

ATUL N. PARIKH

Professional Preparation

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

Appointments

2007-present Professor, University of California, Davis, Applied Science Dept.
2007-present Adjunct Professor, UC Davis, Chemical Engineering & Materials Science Dept.
2001 – 2007 Associate Professor, University of California, Davis, Applied Science Dept.
1999 – 2001 Technical Staff Member, Los Alamos National Laboratory, Bioscience Div.

Selected Publications

(Closely related to this proposal)

- 2007 Characterization of Physical Properties of Supported Membranes Using Quantitative Imaging Ellipsometry at Optical Wavelength, M. Howland, A. W. Szmodis, B. Sanii, A. N. Parikh, **Biophysical Journal** 92, 1306-1317, 2007 (Issue Cover)
- 2007 Optical Transduction of Ion-Channel Mediated Proton Transport in Supported Bilayers, T.-H. (Calvin) Yang, C. K. Yee, M. L. Amweg, E. L. Kendall, S. Singh, A. M. Dattelbaum, A. P. Shreve, C. J. Brinker, A. N. Parikh, **Nano Letters** 7, 2446-2451, 2007
- 2006 A New Class of Supported Membranes: Bilayers on Photonic Band-gap Colloidal Crystals, A. M. Brozell, M. A. Muha, B. Sanii, A. N. Parikh, **J. Am. Chem. Soc. (Communication)**, 128, 62-63, 2006
- 2005 Spreading of Phospholipid Bilayers at Photochemically patterned silane monolayers, M. C. Howland, A. R. Sapuri, S. S. Dixit, A. N. Parikh, **J. Am. Chem. Soc.** 127, 6752-6765, 2005
- 2004 Direct Patterning and Refunctionalization of Phospholipid Membranes, C. K. Yee, M. L. Amweg, A. N. Parikh, **J. Am. Chem. Soc** 126, 13963-13972, 2004

(Significant Other Publications)

- 2006 Materials Science of Supported Membranes, A. N. Parikh and J. T. Groves, **MRS Bulletin**, GUEST EDITORIAL, July Issue, 2006 (Issue Cover)
- 2008 Patterning Fluid and Elastomeric Surfaces Using Photo-generated Reactive Oxygen Species, **Ann. Rev. Phys. Chem.**, in press, 2008.
- 2007 Surface Energy Dependent Spreading of Lipid Monolayers and Bilayers, Babak Sanii and Atul N. Parikh, **Soft Matter** 3, 974-977, 2007 (Issue Cover)
- 2007 Dynamic Recompartmentalization of Supported Membranes Using Femtosecond Pulses, A. M. Smith, T. R. Huser, A. N. Parikh, **J. Am. Chem. Soc (Communication)** 129, 2422-2423
- 2006 Fas signaling induces apoptotic raft formation in human RPE cells that is blocked by cholesterol depletion, J. E. Lincoln, M. Boling, A. N. Parikh, Y. Yeh, D. G. Gilchrist, L. S. Morse, **J. Investigative Ophthalmology & Visual Science (IOVS)**, 47, 2172-2178

Synergistic Activities

UC Davis

(1) Director, Northern California Nanotechnology Center, College of Engineering Microfabrication Facility; (2) Member, Biophysics, Biomedical Engineering, Chemical Engineering and Materials Science Graduate Groups; (3) Graduate Student Advisor, Biophysics Graduate Group at UC Davis; (4) Exec. Committee, NIH Training Grant in Biomolecular Technology

Editorship

(1) Co-editor, Biointerphases, 2007-2010; (2) Guest Co-Editor (with J. T. Groves) for MRS Bulletin Issue on Membrane Materials Science, 2006; (3) Reviewing Editor, Langmuir (2001-2004)

Review and Discussion Panels

Review Panelist for: (1) Ruth-Kirchstein Fellowships, NIH, 2007; (2) Bio-inspired materials for Solar Energy Utilization, DOE, 2007; (3) NSF Biomaterials CAREER proposals, 2007; (4) Discussant, Nanotechnology Symposium, Annual Meeting of AAAS, St. Louis, MO, 2006; (5) Special Emphasis Panel, Nanoscience and Nanotechnology in Biology and Medicine, NIH, 2005

Program Review Committees

(1) Lujan Neutron Scattering Center, Los Alamos National Laboratory, 2006-2009; (2) Southwest Center for Microelectronic Education, Albuquerque, NM, 2005-2008 (3) Physical Bioscience Division, Lawrence Berkeley Laboratory, 2004

Conference Organization

(1) Co-organizer (with M. Demirel), Workshop on Bio-inspired Nanomaterials, Penn State, 2005; (2) Co-organizer and Co-chair, "Life-Like Matter" An Institute for Complex Adaptive Matter Workshop, Santa Fe, NM; (3) Co-organizer and co-chair, Adamson's Symposium Honoring Dave Allara and Ralph Nuzzo, American Chemical Society (with M. Grunze), 2003

Outreach

(1) COSMOS Internship, A high-school program for partnership in science and Math, 2005-present; (2) Folsom/Intel Science Project, nanoQuest, Environment & Health projects for elementary and middle-school students in Folsom, CA area, 2007; (3) HBCU Research and Internship exchange with AAMU through NSF Center for Biophotonics, 2004-present

Collaborators

Hagan Bayley, Oxford; C. Jeff Brinker, Sandia; Jay T. Groves, UC Berkeley and LBL; Thomas Huser, UC Davis; Fredrik Hook, Lund; Steve Lenhart, Karlsruhe; Prof. Larry Morse, UC Davis Health Systems; Alexandra Navrotsky, UC Davis; Christine Orme, LLNL; Joachim Radler, Munich; Prof. Anup Sharma, Alabama A&M Univ; Andrew P. Shreve, LANL; Prof. Sunil Sinha, UC San Diego; Prof Yin Yeh, UC Davis

Graduate & Post Doctoral Advisors

Prof. David L. Allara, Chemistry, The Pennsylvania State University

Dr. Basil Swanson, Chemistry and Bioscience, Los Alamos National Laboratory

Thesis Advisor and Post-Graduate Scholar Sponsors

- 1. Graduate Students (Ph.D. Candidates)** Alan Szmodis (Biophysics), Andreia Michelle Smith (Biophysics), Rita El-Khoury (Chemistry), Michael Howland (Chemical Engineering), Adrian Brozell (Biophysics), Babak Sanii (Applied Science), Dan Bricarello (Applied Science), and Eric Kendall (Chemical Engineering)
- 2. Post-Doctoral and Senior Researchers** Ann Oliver (Last Appt, Center for Biostabilization, UC Davis), Madhuri Vinchurkar (Last Appt: Biochemistry, Academia Sinia, Taiwan), Viviane Ngassam (Univ. Paris)
- 3. Recently Departed Students and Post-Docs (past 24 months).** Dr. Chanel K. Yee (now at Amgen, CA), Dr. Sanhita Dixit, (now at SRI, CA), Dr. Annapoorna Butti (now at Purdue, IN), Mr. Calvin Yang, M.S., Biomedical Engineering