

David R. Latulippe

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EDUCATION

Doctor of Philosophy, Chemical Engineering, Expected Graduation: June 2010
The Pennsylvania State University, State College, Pennsylvania

Master of Applied Science, Chemical Engineering, Graduated: August 2005
McMaster University, Hamilton, Ontario

Bachelor of Engineering, Chemical Engineering, Graduated: May 2000
McMaster University, Hamilton, Ontario

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science (AAAS)
- American Chemical Society (ACS)
- American Institute of Chemical Engineers (AIChE)
- North American Membrane Society (NAMS)

PROFESSIONAL SERVICE

- Reviewer for Journal of Membrane Science
- Co-chair for Gordon Research Conference 2008 Graduate Research Seminar on Membranes: Materials & Processes

PUBLICATIONS (Peer-Reviewed)

- Latulippe, D.R., A.L. Zydney, "Static Light Scattering Analysis of Supercoiled, Open-Circular, and Linear Plasmid DNA Isoforms" submitted to Biopolymers
- Ager, K., D.R. Latulippe, A.L. Zydney, "Plasmid DNA Transmission through Charged Ultrafiltration Membranes", J. Membrane Sci. 344 (2009) 123-128
- Latulippe, D.R., A.L. Zydney, "Size Exclusion Chromatography of Plasmid DNA Isoforms", J. Chromatogr. A 1216 (2009) 6295-6302
- Latulippe, D.R., A.M. Mika, R.F. Childs, R. Ghosh, C.D.M. Filipe, "Flux performance and macrosolute sieving behavior of environment responsive formed-in-place ultrafiltration membranes", J. Membrane Sci. 342 (2009) 227-235
- Latulippe, D.R., A.L. Zydney, "Elongational flow model for transmission of supercoiled plasmid DNA during membrane ultrafiltration", J. Membrane Sci. 329 (2009) 201-208
- Latulippe, D.R., J. R. Molek, A.L. Zydney, "Importance of biopolymer molecular flexibility in ultrafiltration processes", Ind. Eng. Chem. Res. 48 (2009) 2395-2403
- Latulippe, D.R., A.L. Zydney, "Salt-induced changes in plasmid DNA transmission through ultrafiltration membranes", Biotech. Bioeng. 99 (2008) 390-398
- Latulippe, D.R., K. Ager, A.L. Zydney, "Flux-dependent transmission of supercoiled plasmid DNA through ultrafiltration membranes", J. Membrane Sci. 294 (2007) 169-177
- Latulippe, D.R., R. Ghosh, C.D.M. Filipe, "Pulse injection technique for membrane characterization: Ultrafiltration of dextran solutions", J. Membrane Sci. 289 (2007) 268-276

PATENTS

- USPTO Application # 20090018322; Separation of different isoforms of plasmid DNA using ultrafiltration

CONFERENCE PRESENTATIONS

- D.R. Latulippe, A.L. Zydney, 'Size-Exclusion Chromatography of Plasmid DNA Isoforms', AIChE Annual Meeting 2009, Nashville, TN
- D.R. Latulippe, A.L. Zydney, 'Size-Based Separation Processes for Plasmid DNA – Comparison Between Size Exclusion Chromatography, Agarose Gel Electrophoresis, and Membrane Ultrafiltration', AIChE Annual Meeting 2009, Nashville, TN
- D.R. Latulippe, A.L. Zydney, 'Separation of Plasmid DNA Isoforms Using Ultrafiltration', AIChE Annual Meeting 2008, Philadelphia, PA
- D.R. Latulippe, A.L. Zydney, 'Salt-dependent transmission of plasmid DNA through ultrafiltration membranes', 234th ACS National Meeting, 2007, Boston, MA
- D.R. Latulippe, A.L. Zydney, 'Investigation of plasmid DNA transmission through ultrafiltration membranes', Penn State College of Engineering Research Symposium 2007
- D.R. Latulippe, K. Ager, A.L. Zydney, 'Ultrafiltration characteristics of plasmid DNA', AIChE Annual Meeting 2006, San Francisco, CA
- D.R. Latulippe, C.D.M. Filipe, R. Ghosh, R. Childs, A.M. Mika, 'Characterization of gel-filled membranes for plasma protein fractionation' AIChE Annual Meeting 2004, Austin, TX
- D.R. Latulippe, C.D.M. Filipe, R. Ghosh, R. Childs, A.M. Mika, 'Characterization of pore-filled membranes for protein fractionation applications', 54th Canadian Chemical Engineering Conference 2004, Calgary, AB

AWARDS & ACCOMPLISHMENTS

- 2009 – Larry Duda Award for Penn State Chemical Engineering 'Best Paper' competition
- 2009 – Travel award for Leadership Workshop at the 30th annual meeting of the Council for Chemical Research
- 2008 – AIChE Separations Division Graduate Student Research Award
- 2007 – Larry Duda Award for Outstanding Graduate Student Performance (candidacy exam)
- 2007 – The Pennsylvania State University Graduate Retention Fellowship
- 2005 – J. Armand Bombardier Internationalist Fellowship
- 2005 – DOW Teaching Assistant Award
- 2004 – Natural Sciences and Engineering Research Council of Canada (NSERC) Graduate Scholarship
- 2003 – McMaster University Graduate Scholarship
- 2000 – Society of Chemical Industry Merit Award

RESEARCH & WORK EXPERIENCE

- September 2005 – present: Graduate Research Assistant, The Pennsylvania State University
- January 2009 – May 2009: Teaching Fellow, The Pennsylvania State University
- September 2007 – December 2007: Teaching Assistant, The Pennsylvania State University
- September 2003 – April 2005: Graduate Research Assistant and Teaching Assistant, McMaster University
- July 2000 – August 2003: Process Engineer, ZENON Environmental

COMMUNITY & OUTREACH SERVICES

- Vice-President of Penn State University Canadian Club (2006 – 2009)
- State College High School 'Biotechnology Outreach' Presenter (2006 – 2008)
- 'Engineers Without Borders' High School Presentation/Workshop Presenter (2003 – 2005)
- McMaster Engineering Design & Communications Career Day Guest Speaker (2002)
- McMaster University Chemistry & Chemical Engineering Society Careers Night Speaker (2001, 2002)