

## Harvey Warren Blanch

Department of Chemical & Biomolecular Engineering  
University of California Berkeley  
Berkeley, CA 94720  
(510) 642-1387  
[blanch@berkeley.edu](mailto:blanch@berkeley.edu)

### EDUCATION & TRAINING

B.Sc. 1<sup>st</sup> Class Honors, Chemical Engineering University of Sydney, Australia (1968)  
Ph.D. Biological Technology, Univ. of New South Wales, Sydney, Australia (1971)  
Post-doctoral Fellow, Applied Microbiology, ETH Zurich, Switzerland (1971-3)

### PROFESSIONAL EXPERIENCE

Chief Science and Technology Officer, Joint Bioenergy Institute (JBEI) LBNL (2007-present)  
Chair, Department of Chemical Engineering, Berkeley (1997-2001)  
Associate Director, NSF Marine Bioproducts Engineering Center (MarBEC), (1998-2004)  
Senior Faculty Scientist, Lawrence Berkeley National Laboratory, (1984 –present)  
Professor, University of California, Dept. of Chemical Engineering, Berkeley (1982-present)  
Associate Professor, University of California, Dept. of Chemical Eng. Berkeley (1978-1982)  
Associate Professor, University of Delaware, Dept. of Chemical Engineering (1977-1978)  
Assistant Professor, University of Delaware, Dept of Chemical Engineering, (1974 -1977)  
Lecturer: School of Biological Technology, University of N.S.W. (1971)

### AWARDS AND HONORS

Victor Cape Lecture, McGill University, Canada, 1982  
BPEC Lecturer, Cell Culture Engineering Meeting, Dec. 1989  
Fellow, International Institute of Biotechnology (UK); Elected (1991)  
Founding Fellow, American Institute for Medical and Biological Engineering; Elected (1992)  
John C. Holtz and Florence W. Holtz Memorial Lecture, The Johns Hopkins University, April 1993  
Collaboratus Lecturer, Rutgers University (1994)  
Marvin Johnson Award, Biochemical Technology Division, American Chemical Society (1995)  
Food, Pharmaceutical & Bioengineering Award, American Institute of Chemical Engineers (1996)  
Enzyme Engineering Award, Engineering Foundation (1997)  
AIChE Award for Excellence in Academic Research, AIChE Northern California Section (2000)  
Amgen Award in Biochemical Engineering, Engineering Foundation (2001)  
Warren & Katharine Schlinger Distinguished Professor of Chemical Engineering (2001)  
Fellow, AAAS (elected 2004)  
US National Academy of Engineering (2005)  
Honorary University Professor, University of Queensland, Australia (2005)  
Merck Professor of Biochemical Engineering (2007)  
“One Hundred Engineers of the Modern Era”, AIChE (2008)  
James E. Bailey Award, Society of Biological Engineering, AIChE (2010)  
L.T. Fan Lecture, Kansas State University (2012)  
Patten Distinguished Lecturer, Department of Chemical Engineering, University of Colorado (2013)  
William H. Walker Award, AIChE (2013)  
Martin Meyerson Berkeley Faculty Research Lecture (2014)

### TEXTBOOKS

“Biochemical Engineering”, H.W. Blanch & D.S. Clark, Marcel Dekker (1996). Seventh printing.

### RESEARCH IMPACT

Author of over 400 peer-reviewed scientific publications, with a Hirsch “h” factor of 70. Average cites per article is over 30.

### RELATED PUBLICATIONS

1. Seth E. Levine, Jerome M. Fox, Harvey W. Blanch, Douglas S. Clark, “A mechanistic model of the

enzymatic hydrolysis of cellulose”, *Biotechnology & Bioengineering*, 107, 37-51 (2010)

2. Tae-Wan Kim, Harshal A. Chokhawala, Dana Nadler, Harvey W. Blanch, Douglas S. Clark, “Binding modules alter the activity of chimeric cellulases: Effects of biomass pretreatment and enzyme source”, *Biotechnology & Bioengineering*, 107, 601-611 (2010)

3. Trinh, C.T., Li, J., Blanch, H.W., Clark, D.S., “Redesigning *E. coli* metabolism for anaerobic production of isobutanol”, *Appl. Env. Microbiol.*, 77 (14), 4894-4904 (2011)

4. Graham, J.E., Clark, M., Nadler, D., Huffer, S., Chokhawala, H.A., Rowland, S., Blanch, H.W., Clark, D.S., Robb, F., “Identification and characterization of a multidomain hyperthermophilic cellulase from an archaeal enrichment”, *Nature Communications*, 2, Article 375 (2011)

5. Klein-Marcuschammer, D., Simmons, B., Blanch, H.W., “Techno-economic analysis of a lignocellulosic ethanol biorefinery with ionic liquid pre-treatment”, *Biofuels, Bioproducts & Biorefining*, 5, 562-569 (2011)

6. Blanch, H.W., Klein-Marcuschamer, D., Simmons, B.A., “Biomass Deconstruction to Sugars”, *Biotechnology Journal*, 6, 1086-1102 (2011)

7. Levine, S., Fox, J.M., Clark, D.S., Blanch, H.W., “A mechanistic model for rational design of optimal cellulase mixtures”, *Biotech. Bioeng.*, 108 (11), 2561-2570 (2011)

8. Shill, K., Padmanabhan, S., Xin, S., Prausnitz, J.M., Clark, D.S., Blanch, H.W., “Ionic liquid pretreatment of cellulosic biomass: Enzymatic hydrolysis and ionic liquid recycle”, *Biotechnol. Bioeng.* 108 (3), 511-520 (2011)

9. Xin, S. Pfeiffer, K. Prausnitz, J.M., Clark, D.S., Blanch, H.W., “Extraction of lignins from aqueous-ionic liquid mixtures by organic solvents”, *Biotechnol. Bioeng.* 109 (2), 346-352 (2012)

10. Fox, J.M., Levine, S.E., Blanch, H.W., Clark, D.S., “An evaluation of cellulose saccharification and fermentation with an engineered *Saccharomyces cerevisiae* capable of cellulose and xylose utilization”, *Biotechnology Journal*, 7 (3), 361-373 (2012)

#### SYNERGISTIC ACTIVITIES:

Editorial Boards: *Biotechnology and Bioengineering* (1990-present); *Advances in Biochemical Engineering* (1992-present); *Applied Biochemistry and Biotechnology* (2005-present); *Bioprocess and Biosystems Engineering* (2000 – present); *Engineering in the Life Sciences, Chemical & Engineering Technology* (2002-present); *ACS Symposium Series* (1986-1990); *Acta Biotechnologica* (1984-1990); *Advances in Biotechnology*, Pergamon Press (1984-1986)

Advisory Board, Chemical Engineering Department, University of California Riverside (2000- present)

Advisory Board, Chemical Engineering Department, Tufts University (2004- present)

Advisory Board, Chemical Engineering Department, University of California Davis (2005- present)

Advisory Board, Chemical Engineering Department, Princeton University (2005-present)

Advisory Board for Biotechnology, Cambridge University (England) (2006-present)

Sandia National Laboratory, Advisory Board on Biology (2008-present)

Awards Committees

AIMBE Fellows Selection Committee, Chair for Biochemical Engineering and Biotechnology (1999-2002), 2005-2006; AIChE Institutional Awards Committee (1998-2002, 2008-9); Enzyme Engineering Award, Chair (2001) 1995-2005; Amgen Award n Biochemical Engineering, Chair (2001, 2003, 2005, 2007) 2009

#### COLLABORATORS & OTHER AFFILIATIONS

Collaborators : Douglas Clark (UC Berkeley), Jay D. Keasling (U.C. Berkeley), Frank T. Robb (University of Maryland); Blake Simmons (Sandia National Lab)

Graduate and Postdoctoral Advisors:

Ph. D. Advisor: Professor Peter Rogers (UNSW, Australia)  
Post Doc Advisor: Professor Armin Fiechter (ETH Zurich)

Current Graduate Students: Craig Dana; Sarah Huffer; Adam Meadows; Jerome Fox; Neil Forbes; Mike Blacic; Priya Jayachandran; Dana Nadler; Zachary Baer; Katherine Pfeiffer; Christine Roche; Kierston Shill; Paul Wolski.

Postdoctoral Fellows: Dr. Harshal Chokhawala; Dr. Melinda Clark; Dr. Cong Trinh; Dr. Tae-Wan Kim; Dr. Seth Levine; Dr. Anna Twigg

Total Graduate Students: 145; Total Postdoctoral Fellows: 45