

David Do Le Minh

Citizenship: USA and Australia

Argonne National Laboratory
Biosciences Division
9700 S. Cass Av. Building 202 Room B265
Argonne IL 60439, USA

Phone: (630) 252-6573
Fax: (630) 252-5517
daveminh@gmail.com

Research Experience

Director's Postdoctoral Fellowship	8/2009-present
Argonne National Laboratory, Argonne IL	
Postdoctoral Fellowship	8/2007-7/2009
National Institutes of Health, Bethesda MD	
Advisor: Artur Adib	
Undergraduate Student Internship	1/2004-7/2004
Argonne National Laboratory, Argonne IL	
Advisor: Lee Makowski	

Education

Ph.D., Physical Chemistry	8/2004-6/2007
University of California, San Diego	
Advisor: J. Andrew McCammon	
Thesis Topic: Free Energy Reconstruction from Irreversible Single-Molecule Pulling Experiments	
M.S., Chemistry	8/2004-6/2006
University of California, San Diego	
B.A., Chemistry	8/2000-12/2003
University of California, Berkeley	

Teaching Experience

Teaching Assistant	2005-2006
University of California, San Diego	

Courses:

Chemistry 100A	Analytical Chemistry Laboratory	Winter 2006
Chemistry 126	Physical Chemistry – Quantum Mechanics and Spectroscopy	Fall 2005
Chemistry 115/215	Modeling Biological Macromolecules	Spring 2005
Chemistry 127	Physical Chemistry – Thermodynamics and Kinetics	Winter 2005

Publications

1. Qin S, **Minh DDL**, McCammon JA, Zhou, HX. *Method to Predict Crowding Effects by Postprocessing Molecular Dynamics Trajectories: Application to the Flap Dynamics of HIV-1 Protease*. Journal of Physical Chemistry Letters, in press.
2. **Minh DDL**, Chodera JD. *Optimal estimators and asymptotic variances for nonequilibrium path-ensemble averages*. Journal of Chemical Physics, 131: 134110 (2009).
3. **Minh DDL**. *Density-Dependent Analysis of Nonequilibrium Paths Improves Free Energy Estimates*. Journal of Chemical Physics, 130: 204102 (2009).
4. **Minh DDL**, Adib AB. *Path integral analysis of Jarzynski's equality: Analytical results*. Physical Review E, 79: 021122 (2009).
5. **Minh DDL**, McCammon JA. *Springs and Speeds in Free Energy Reconstruction from Nonequilibrium Single-Molecule Pulling Experiments*. Journal of Physical Chemistry B, 112(19): 5892-5897 (2008).
6. **Minh DDL**, Adib AB. *Optimized free energies from bidirectional single-molecule force spectroscopy*. Physical Review Letters, 100: 180602 (2008).
7. Makowski L, Rodi DJ, Mandava S, **Minh DDL**, Gore DB, Fischetti RF. *Molecular Crowding Inhibits Intramolecular Breathing Motions in Proteins*. Journal of Molecular Biology, 375: 529-546 (2008).
8. **Minh DDL**, Hamelberg D, McCammon JA. *Accelerated Entropy Estimates with Accelerated Dynamics*. Journal of Chemical Physics, 127:154105 (2007).
9. Amaro R, **Minh DDL**, Cheng L, Lindstrom WM, Olson AJ, Lin JH, Olson AJ, McCammon JA. *Remarkable Loop Flexibility in Avian Influenza NI and its Implications for Antiviral Drug Design*. Journal of the American Chemical Society, 129(25):7764-7765 (2007).
10. **Minh DDL**. *Multidimensional Potentials of Mean Force from Biased Experiments Along a Single Coordinate*. Journal of Physical Chemistry B, 111(16): 4137-4140 (2007).
11. **Minh DDL**. *Free Energy Reconstruction from Experiments Performed Under Different Biasing Programs*. Physical Review E, 74: 061120 (2006).
12. **Minh DDL**, Chang CE, Trylska J, Tozzini V, McCammon JA. *The influence of macromolecular crowding on HIV-1 protease internal dynamics*. Journal of the American Chemical Society, 128:6006-6007 (2006).
13. **Minh DDL**, Bui JM, Chang CE, Jain T, Swanson JM, McCammon JA. *The entropic cost of protein-protein association: a case study on acetylcholinesterase binding to fasciculin-2*. Biophysical Journal, 89(4):L25-7 (2005).

Awards

Director's Postdoctoral Fellowship	8/2009-present
Postdoctoral Intramural Research Training Award	8/2007-7/2009
NIH Molecular Biophysics Training Grant	8/2005-6/2007
Aguoron Kamen and Kaplan Fellowship	8/2004-8/2005
UC Berkeley Chancellor's Scholarship	8/2000-12/2003
National Merit Scholarship	8/2000-12/2003

Service

Manuscript review for Biophysical Journal, Journal of Chemical Physics, Journal of Molecular Biology, Journal of Physical Chemistry B, and Physical Biology	
Universities Allied for Essential Medicines	
National Coordinating Committee	2006-2007
UC San Diego Chapter Coordinator	2005-2007
Speaker host for the UCSD Molecular Biophysics Training Grant	2007

Popular Science Articles

Written for the *Daily Californian* student newspaper at UC Berkeley, 2002-2003

Researchers Pioneer Painless Microsyringe for Drug Delivery	5/7/2003
Scientists Offer Insight Into Roots of Age, Cancer	3/5/2003
Brain Injuries Found to Differ in Sexes	2/6/2003
California Scientists Join Earthquake Coalition	2/5/2003
Unique Type of Asteroid Discovered	1/29/2003
UC Berkeley Scientists Uncover the Brain's Role in Recalling Smells	11/13/2002
Research Shows Exposure to Chemical Affects Frog Sexuality	10/31/2002
UC Scientists Study Cancer's Ferocious Proliferation	9/19/2002
Zinc-Bound Protein Implicated in DNA Repair	9/4/2002
Pilotless Chopper Finds Its Own Way	8/28/2002