Bilayers on Topographically Deformable Substrates"*, B. Sanii, A. M. Smith, R. Butti, A. M. Brozell, A. N. Parikh, **Nano Letters** 8, 866-871.
- 2014 *"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\*, **J. Amer. Chem. Soc.** 136, 10186–10189, 2014

2013 "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]

#### (d) Synergistic Activities

2012-present Visiting Professor, Nanyang Technological University

2011-2013 Gästprofessor, Applied Physics Physics, Linköping University, Sweden

Various Reviewer for Journal articles (JACS, Langmuir, Nature Materials, PNAS, Soft Matter, Nature Nanotechnology, Nature Methods, Soft Matter, Science, etc); Proposals (U.S. DOE, NSF, NIH); and External evaluations of tenure cases, research programs at National Labs

2004-2012 National Visiting Committee, NSF Southwest Center for Microelectronics Education, Central New Mexico Community College, Albuquerque, NM

2010-2012-2016 Continuing Symposium Chair, ACS Division of Surface & Colloids Chair, Gordon Research Conference on Biointerfaces 2016, Les Diabrelets, Switzerland (Vice-Chair, 2014, Il Ciocco, Italy)

#### (e) Collaborators and Other Affiliations

**Collaborators:** Padmini Rangamani, UC San Diego; C. Jeff Brinker, Univ. of New Mexico; Sunil Sinha, UC San Diego; Bo Liedberg and Rachel Kraut, NTU, Singapore; Catharina Svanborg, Lund, Sweden

**Graduate Advisor & Post Doctoral Sponsor:** (a) Prof. David L. Allara, Chemistry, The Pennsylvania State University (Ph.D. Advisor) and (b) Dr. Basil Swanson, Chemistry, Los Alamos National Laboratory (Post-Doc Sponsor)

#### **Thesis Advisor and Post-Graduate Scholar Sponsors:**

**(current Ph.D. Candidates, 5)** Josh Hansen (Chemistry), Jeremy Sanborn (Applied Science), Ozge Kurtulus (w E. Seker, Chemical Engineering & Materials Science), Doug Gettel (Chemical Engineering & Materials Science), Sean Hong (Applied Science) **Current Senior Researchers (1)** Viviane Ngassam

**Past Graduates (12)** Dr. Sean Gillmore (Ph.D., Applied Science, Post-Doc., LLNL), Dr. Babak Sani, Applied Science, Ph.D. 2008 (Asst. Prof., Claremont McKenna College, Pomona, CA); Dr. Michelle Smith, Biophysics, Ph.D., 2008 (Staff Scientist, Joint Bio-Energy Institute, Berkeley, CA); Dr. Alan Szmodis, Biophysics Ph.D., 2008 (Co-Founder, NanoOasis, Inc.); Dr. Rita El-Khoury (Chemistry), Ph.D., 2010 (Scientist, L'Oreal); Dr. Michael Howland (Chemical Engineering), Ph.D., 2009 (Genentech); Dr. Adrian Brozell, Applied Science, Ph.D., 2009: Co-founder, zNano, Napa, CA; Dr. Chris Babayco Ph. D., 2010 (Asst. Prof., Columbia College, MO); Dr. Daniel Bricarello, Applied Science, Ph.D., 2010 (FFHI, UC Davis); Dr. Eric Kendall Chemical Engineering, Ph. D. 2010 (Univ. Maryland); Dr. Lobat Tayebi, Applied Science, Ph.D. 2011 (Asst. Prof. Oklahoma State University).