

Curriculum Vitae

Jeff Gostick

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1. RESUME	2
2. RESEARCH DOSSIER	4
2.1. SCIENTIFIC CONTRIBUTIONS.....	5
2.2. REFEREED JOURNAL PUBLICATIONS	6
2.2.1. <i>Under Review</i>	6
2.2.2. <i>In-Press</i>	6
2.2.3. <i>Published</i>	6
2.3. NON-REFEREED ARTICLES.....	8
2.4. BOOK CHAPTERS	8
2.5. BOOK REVIEWS.....	8
2.6. CONFERENCE PROCEEDINGS	8
2.7. PRESENTATIONS IN CONFERENCES, WORKSHOPS AND COLLOQUIA.....	8
2.8. INVITED AND PLENARY TALKS.....	10
3. TEACHING PORTFOLIO.....	ERROR! BOOKMARK NOT DEFINED.
3.1. TEACHING PHILOSOPHY AND APPROACH	ERROR! BOOKMARK NOT DEFINED.
3.2. TEACHING RESPONSIBILITIES	ERROR! BOOKMARK NOT DEFINED.
3.2.1. <i>Courses Taught</i>	Error! Bookmark not defined.
3.2.2. <i>Supervision of Graduate Students</i>	Error! Bookmark not defined.
3.2.3. <i>Supervision of Undergraduate Students</i>	Error! Bookmark not defined.
3.2.4. <i>ChemE Car Supervisor</i>	Error! Bookmark not defined.
3.2.5. <i>Participation in Teaching Workshops</i>	Error! Bookmark not defined.
4. CONTRIBUTIONS TO THE UNIVERSITY AND COMMUNITY	ERROR! BOOKMARK NOT DEFINED.
4.1. MEMBERSHIP ON DEPARTMENTAL COMMITTEES	ERROR! BOOKMARK NOT DEFINED.
4.2. MEMBERSHIP ON FACULTY COMMITTEES	ERROR! BOOKMARK NOT DEFINED.
4.3. MEMBERSHIP ON UNIVERSITY COMMITTEES	ERROR! BOOKMARK NOT DEFINED.
4.4. OTHER SERVICES TO THE DEPARTMENT AND FACULTY	ERROR! BOOKMARK NOT DEFINED.
4.5. THESIS DEFENSES	ERROR! BOOKMARK NOT DEFINED.
4.5.1. <i>PhD Defense Committees</i>	Error! Bookmark not defined.
4.5.2. <i>PhD Proposal Committees</i>	Error! Bookmark not defined.
4.5.3. <i>MEng Thesis Reviews</i>	Error! Bookmark not defined.
4.5.4. <i>Pro-Dean</i>	Error! Bookmark not defined.
4.5.5. <i>Deputy Chair</i>	Error! Bookmark not defined.
4.6. CONFERENCE AND WORKSHOP INVOLVEMENT	ERROR! BOOKMARK NOT DEFINED.
4.6.1. <i>Session Organization</i>	Error! Bookmark not defined.
4.6.2. <i>Session Chairs</i>	Error! Bookmark not defined.
4.7. REVIEWER FOR SCHOLARLY JOURNAL ARTICLES.....	ERROR! BOOKMARK NOT DEFINED.
4.8. REVIEWER OF SCIENTIFIC PROPOSALS	ERROR! BOOKMARK NOT DEFINED.

1. Resume

Jeff Gostick, P.Eng.

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Education

University of Waterloo (2004-2008)	Ph.D., Chemical Engineering Dissertation: "Multiphase Mass Transfer and Capillary Properties of Gas Diffusion Layers for Polymer Electrolyte Membrane Fuel Cells" Supervisor: Professor Michael Fowler
University of Waterloo (2000-2002)	M.A.Sc., Chemical Engineering Thesis: "Measurement of Local Mass Transfer Coefficients in a Packed Bed of Pall Rings using an Electrochemical Technique" Supervisor: Professor Mark Pritzker
Ryerson University (1995-2000)	B.Eng., Chemical Engineering

Professional and Academic Experience

University of Waterloo (2017-Present)	Associate Professor Department of Chemical Engineering
McGill University (2016)	Associate Professor Department of Chemical Engineering
McGill University (2010-2016)	Assistant Professor Department of Chemical Engineering
Lawrence Berkeley National Lab (2009-2010)	Postdoctoral Research Associate Environmental and Energy Technology Division Supervisor: Adam Weber
Tokyo Institute of Technology (2007)	Visiting Scholar Department of Mechanical Engineering Supervisor: Shoji Tsushima
TeckCominco (now Teck) (2002-2004)	Research Engineer Product Technology Center, Mississauga ON

Assinck Bros (1997)	Drafter Manufacturing Facility, Markham ON
Sterling Pulp Chemicals (1996)	Research Assistant R&D Center, Etobicoke ON
McAsphalt (1996)	Quality Assurance Technician Scarborough, ON

Affiliations

Academic Centers

Trottier Institute for Sustainability in Engineering and Design (2014-2016)
McGill Institute for Advanced Materials (2012-2016)
McGill Association of University Teachers (2010-2016)

Professional Societies

Professional Engineers of Ontario (fully licensed member since 2010, #100138143)
Electrochemical Society (2006-present)
International Society of Porous Materials (Interpore) (2013-present)
American Institute of Chemical Engineers (AIChE) (2010-present)

Honors and Awards

2015	Dean's Scholarship for Active Learning Development
2010	NSERC Postdoctoral Fellowship (declined)
2008	Park M Reilly Medal for Best PhD Thesis in the Department, University of Waterloo
2007	Japan Society for the Promotion of Science Visiting Scholarship
2006	NSERC PGS-D2 Graduate Fellowship
2006	President's Scholarship, University of Waterloo
2005	Graduate Award, University of Waterloo
2001	Graduate Award, University of Waterloo
1997	NSERC Undergrad Student Research Assistantship

2. Research Dossier

Table 1: List of secured research grants

2017-2020	CANARIE Software Reuse: <i>OpenPNM GUI and HPC</i> . J. Gostick (Principal) Type: Operating Amount: \$295,000
2017-2021	NSERC-Strategic Project: Grid-scale energy storage using zinc-air fuel cells with nanostructured electrode. J. Gostick (PI), E. Roberts, V. Birss, E. Kjeang. Type: Operating Amount: \$584,000
2017-2022	NSERC-CREATE: Materials for Electrochemical Energy Solutions, E. Roberts (PI), J. Gostick, V. Birss, K. Karan, M. Secannel, V. Thangadurai, M. Trifkovic, A. Whaley. Type: Operating Amount: \$1,590,000
2017	NSERC Engage: Developing Simple and Non-Destructive Tools to Perform Quality Control Tests on Gas Diffusion Layers for Fuel Cell Electrodes. J. Gostick Type: Operating Amount: \$25,000
2016	CFI-JELF: <i>Engineered Electrode Materials for Electrochemical Energy Storage</i> . Type of Grant: Infrastructure Amount: \$265,000
2016-2017	Argonne Advanced Photon Source: <i>The Nature of Coupled Heat and Mass Transport in Porous Carbon Electrodes</i> . I. Zenyuk (PI), J. Gostick, O. Burnheim. Type of Grant: User Access Amount: N/A
2015-2018	NSERC-Collaborative R&D: <i>Characterization of Nanoporous Catalyst Layers for Polymer Electrolyte Membrane Fuel Cells</i> . J. Gostick (Principal) Type of Grant: Operating Amount: \$216,000
2015-2018	NSERC-Strategic: <i>Readily scalable and efficient iron-based PEM fuel cell electrocatalysts from low cost metal organic framework precursors</i> . T. Friščić (principal), J. Gostick, F. Vidal (INRS) and S. Sun (INRS) Type of Grant: Operating Amount (Proportion): \$560,248 (25%)
2015-2018	NSERC-Strategic: <i>Nanoparticles to superparticles: New materials for clean energy</i> . J. Barralet (principal), J. Gostick. Type of Grant: Operating Amount (Proportion): \$501,404 (33%)
2013-2015	FQRNT-Industrial Innovation Scholarship: <i>Modeling cold-start of hydrogen fuel cell using pore networks</i> . J. Gostick (Principal) Type of Grant: Student Stipend (for Harold Day) Amount: \$42,000

2013-2014	US Department of Energy, Fuel Cell Technologies Office: <i>Understanding Water Infiltration Using Analogues</i> . J. Gostick (Principal) Type of Grant: Operating Amount: \$30,000
2012-2017	NSERC-Discovery: <i>Characterization and transport modeling of atypical porous materials</i> . J. Gostick (Principal) Type of Grant: Operating Amount: \$145,000
2012-2017	CFI-Leaders Opportunity Fund: <i>Electrochemical energy storage and conversion</i> . J. Gostick (Principal) Type of Grant: Infrastructure Amount: \$222,847
2011-2014	NSERC-Collaborative R&D: <i>Water Management Characterization of Gas Diffusion Layers for Polymer Electrolyte Membrane Fuel Cells</i> . J. Gostick (Principal) Type of Grant: Operating Amount: \$259,400
2010	NSERC-Research Tools and Instrumentation: <i>Imaging workstation for dynamic material studies</i> . A. Kietzig (principal), J. Gostick, N. Tufenkji and M. Cerruti. Type of Grant: Equipment Amount (Proportion): 93,022 (25%)

2.1. Scientific Contributions

Table 2: Overview of publications by year and journal

Journal	IF*	≤2011	2012	2013	2014	2015	2016	2017	In-Press	Under Review	Total
ACS Applied Materials & Interfaces	4.589				1						1
Chemical Engineering Journal	3.283	1						1			2
Chemical Engineering Science									1		1
Computing in Science & Engineering	1.248						1				1
Electrochemistry Communications	4.382	2									2
Electrochimica Acta	3.623		1			1				1	3
Fuel Cells	2.491						1				1
Industrial & Engineering Chemistry Research	2.067	1									1
International Journal of Heat and Mass Transfer	1.726					2					2
International Journal of Hydrogen Energy	3.811	1						1			2
Journal of Applied Electrochemistry	1.743	1							1		2
Journal of Membrane Science	3.829					1					1
Journal of Open Source Software										1	1
Journal of Physical Chemistry C	4.866					2					2
Journal of Power Sources	4.398	5				1					6
Journal of the Electrochemical Society	2.523	1		1		1	3	1			7
Langmuir	4.171					1					1
Physical Review E								1			1
Polymer	3.553	1									1
Small										1	1
Transport in Porous Media	1.254							1	1		2
Total		13	1	1	1	9	5	5	3	3	41

* IF = Impact factor averaged over past 6 years

2.2. Refereed Journal Publications

Statistics from Google Scholar: h-index = 17, i10 = 29, Citations > 2700
(Students in **bold**, * indicates corresponding author)

2.2.1. Under Review

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43. **Sadeghi, A.**, Barralet, J. E. & Gostick, JT* *The interplay between microstructure, transport properties, and kinetics in flow battery electrodes: a pore network modeling study*. *Electrochimica Acta*.
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42. **Kok, MDR, T Tranter, MR Lam**, and JT Gostick*, *PoreSpy: An image analysis toolkit for voxel images of porous materials*. *Journal of Open Source Software*.
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41. **Kok, MDR.**, R. Jervis, D. Brett, P. Shearing, and JT Gostick*, *Pore network modeling of capillary hysteresis in neutrally wettable fibrous media*. *Small*.
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2.2.2. In-Press

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40. **Tranter, T.**, A. Burns, and W. Gale, J. Gostick*, *Pore network modeling of capillary hysteresis in neutrally wettable fibrous media*. *Transport in Porous Media*.
-
39. Moosavi, SM, M Niffeler, J Gostick, S Haussener, *Transport characteristics of saturated gas diffusion layers treated with hydrophobic coatings*. *Chemical Engineering Science*.
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38. **Aghighi, M.**, J. Gostick*, *Pore network modeling of phase change in PEM fuel cell fibrous cathode*. *Journal of Applied Electrochemistry*.
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2.2.3. Published

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37. **Sadeghi, M. A., Aghighi, M.**, Barralet, J. & Gostick, J. T.*, *Pore network modeling of reaction-diffusion in hierarchical porous particles: The effects of microstructure*. *Chemical Engineering Journal* 330, 1002–1011 (2017).
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36. **Liu, S, MDR Kok, YW Kim**, JL Baron, FR Brushett, JT Gostick*, *Evaluation of Electrospun Fibrous Mats Targeted for Use as Flow Battery Electrodes*. *J. Electrochem. Soc.* 164, A2038–A2048 (2017).
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35. Gostick, J. T. *Versatile and efficient pore network extraction method using marker-based watershed segmentation*. *Phys. Rev. E* 96, 023307 (2017).
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34. Hinebaugh, J., Gostick, J. & Bazylak, A. *Stochastic modeling of polymer electrolyte membrane fuel cell gas diffusion layers – Part 2: A comprehensive substrate model with pore size distribution and heterogeneity effects*. *International Journal of Hydrogen Energy* 42, 15872–15886 (2017).
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33. **Tranter, T.G., P. Stogornyyuk**, J.T. Gostick, A.D. Burns, W.F. Gale, *A method for measuring relative in-plane diffusivity of thin and partially saturated porous media: An application to fuel cell gas diffusion layers*. *International Journal of Heat and Mass Transfer*. Volume 110(July), 132–141.
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32. Lopes, J., F.-X. Colson, S. Ye, J.T. Gostick, J.E. Barralet, G. Merle, *Graphene modified nanosized Ag electrocomposites*. *Materials Research Bulletin*. 89(May), 42–50.
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31. **Rashapov, R.**, and J. Gostick*, *In-plane effective diffusivity in PEMFC gas diffusion layers*. *Transport in Porous Media*, 2016. 115(3), 411-433.
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30. Zhang Z., J.H. Lopes, S. Ye, J. Gostick, J.E. Barralet, and G. Merle, *Electrically Bloomed Platinum Nanoflowers on Exfoliated Graphene: An Efficient Alcohol Oxidation Catalyst*. *Journal of the Electrochemical Society*, 2016. 163(10), D615-D621.
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29. **Tranter, T.**, J. Gostick, A. Burns, and W. Gale. *Pore Network Modeling of Compressed Fuel Cell Components with OpenPNM*, *Fuel Cells*, 2016. 16(4), p504–515.
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28. Gostick, J.*, **M. Aghighi**, J. Hinebaugh, **T. Tranter, M.A. Hoeh, H. Day, B. Spellacy**, M. Sharqawy, A. Bazylak, A. Burns, W. Lehnert and A. Putz. *OpenPNM: A Pore Network Modeling Package*. *Computing in Science & Engineering* 2016. 18(4), p60-74.
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27. **Kok, M., A. Khalifa** and J. Gostick*. *Multiphysics Simulation of the Flow Battery*
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26. **Aghighi M.A.**, M.A. Hoeh, W. Lehnert, G. Merle, and J. Gostick*, *Simulation of a Full Fuel Cell Membrane Electrode Assembly Using Pore Network Modeling*. *Journal of the Electrochemical Society*, 2016. 163(4), p.F384-392.
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25. Schalenbach, M., M.A. Hoeh, J. Gostick, W. Lueke and D. Stolten. *Gas Permeation through Nafion®. Part 2: Resistor*
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- Network Model*. Journal of Physical Chemistry C, 2015. 119(45), p.25156–25169.
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24. Quesnel C., **R. Cao**, J. Lehr, A. Kietzig, A. Weber and J Gostick*. *Dynamic Percolation Behavior in Double Layered Porous Materials*. Journal of Physical Chemistry C, 2015. 119(40), p.22934–22944.
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23. Gostick, J. and A. Weber, *Resistor-Network Modeling of Ionic Conduction in Polymer Electrolytes*. Electrochimica Acta, 2015. 179(October), p.137-145.
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22. Lopez, J., G. Merle, S. Ye , J. Gostick, J. Barralet, *Nanoparticle decoration of defect-free electrochemically exfoliated graphene*. Langmuir, 2015. 31(35), p.9718-9727.
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21. **García-Salaberri, P.A.**, J. Gostick, G. Hwang, A.Z. Weber and M. Vera. *Effective diffusivity in partially-saturated carbon-fiber gas diffusion layers: Effect of local saturation and application to macroscopic continuum models*. Journal of Power Sources, 2015. 296: p. 440–453.
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20. **García-Salaberri, P.A.**, G. Hwang, M. Vera, A.Z. Weber and J. Gostick*. *Effective diffusivity in partially-saturated carbon-fiber gas diffusion layers: Effect of through-plane saturation distribution*. International Journal of Heat and Mass Transfer, 2015. 86: p. 319–333.
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19. **Rashapov, R., J. Unno** and J. Gostick*, *Characterization of PEMFC gas diffusion layer porosity*. Journal of the Electrochemical Society, 2015. 162(1): p. F603-F612.
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18. **Rashapov, R., F. Imami** and J. Gostick*, *Experimental method of in-plane effective diffusion coefficient measurements of porous media*. International Journal of Heat and Mass Transfer, 2015. 85: p. 367-374.
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17. **Kok, M.R.D.**, J. Gostick*, *Transport properties of electrospun fibrous membranes with controlled anisotropy*. Journal of Membrane Science, 2015. 1(473): p. 237-244.
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16. **Morris, D., S. Liu, D. Villegas** and J. Gostick*, *Electrical conductivity of fuel cell catalyst layers under controlled relative humidity*. ACS Applied Materials & Interfaces, 2014. 6(21): p. 18609–18618.
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15. Gostick, J.*, *Random pore network modeling of fibrous PEMFC gas diffusion media using Voronoi and Delaunay tessellations*. Journal of the Electrochemical Society, 2013. 160(8): p. F731-F743.
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14. **Morris, D** and J. Gostick*, *Determination of the in-plane components of the electrical conductivity tensor in PEM fuel cell gas diffusion layers*. Electrochimica Acta, 2012. 85(1): p. 665-673.
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13. Weber, A.Z., M.M. Mench, J.P. Meyers, P.N. Ross, J. Gostick, and Q. Liu, *Redox flow batteries, a review*. Journal of Applied Electrochemistry, 2011. 41(10): p. 1137-1164.
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12. Gostick, J.* and M.A. Ioannidis, *Comment on "Effect of gas diffusion layer properties on the time of breakthrough" by Shahraeeni and Hoorfar*. Journal of Power Sources, 2011. 196(22): p. 9844.
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11. Hwang, G.S., M. Kaviani, J. Gostick, B. Kientiz, A.Z. Weber, and M.H. Kim, *Role of water states on water uptake and proton transport in Nafion using molecular simulations and bimodal network*. Polymer, 2011. **52**(12): p. 2584-2593.
-
10. Bunmark, N., S. Limtrakul, M.W. Fowler, T. Vatanatham, and J. Gostick, *Assisted water management in a PEMFC with a modified flow field and its effect on performance*. International Journal of Hydrogen Energy, 2010. 35(13): p. 6887-6896.
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9. Gostick, J., M.A. Ioannidis, M.D. Pritzker, and M.W. Fowler, *Impact of liquid water on reactant mass transfer in PEM fuel cell electrodes*. Journal of the Electrochemical Society, 2010. 57(4): p. B563-B571.
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8. Gostick, J., M.A. Ioannidis, M.W. Fowler, and M.D. Pritzker, *Wettability and capillary behavior of fibrous gas diffusion media for polymer electrolyte membrane fuel cells*. Journal of Power Sources, 2009. 194: p. 433-444.
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7. Gostick, J., M.A. Ioannidis, M.W. Fowler, and M.D. Pritzker, *On the role of the microporous layer in PEMFC operation*. Electrochemistry Communications, 2009. 11(3): p. 576-579.
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6. Gostick, J., M.A. Ioannidis, M.W. Fowler, and M.D. Pritzker, *Direct measurement of the capillary pressure characteristics of water-air-gas diffusion layer systems for PEM fuel cells*. Electrochemistry Communications, 2008. 10: p. 1520-1523.
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5. Gostick, J., M.A. Ioannidis, M.W. Fowler, and M.D. Pritzker, *Pore network modeling of fibrous gas diffusion layers for polymer electrolyte membrane fuel cells*. Journal of Power Sources, 2007. 173: p. 277-290.
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4. Gostick, J., M.W. Fowler, M.D. Pritzker, M.A. Ioannidis, and L.M. Behra, *In-Plane and through-plane gas permeability of carbon fiber electrode backing layers*. Journal of Power Sources, 2006. 162 (1): p. 228-238.
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3. Gostick, J., M.W. Fowler, M.A. Ioannidis, M.D. Pritzker, Y.M. Volfkovich, and A. Sakars, *Capillary pressure and hydrophilic porosity in gas diffusion layers for polymer electrolyte fuel cells*. Journal of Power Sources, 2006. 156(2): p. 375-387.
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2. Gostick, J., M. Pritzker, A. Lohi, and H.D. Doan, *Mass transfer variation within a packed bed and its relation to liquid distribution*. Chemical Engineering Journal, 2004. 100(1-3): p. 33-41.
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1. Gostick, J., H.D. Doan, A. Lohi, and M.D. Pritzker, *Investigation of Local Mass Transfer in a Packed Bed of Pall Rings Using a Limiting Current Technique*. Industrial & Engineering Chemistry Research, 2003. 42(15): p. 3626-3634.
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2.3. Non-refereed Articles

1. Aye T, Christensen D, Gostick J, Mogharei A, Olatunde G, Singcuna S, Won W, Aida T. Environmental catalysis: The Canadian Situation. *Canadian Chemical News*, 2000. 52: p. 2526.

2.4. Book Chapters

2. Gostick, J.T., et al., *Porosimetry and Characterization of the Capillary Properties of Gas Diffusion Media*, in *Handbook of PEM Fuel Cell Durability*, H. Wang, X.-Z. Yuan, and H. Li, Editors. 2011, Taylor Francis: Baton Rouge.
1. Gostick, J.T., et al., *Characterization of the Capillary Properties of Gas Diffusion Media*, in *Modern Aspects of Electrochemistry*, C.Y. Wang and U. Pasaogullari, Editors. 2010, Springer: Berlin.

2.5. Book Reviews

1. *Experimental Techniques for Chemical Engineers*, in *Canadian Journal of Chemical Engineering*, 2014. 92: p. 1160-1162.

2.6. Conference Proceedings

(Students in bold)

11. **Kok, MDR**, Jervis, R, Shearing, P R & Gostick, JT, Fluid Transport Properties from 3D Tomographic Images of Electrospun Carbon Electrodes for Flow Batteries. *ECS Trans.* 77, 129–143 (2017).
10. **Liu, SP, Kok, MDR** & Gostick, J. T. Fabrication and Characterization of Electrospun Electrodes for Flow Battery Electrodes. *ECS Trans.* 75, 15–25 (2017).
9. **Kok, MDR** and J Gostick, *Multiphysics Simulation of the Bromine Cathode: Cell Architecture and Electrode Optimization*. *ECS Transactions*, 2015. 69(1): p. 21-35.
8. **Tranter, TG**, AD Burns and J Gostick, *Multiphysics Pore Network Modeling of Compressed Fuel Cell Components with OpenPNM*. 5th European Fuel Cell and H₂ Forum, 2015. Chapter 05 – Sessions A08, 11, 12, 14. p. 138-148 (ISBN: 978-3-905592-19-1).
7. **Aghighi, MA** and J Gostick, *Pore Network Modeling of the Full Membrane Electrode Assembly of a Polymer Electrolyte Membrane Fuel Cell*. *ECS Transactions*, 2014. 64(3): p. 19-25.
6. Gostick, J et al., *Introducing OpenPNM: An open-source pore network modeling framework*. *ECS Transactions*, 2013. 58(1): p. 79-86.
5. **Shrestha, K** and J Gostick. *Measurement of capillary pressure curves in GDLs at elevated temperatures*. *ECS Transactions*, 2012. 50(2): p. 469-476.
4. Gostick, J, *Random pore network modeling of GDLs using Voronoi and Delaunay Tessellations*. *ECS Transactions*, 2011. 41(1): p. 125-130.
3. Kwong, A, et al., *Water Uptake in PEMFC Catalyst Layers*. *ECS Transactions*, 2011. 41(1): p. 647-650.
2. Gostick, J, et al., *Tomographic Imaging of Water Injection and Withdrawal in PEMFC Gas Diffusion Layers*. *ECS Transactions*, 2010. 33(1): p. 1407-1412.
1. Gostick, J, et al. *Effect of hydrophobic polymer treatments on the capillary properties of gas diffusion layers for polymer electrolyte membrane fuel cells*. in *AIChE Annual Meeting*. 2008. Philadelphia, PA: AIChE.

2.7. Presentations in Conferences, Workshops and Colloquia

(Students in bold)

35. García-Salaberri, P.A., J. T. Gostick, G. Hwang, M. Vera, I. Zenyuk, A. Z. Weber, *Multiphysics, Multiphase & Multiscale Modeling of PEFCs: With a Focus on the Gas Diffusion Layer*, Annual Fall Meeting of the Electrochemical Society, 2017. Washington, DC.
34. **Kok, MDR**, and J Gostick, *Fluid Transport Properties from 3D Tomographic Images*, Annual Spring Meeting of the

- Electrochemical Society, 2017. New Orleans, USA.
33. **Liu S**, and J Gostick, *Fabrication and Characterization of Electrospun Electrodes for Flow Battery Applications*, Annual Fall Meeting of the Electrochemical Society, 2016. Honolulu, USA.
 32. Gostick J, **T Tranter**, A Burns, *Pore network modeling of capillary hysteresis in neutrally wettable fibrous media*, International Society for Porous Media 8th Annual Conference 2016. Cincinnati, OH.
 31. Gostick J, **T Tranter**, **P Stogornyuk**, W Gale, *Measuring relative in-plane diffusivity of thin and partially saturated porous media*, International Society for Porous Media 8th Annual Conference 2016. Cincinnati, OH.
 30. **Kok MDR** and J Gostick, *Multiphysics Simulation of the Bromine Cathode: Cell Architecture and Electrode Optimization*, Canadian Society for Chemical Engineering Conference, 2015. Calgary, AB.
 29. **Kok MDR** and J Gostick, *Multiphysics Simulation of the Bromine Cathode: Cell Architecture and Electrode Optimization*, Annual Fall Meeting of the Electrochemical Society, 2015. Phoenix, USA.
 28. Tranter TG, AD Burn and J Gostick, *Pore network modelling of compressed fuel cell components with OpenPNM*, 5th European PEFC and H₂ Forum, 2015. Lucerne, Switzerland.
 27. Seyedmohamad M, J Gostick, S Haussener, *Tomography-based characterization of two phase transport in porous media using direct pore-level simulations*. International Society for Porous Media 7th Annual Meeting, 2015. Padova, Italy.
 26. Gostick J, **PA García-Salaberri**, G Hwang, M Vera, and AZ Weber, *On the Mass-Transfer Properties of Partially-Saturated Carbon-Paper Gas Diffusion Layers: Global Vs. Local Effective Diffusivity*. Annual Spring Meeting of the Electrochemical Society, 2015. Chicago, USA.
 25. Weber AZ, A Kusoglu, J Gostick and A Crothers, *Understanding Transport Phenomena in Perfluorosulfonic-Acid Membranes*. Annual Spring Meeting of the Electrochemical Society, 2015. Chicago, USA.
 24. **Aghighi M** and J Gostick, *Incorporation of the Stefan-Maxwell Multicomponent Diffusion Model into a Pore Network Model of the PEMFC Electrode*. Annual Fall Meeting of the Electrochemical Society. 2014. Cancun, Mexico.
 23. Gostick J and **M Aghighi**, *Modeling a Full PEMFC Membrane Electrode Assembly Using a Pore Network Model*. Annual Fall Meeting of the Electrochemical Society, Cancun, Mexico, Oct 6th, 2014.
 22. **Rashapov R** and J Gostick, *Experimental Method of Diffusion Coefficient Measurements of Porous Media (Poster)*. 4th Electrochemical Society Montreal Student Chapter Symposium. Montreal, QC. June 13th, 2014.
 21. **Rashapov R** and J Gostick, *Experimental Method of Diffusion Coefficient Measurements of Porous Media*. International Society for Porous Media 6th Annual Conference. Milwaukee, USA. May 27-30, 2014.
 20. **Kok M** and J Gostick, *Transport Properties of Electrospun Fibrous Membranes with Controlled Anisotropy*. International Society for Porous Media 6th Annual Conference. Milwaukee, USA. May 27-30, 2014.
 19. **Morris D** and J Gostick, *Structure-Conductivity Relationship of PEMFC Catalyst Layers*. Electrochemical Conference on Energy & the Environment. Shanghai, China. March 13-16, 2014.
 18. Gostick J, *Liquid Flow Through MPLs: The impact of holes and cracks on percolation through dual layers*. DoE Fuel Cell Modeling Workshop. Berkeley, CA. February 4th, 2014.
 17. **Laskey G** and J Gostick, *Low Pressure Liquid Extrusion Porosimetry for Determination of Pore Size Distribution in Gas Diffusion and Microporous Layers*. Annual Fall Meeting of the Electrochemical Society. 2013. San Francisco, USA.
 16. Gostick J, A Putz, A Bazylak, **H Day**, **M Aghighi**, J Hinebaugh. *Introducing OpenPNM: An open-source, pore network modeling software package*. Annual Fall Meeting of the Electrochemical Society. October 13-18, 2013. San Francisco, USA.
 15. **García-Salaberri P**, J Gostick, M Vera, A Weber and G Hwang, *Lattice Boltzmann simulations of anisotropic permeabilities in partially-saturated PEM fuel cell gas diffusion layers*. IV Iberian Symposium on Hydrogen, Fuel Cells and Advanced Batteries. June 26-28, 2013. Estoril, Portugal.
 14. **Morris DRP**, **S Liu**, **D Villegas** and J Gostick, *Percolation Conductivity of Fuel Cell Catalyst Layers*. 3rd Electrochemical Society Montreal Student Chapter Symposium. June 28th, 2013. Montreal, QC.
 13. Gostick J, G Hwang and A Weber. *Using Tomographic Images to Study Invasion Mechanisms in Fibrous GDMs*. Annual Spring Meeting of the Electrochemical Society. 2013. Toronto, ON.
 12. **Shrestha K** and J Gostick, *Measurement of Capillary Pressure Curves in GDLs at Elevated Temperatures*. Annual Fall Meeting of the Electrochemical Society. October 2012. Honolulu, HI.
 11. **Morris DRP** and J Gostick. *Electrical Conductivity of Gas Diffusion Layer Materials*. 2nd Electrochemical Society Montreal Student Chapter Symposium. June 22nd, 2012. Montreal, QC.
 10. Gostick J, *Random pore network modeling of GDLs using Voronoi and Delaunay Tessellations*. Annual Fall Meeting of the Electrochemical Society. 2011. Boston, MA.

9. Gostick J, B Kienitz, A MacDowell and A Weber. X-Ray tomographic study of liquid water distribution in GDLs under pressure-controlled capillary invasion and withdrawal. ECS Fall Meeting, Las Vegas, NV. October 15 – 20, 2010.
8. Gunterman P, J Gostick, A Weber and J Newman. Measurement of air-water capillary pressure curves of microporous layers in PEMFC electrodes. ECS Fall Meeting, Las Vegas, NV. October 15 – 20, 2010.
7. Kienitz B, J Gostick, A MacDowell and A Weber. Investigation of Nafion water content using x-ray radiography. ECS Fall Meeting, Las Vegas, NV. October 15 – 20, 2010
6. Gostick J, M Ioannidis, M Pritzker and M Fowler, Effect of hydrophobic polymer treatments on the capillary properties of gas diffusion layers. AIChE Annual Meeting, Philadelphia, PA. November 17 – 21, 2008.
5. Shim J, J Gostick, S Tsushima, S Harai. Analysis and verification of MEA degradation mechanism in PEMFC through SEM images and direct gas mass spectroscopy. 4th International Conference on Flow Dynamics, Sendai, Japan. September 26 & 27, 2007.
4. Gostick J, M Ioannidis, M Pritzker and M Fowler, Capillary pressure and permeability of gas diffusion layers: measurement and pore network modeling. 210th Meeting of the Electrochemical Society, Cancun, Mexico. October 29 – November 3, 2006.
3. Gostick J, E Lin, M Ioannidis, M Pritzker and M Fowler, Measurement of hydrophobic pore volume in GDLs at elevated temperatures. 9th Grove Fuel Cell Symposium, London, UK. October 4 – 6, 2005. (Poster)
2. Gostick J, M Ioannidis, M Pritzker and M Fowler, Effectiveness of PTFE coatings on GDLs at elevated temperatures. 1st Symposium on Manufacturing of MEAs for Hydrogen Applications, Dayton, OH. August 9 – 11, 2005.
1. Gostick J, H Doan, M Pritzker and A Lohi, Measurement of local mass transfer coefficients in a packed column of Pall rings using the limiting current technique. 51st Canadian Chemical Engineering Conference, Halifax, NS. October 14 – 17, 2001.

2.8. Invited and Plenary Talks

25. Visiting Speaker: OpenFCST 1st Annual Workshop (Invited by Prof. Marc Secanell)
OpenPNM: Open Source Pore Network Modelling in Python. Edmonton, AB. August 22nd, 2016.
25. Visiting Speaker: Henan Normal University 111 Kick-off Meeting (Invited by Prof. Tang)
OpenPNM: Open Source Pore Network Modelling in Python. Edmonton, AB. August 22nd, 2016.
25. Visiting Speaker: OpenFCST 1st Annual Workshop (Invited by Prof. Marc Secanell)
OpenPNM: Open Source Pore Network Modelling in Python. Edmonton, AB. August 22nd, 2016.
24. Visiting Speaker: SDFC Batteries Meeting (Invited by Prof. Paul Shearing of University College London)
Modeling Thin Porous Materials: Three Challenges, One Solution. Abbingdon, UK. July 15th, 2016.
23. Visiting Speaker: University of Leeds (Invited by Prof. Alan Burns)
Characterization & Modeling Transport in Gas Diffusion Layer. University of Leeds. July 12th, 2016.
22. Visiting Speaker: Tufts University (Invited by Prof. Iryna Zenyuk)
Thin Porous Materials: Characterization Challenges & Modeling Opportunities. Tufts University. March 10th, 2016.
21. Public Talk: Sustainable Engineering at McGill (SEAM)
Mobile Power: Want vs. Need. McGill University, Jan 26th, 2016.
20. Public Debate: McGill Engineering TechWeek
Batteries vs Fuel Cells for Mobile Power. Organized by the McGill Engineering Equity Committee. Sept 30th 2015.
19. Workshop Moderator: Universal Design in Learning
Four Things I Learned This Summer from the NETI-1. Organized by the McGill Engineering Equity Committee. Sept 30th 2015.
18. Tutorial: CSChE Conference (invited by Prof. Kunal Karan)
Code like a Pro: An Introduction to Object-Oriented Programming with Python, given as part of the Student Symposium at the 65th Annual Society Meeting in Calgary. Oct 6th 2015.
17. Tutorial: ECS Spring Meeting (invited by Dr. Adam Weber)
Measuring and Modeling Transport Processes in Porous Electrodes, given as part of the “State-of-the-Art Tutorial on Diagnostics in Low-Temperature Fuel Cells” at the Annual Spring Meeting of the Electrochemical Society, Chicago, USA, May 26th, 2015.
16. Public Talk: McGill Engineering TechWeek
Porous Materials Engineering and Analysis: Measuring, Modeling and Making, McGill University, Jan 28th, 2015.
15. Public Talk: TISED Annual Symposium (invited by Prof. Francois Bouffard)

- Electrochemical Energy Storage: Make Hay When the Sun Shines*, Trottier Institute of Sustainability in Engineering and Design Symposium on Storage in Sustainable Energy Electric Systems, Montreal, QC, Nov 20th, 2014.
14. Keynote: McGill Chemical Engineering Research Symposium (invited by Prof. Anne Kietzig)
How to Become a Professor in N Easy Steps ($N \gg 1$), given as part of the Departmental Semi-Annual Research Day, Nov 19th, 2014.
 13. Seminar: CSChE Conference (invited by Prof. Jason Grove)
How to Become a Professor in N Easy Steps ($N \gg 1$), given as part of the undergraduate symposium at the 64th Canadian Chemical Engineering Conference, Niagara Fall, ON, Oct 20th, 2014.
 12. Plenary Talk: ECS Fall Meeting (invited by Dr. Felix Buchi)
Modeling a Full PEMFC Membrane Electrode Assembly Using a Pore Network Model, given during the plenary session of the Annual Fall Meeting of the Electrochemical Society, Cancun, Mexico, Oct 6th, 2014.
 11. Workshop: University of Calgary (invited by Prof. Viola Birss)
Porous Media Research at McGill. Workshop on Electrochemical Energy Storage. University of Calgary, Calgary, AB. June 9th, 2014.
 10. Seminar: US DoE Working Group (invited by Dr. Adam Weber)
X-ray Tomography & Lattice Boltzmann Simulations, presented to the DoE Fuel Modelling Working Group, Lawrence Berkeley National Lab, Berkeley, USA. May 22nd, 2014.
 9. Visiting Speaker: Juelich Institute (invited by Prof. Werner Lehnert)
Porous Media Research at McGill. Juelich Institute, Juelich, Germany. May 16th, 2014.
 8. Seminar: Daimler Research Facility (invited by Dr. Jorg Kleeman)
Fuel Cell Electrode Characterization, given to research facility members in Naburn, Germany. May 15th, 2014.
 7. Visiting Speaker: University of Waterloo (invited by Prof. Michael Fowler)
How to Become a Professor in N Easy Steps ($N \gg 1$). University of Waterloo, Waterloo, ON. April 4th, 2014.
 6. Workshop: DoE Fuel Cell Modeling Workshop (invited by Dr. Adam Weber)
Introducing OpenPNM: An open-source, pore network modeling software package, presented to the DoE Fuel Modelling Working Group, Lawrence Berkeley National Lab, Berkeley, USA. Oct 12th, 2013.
 5. Seminar: Automotive Fuel Cell Cooperation
Random Pore Network Modeling, given as part of the Lunch & Learn series at AFCC, Burnaby BC. Feb 22nd, 2012.
 4. Workshop: DoE Fuel Cell Modeling Workshop (invited by Dr. Adam Weber)
GDL Transport Properties: Update and Status, presented to the DoE Fuel Modelling Working Group, Lawrence Berkeley National Lab, Berkeley, USA. Jan 26th, 2012.
 3. Seminar: Automotive Fuel Cell Cooperation
Random Thoughts on Wettability, given as part of the Lunch & Learn series at AFCC, Burnaby, BC. Feb 24th, 2011.
 2. Workshop: DoE Fuel Cell Modeling Workshop (invited by Dr. Adam Weber)
GDL Transport Properties: Overview and Status, presented to the DoE Fuel Modelling Working Group, Lawrence Berkeley National Lab, Berkeley, USA. Feb 28th, 2011.
 1. Public Talk: McGill Engineering TechWeek
Energy Storage: Make Hay While the Sun Shines. Academic Week, McGill University, Feb 7th, 2011.