

CURRICULUM VITAE

Pu Chen

**Fellow of the Canadian Academy of Engineering
Professor of Chemical Engineering, Nanotechnology and Physics**

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Education

Doctor of Philosophy, Mechanical and Industrial Engineering

University of Toronto, Toronto, ON, 1998

Thesis: *Applied Surface Thermodynamics; Biointerfaces*

Master of Applied Science, Metallurgy and Materials Science

University of Toronto, Toronto, ON, 1993

Thesis: *Hardware and Software Development of Scanning Reference Electrode Techniques for Localized Corrosion*

Master of Science, Solid State Physics, Nanjing University, Nanjing, China, 1988

Thesis: *Microstructure and Phase Transition of High T_c Superconductivity Ceramics*

Bachelor of Science, Physics, Nanjing University, Nanjing, China, 1985

Professional Experience

Professor (2008-present)

Department of Chemical Engineering, Faculty of Engineering, University of Waterloo, Waterloo, ON

Professor (cross-appointed, 2008-present)

Department of Physics, Faculty of Science

University of Waterloo, Waterloo, ON

Canada Research Chair (2004-2014)

Faculty of Engineering, University of Waterloo, ON Canada

Associate Professor (tenured, 2003-2008)

Department of Chemical Engineering, Faculty of Engineering, University of Waterloo, Waterloo, ON

Associate Professor (cross-appointed, 2003-2008)

Department of Physics, Faculty of Science

University of Waterloo, Waterloo, ON

Visiting Scientist/Associate Professor (2004-2005)

Harvard-MIT Division of Health Sciences and Technology, and Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA

Assistant Professor (1998-2003)

Department of Chemical Engineering, Faculty of Engineering, University of Waterloo, Waterloo, ON

Assistant Professor (cross-appointed, 2001-2003)

Department of Physics, Faculty of Science

University of Waterloo, Waterloo, ON

Research Assistant (1994-July 1998)

Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, ON

Lecturer (part time, January 1997-May 1997)

Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, ON

Teaching Assistant (1994-1997)

Department of Mechanical and Industrial Engineering,

<i>Research Assistant</i> (1990-1992)	University of Toronto, Toronto, ON Department of Metallurgy and Materials Science, University of Toronto, Toronto, ON
<i>Teaching Assistant</i> (1990-1992)	Department of Metallurgy and Materials Science, University of Toronto, Toronto, ON
<i>Technical Specialist</i> (1988-1989)	Science and Technology for Innovation and Development, Inc., Anhui Province, China
<i>Research Assistant</i> (1985-1988)	Department of Physics, Nanjing University, Nanjing, China
<i>Teaching Assistant</i> (1985-1988)	Department of Physics, Nanjing University, Nanjing, China

Honors

- Experts board member, Overseas Chinese Affairs Office of the State Council, 2017-
- Experts review board member, Chinese Academy of Sciences, 2017-
- University Research Chair, 2015-
- Fellow of the Canadian Academy of Engineering, 2015-
- Canada Research Chair Tier 1, 2015-, (declined)
- Overseas Scholar, South China University of Technology, 2011-
- Eastern Scholar, Shanghai Institute of Technology, 2011-2014
- Faculty of Engineering Distinguished Performance Award, University of Waterloo, 2010
- Distinguished Visiting Professorship, Nanjing University of Technology, 2010-
- Canadian Who's Who, 2008
- Consultant Professor, South China University of Technology, 2007-present
- Canada Research Chair in Nano-Biomaterials, 2004-present
- Inclusion in the AcademicKeys Who's Who in Higher Education Engineering (WWHEE), 2006
- Nominated for the Teaching Excellence Award, Faculty of Engineering, University of Waterloo, 2003
- Nominated for One of the Top 20 Researchers (in all fields of sciences and engineering) under the Age of 40 in Canada, 2002
- Outstanding Performance Faculty, Department of Chemical Engineering, University of Waterloo, 2001
- Premier's Research Excellence Award (PREA), Ontario, 2000
- Natural Sciences and Engineering Research Council of Canada (NSERC) Postdoctoral Fellowship, 1998-2000, (declined)
- Ontario Graduate Scholarship (OGS), 1997-1998
- Ontario Graduate Scholarship (OGS), 1996-1997
- University of Toronto Open Doctoral Fellowship, 1995-1996
- University of Toronto Open Doctoral Fellowship, 1994-1995
- Charles Bertram Pitt Endowment Fund, University of Toronto, 1994
- University of Toronto Open Master's Fellowship, 1990-1991

Research Programs (1998-present)

- **Nano-Biomaterials: Amino acid pairing (AAP) peptides; Biomolecular Interactions and Binding; Peptide/DNA/RNA Self/co-assembly; Mechanochemistry of Biomolecules; Drug and Gene Delivery; Peptide-mediated Anticancer Drug Delivery; Peptide-mediated siRNA Delivery; Peptide-mediated HIV Vaccine Formulation; Cancer Inhibiting Peptides; Multidrug Resistance; Nanotube-mediated Drug Delivery; Synthesis of Biomimetic Affinity Ligands;**

Cancer Stem Cell-Peptide Interactions; Peptide Replication and Origins of Life; Nanoparticle Toxicity and Immunology; siRNA Transfection Reagents

- Biointerfacial Engineering: *Peptide/Cell Patterning; Biomolecular Immobilization; Nanotube Membranes for Enantioseparation; Protein Separation/Purification and Immunoadsorption; Nanofiber Nucleation and Growth; Protein/Peptide Conformational Diseases; **Biosensors**; **Biofuel Cells**; Mechanochemistry; Antimicrobial Surfaces*
- Synthetic Biology: *Bacteria as Tumor Targeting Vectors; Cancer Computational Fluid Dynamics (CFD); Functional Genomics; Metagenomics*
- Polymers: *Polymer Nanotubes, Polymer Melt Surface Tension; Surface Modified Polymers; Soft Contact Lenses; Micro/nanocellular Foaming of Polymers in Supercritical Fluids; PEM Fuel Cells; **Functionalized Nanotube Assisted Catalysts**; Polymer-Nanoparticle Composites; Mesoporous Particles*
- Surface Thermodynamics and Statistical Mechanics: ***Surface/Interfacial Tension**; Contact Angle; Wetting/Dewetting; Statistical Rate Theory; Monte Carlo and Molecular Dynamics Simulations*
- Generalized Theory of Capillarity: *Generalization of the Classical Gibbs Surface Thermodynamics for Nanoscale Systems; 1-D Thermodynamics*
- Energy and Integrative Research: ***Lithium Batteries; Rechargeable Hybrid Aqueous (Ion Exchange) Batteries (ReHABs)**; High Purity Polycrystalline Silicon Synthesis; Solid State and Gel Polymer Electrolytes; Scale-up of ReHABs for commercial manufacturing and market readiness*

Consulting Activities (1999-present)

- Positec Group Ltd., USA and China (2009-present)
- Click-into Ltd., Markham, Ontario (2009-present)
- Interfacial Engineering Consulting, Ontario (2003-present)
- Escalator Handrail Company, Inc., Oshawa, Ontario (2002-present)
- PlasmaTreat, Mississauga, Ontario (2000-present)
- Systems for Research, Hamilton, Ontario (2000-present)
- Sci-lab Materials Testing Inc., Kitchener, Ontario (2002-2002)
- Plastiflex Canada Inc., Orangeville, Ontario (1999-2000)
- British Tire & Rubber (BTR) Sealing Systems North America, Oakville, Ontario (1999-2000)
- Avery-Dennison, Painesville, Ohio, USA (1999-2000)

Journal Editor or Editorial Board

- Editorial Board Member, World Journal of Chemical Engineering (2006-present)
- Managing Editor, World Journal of Chemical Engineering (2006-2007)
- Academic Editor, PLoS ONE (2007-present)
- Associate Editor, Advanced Science Letters (2007-present)
- Editorial Board Member, The Open Structural Biology Journal (2007-present)
- Editorial Board Member, The Open Materials Science Journal (2008-present)
- Editorial Board Member, The Open Nanomedicine Journal (2008-present)
- Editorial Board Member, The Open Biomaterials Journal (2008-present)
- Editorial Board Member, Journal of Thermodynamics (2008-present)
- Editorial Board Member, The Open Polymer Science Journal (2008-present)
- Advisory Board Member, Journal of Bioscience and Medicine (2011-present)
- Honorary Member, Editorial Board, Advances in Applied Physics (2012-present)
- Editorial Board Member, Journal of Gene Therapy (2013-present)
- Editorial Board Member, Austin Journal of Nanomedicine & Nanotechnology (2013-present)

- Associate Editor, Energy Storage Section, Frontiers in Energy Research (2013-present)
- Editorial Board Member, Journal of Advanced Biotechnology and Bioengineering (2018-present)

Journal Referee (1995-present, on average 10 reviews per year)

- J. Colloid Interface Sci.
- Langmuir
- Colloids Surfaces A: Physicochem. Eng. Aspects
- Colloids Surfaces B: Biointerfaces
- J. Phys. Chem.
- Biochimica et Biophysica Acta (BBA)
- CSME Transactions
- J. Membrane Sci.
- Advances in Colloid and Interface Science
- Physical Review Letters
- Physical Review B
- Physical Review E
- Separation and Purification Technology
- Interface Science
- Chemical Engineering Science
- Biopolymers
- J. Am. Chem. Soc.
- Biomacromolecules
- Industrial & Engineering Chemistry Research
- Chemical Engineering Communications
- Polymer Engineering Sci.
- World Journal of Chemical Engineering
- PLoS ONE
- Biomaterials
- Biotechnology & Bioengineering
- Angew. Chem. Int. Ed.
- Macromolecular Chemistry & Physics
- Advanced Materials
- Advanced Functional Materials
- Canadian Journal of Chemical Engineering
- Biochemistry
- Ionics
- Energy & Environmental Science
- J. Power Sources
- Soft Matter
- Small
- MRS Communications
- Materials Letters
- Materials Chemistry and Physics
- Macromolecular Chemistry and Physics
- J. Nanoscience and Nanotechnology
- J. Cancer Research and Clinical Oncology
- J. Applied Polymer Science
- Energy and Fuels

- Electrochimica Acta
- Current Pharmaceutical Biotechnology
- CrysEngComm
- Cell Biology International
- Applied Materials & Interfaces
- Analytical Chemistry
- Acta Biomaterialia
- ACS Nano
- Nature
- Nature Communications
- Nature Medicine
- Scientific Reports
- Nanoscale
- J. Solid State Electrochemistry
- Polymer Chemistry
- Drug Delivery

Courses Taught

<i>Name</i>	<i>Number</i>	<i>Term and Year</i>
- Interfacial Phenomena	ChE 612	Fall 07, Fall 08, Fall 09, Spring 16
- Nanoscale Biomaterials	ChE 755	Spring 07, Fall 13
- Mass Transfer	ChE 035	Fall 98, Fall 99, Fall 00, Fall 01, Fall 02, Fall 03
- Advanced Mathematics in Chemical Engineering	ChE 039	Spring 99
- Interfacial Phenomena	ChE 710	Fall 99, Spring 01, Spring 02, Spring 03, Fall 05 Fall 06
- Introduction to Materials Science and Engineering	ChE 039	Spring 00, Spring 01, Spring 02, Spring 05
- Physical Chemistry 1	ChE 023	Fall 00, Fall 01, Fall 02, Fall 03, Fall 06, Fall 07 Fall 08, Fall 09, Fall 10, Fall 11
- Nanoscale Biosystems	NE 489-1	Winter 10, Winter 11, Winter 12
- Chemistry for Engineers	ChE 102	Fall 13 (2), Fall 15 (2)
- Physical Chemistry 2	ChE 231	Spring 15, Spring 16

Committee Service

- PhD Thesis Chair Designate, University Wide Committee, 2018-
- MMY Scholarship Committee, 2018-
- Departmental Representative to the Engineering Faculty Council, 2017-
- Member, Designated Chair Pool (PhD examinations), 2016-
- Organizing Committee, NANOMED 2016 (World Summit on Nanotechnology and Nanomedicine Research), Dubai, UAE, September, 2016.
- Organizing Committee, the 12th Nanotechnology Products Expo (Nano Expo-2016), Melbourne, Australia, November 3-5, 2016
- Tenure and Promotion Committee, Department of Chemical Engineering, University of Waterloo, 2015-
- Organizing Committee, the 6th Global Experts Meeting & Expo on Nanomaterials and Nanotechnology (Nanomaterials-2016), Dubai, UAE, April 21-23, 2016

- Organizing Committee, Canadian Chemical Engineering Conference, Calgary, Alberta, Canada, 2015-
- Member, Biomedical Engineering Committee, Canadian Institutes of Health Research (CIHR), Government of Canada, 2014-
- Member, Graduate Review Committee, Department of Chemical Engineering, University of Waterloo, 2014-
- Coordinator, ChE 102, Chemistry of Engineers, 2013-
- Session Chair, Battery Electrolytes Session, the 223rd ECS meeting, Toronto, Canada, May 12-16, 2013
- Session Chair, the 6th Annual Protein & Peptide Conference (PepCon-2013), Suzhou, China, March 21-23, 2013.
- Member, International Organizing Committee, Drop Reaction and Microfluidic Analysis (DRAMA) International Symposium, Royal Dublin Society, Dublin, Ireland, 11 – 13 September 2012
- Member, Scientific Advisory Board, New and Advanced Materials International Conference, Isfahan, Iran, 2011-present
- Member, Department of Chemical Engineering Merit Review Committee, 2008-present
- Member, Canadian Chapter of the Controlled Release Society, 2008-present
- Ad hoc steering committee for the Waterloo Institute for Nanotechnology (WIN), University of Waterloo, 2008-present
- Graduate curriculum committee for nanotechnology program, University of Waterloo, 2008-present
- Ontario-India Nanotechnology Initiative, 2007-present
- Ad hoc committee for collaboration with Ontario Institute for Cancer Research, a research priority of the VP Research Office, University of Waterloo, 2007-2007
- Organizer, Ontario-India Nanotechnology Workshop, Ministry of Research and Innovation Ontario, 2007
- Department of Chemical Engineering DACA (hiring committee), 2006-2007
- Organizer, Member of the local organizing committee, Nanomedicine: Nanostructures & Their Biomedical Applications; Metabolomics, Technologies & Applications: 5th Northern Lights Summer Conference, Waterloo, Ontario, Canada, June 20-22, 2007
- Organizer, Member of the local organizing committee, NanoForum Canada 2007, Waterloo, Ontario, Canada, June 18-20, 2007
- Committee member, Science Convergence Initiative, CIHR and NSERC, working with the VP Research Office, University of Waterloo, 2007
- Co-chair, the Engineering Modeling in Biology session, the 55th Canadian Chemical Engineering Conference, Toronto, Ontario, Canada, October 16-19, 2005
- Department of Chemistry DACA (hiring committee), February 2005-present
- Research subcommittee for Academic Planning-Vision 2010, 2005-present
- Member of the faculty screening committee, Nanotech Engineering Program, UW, 2004-present
- Member of the committee for the Nanotechnology program, UW, 2004-present
- Chair of the Biomaterials session, the 53rd Canadian Chemical Engineering Conference, Hamilton, Ontario, Canada, October 28-30, 2003
- Co-chair of the Colloid and Interfacial Phenomena session, the 53rd Canadian Chemical Engineering Conference, Hamilton, Ontario, Canada, October 28-30, 2003
- Coordinator, the Chinese-Canadian collaboration in biophysics and biomedical research, University of Waterloo, Canada and Nanjing University, China, 2003-present.
- Founding Member of the Nanotechnology Program at the University of Waterloo, 2002-2004
- Member of the Technical Services Committee, 1999-2004
- Coordinator of the Department Seminar Series, 2000-2004

- Member of Undergraduate Studies Committee, Faculty of Engineering, 2002-2003
- Coordinator of Sanford Fleming Foundation Debates, 2000, 2001
- Departmental Representative to the Engineering Faculty Council, 2002-2004
- Member of the committee for a new program in materials and electrochemical engineering between Chemical Engineering and Electrical and Computer Engineering Departments, 1999-2000
- Mentor at the ExpectATIONS workshop, Spring, 1999
- Organizer for Campus Day '99, '00 and '01
- Organizer for Explorations '99, '00 and '01
- Representative to the Science Faculty Council, 1999, 2000, 2001

Membership in Professional Organizations

- The Electrochemical Society, (2009-present)
- American Association for the Advancement of Science (2005-present)
- Founding Member, The Bulgarian Society for Chemistry Education and History & Philosophy of Chemistry (CE&HPC) (2005-present)
- Biophysical Society (2002-present)
- Emerging Materials Knowledge Network Ontario (2001-present)
- Canadian Society for Chemical Engineering (1998-present)
- American Chemical Society (1998-present)
- Materials and Manufacturing Ontario (MMO) (1998-present)
- American Institute of Chemical Engineers (1996-present)
- The American Society of Mechanical Engineers (1994-present)

Research Interests

Pu Chen is internationally renowned for his work at the interface of *materials, biomedicine and energy*, with applications in *drug and gene delivery, protein-lipid interactions, emulsification, coating, energy storage and conversion*. His lab has produced 218 peer reviewed papers in first rate biomaterials, chemistry and energy journals, including Sci. Adv., Angew. Chem. Int. Ed. and JACS; 143 international patents/patent applications; 253 invited/keynote speeches and conference talks. His *Hirsch Index of 50, i10 Index of 174 and total citations of over 9,000* are excellent for his interdisciplinary fields of research. He is editor, associate editor or editorial board member for 15 international journals. He received over 20 international and national awards, including Premier's Research Excellence Award (2000), Canada Research Chair in Nano-Biomaterials (2004), and University Research Chair (2015).

Books – Published or Accepted

- (1) P. Chen, ed., **Molecular Interfacial Phenomena of Polymers and Biopolymers**, Woodhead Publishing of Abington Hall, Cambridge, UK, and CRC Press, Boca Raton, FL, USA, 2005. (690 pages).

Book Reviews – Published or Accepted

- (1) P. Chen, Endorsement, "Foundations for Nanoscience and Nanotechnology, Nils Petersen," CRC Press/ Taylor & Francis Group, Boca Raton, FL, USA, 2017.

Refereed Book Chapters – Published or Accepted

- (1) N.S. Mirbagheri, S.Sabbaghi, P. Chen, Z. Bahmani, "Overview of Nanomaterial-Assisted Technologies for Denitrification Process," in **Nanotechnology for Clean Water**, Springer, Switzerland/USA, (accepted, 2017).
- (2) N. P. Khiabani, A. Bahramian, M. Soltani, M. R. Ejtehadi, P. Pourafshary, K. Sarikhani and P.

- Chen, "Investigation of Calcium Chloride Aqueous Solutions–Hexane Interfaces: A Molecular Dynamics Study," in **Interdisciplinary Topics in Applied Mathematics, Modeling and Computational Science**, eds. Cojocar, M., Kotsireas, I.S., Makarov, R.N., Melnik, R., Shodiev, H., Springer, Switzerland/USA, pp. 265-270 (2015).
- (3) M. Jafari, B. Zargar, M. Soltani, D.N. Karunaratne, B. Ingalls and P. Chen, "Intelligent drug delivery systems for cancer therapy," in **Nanobiomaterials for Intelligent Medical Devices**, eds. Ashutosh Tiwari and Hisatoshi Kobayashi, Wiley-Scrivener Publishing LLC, USA, pp. 477–513 (2012).
- (4) M. Sheikholeslam, M.D. Pritzker and P. Chen, "Electrochemical Biosensor for Glycated Hemoglobin (HbA1c)," in **Biosensors for Health, Environment and Biosecurity**, Book 2, Pier Andrea Serra, ed., InTech, Rijeka, Croatia, Chapter 13, pp. 293-321, (2011).
- (5) J. Gaydos, Y. Rotenberg, P. Chen, L. Boruvka and A.W. Neumann, "The Generalized Theory of Capillarity," in **Applied Surface Thermodynamics**, 2nd edition, A.W. Neumann, R. David and Y. Zuo, eds., CRC Press, Taylor & Francis Group, Boca Raton, FL. USA., pp. 1-49, 2011, Chapter 1.
- (6) P. Sadatmousavi, S. Lu, T. Mamo, R. Nazarian, M. Soltani, J. Wang, W. Xu and P. Chen, "Design Principles of Self-Assembling Peptides and their Potential Applications," in **Comprehensive Biotechnology**, 2nd edition, M. Moo-Young, ed., Elsevier, Oxford, UK, (accepted, 2010).
- (7) S. Al Shakhshir, X. Li and P. Chen, "An Introduction to the Influence of Microfluidic Channel Wettability on PEM Fuel Cell Performance," in **Microfluidics and Nanofluidics Handbook**, S.K. Mitra and S. Chakraborty, eds., CRC Press/Taylor & Francis Group, Novato, CA., USA, (accepted 2009).
- (8) H. Wei, R.B. Thompson, C.B. Park and P. Chen, "Surface Tension Measurement of Polymer Melts in Supercritical Fluids," in **Bubble and Drop Interfaces**, R. Miller and L. Liggieri, eds., Brill, Leiden and Boston, Chapter 12, pp. 293-324, (2011).
- (9) A. Firooz and P. Chen, "Surface Tension Response to Surface Perturbation of a Volatile Amphiphilic Organic Solution," in **IAENG Transactions on Engineering Technologies**, Vol. II – Special Edition of the World Congress on Engineering and Computer Science 2008, B. Rieger, M.A. Amouzegar and S.I. Ao, ed., American Institute of Physics, USA, (accepted 2009).
- (10) M. Law, M. Wang, J. Duhamel and P. Chen, "Peptide-Nucleic Acid Complexes for Therapeutic Nucleic Acid Delivery," in **Encyclopedia of Nanoscience and Nanotechnology**, Vol. 20, H.S. Nalwa, ed., American Scientific Publishers, Valencia, CA., pp. 495-512, (2011).
- (11) J. Long and P. Chen, "Thermodynamics of Contact Angles on Rough, Heterogeneous Surfaces," in **Molecular Interfacial Phenomena of Polymers and Biopolymers**, P. Chen, ed., Woodhead Publishing of Abington Hall, Cambridge, UK, pp. 119-161, Chapter 5, 2005.
- (12) S. Fung, Y. Hong, C. Keyes-Baig and P. Chen, "Self-Assembly of Oligopeptides," in **Molecular Interfacial Phenomena of Polymers and Biopolymers**, P. Chen, ed., Woodhead Publishing of Abington Hall, Cambridge, UK, pp. 421-475, Chapter 12, 2005.
- (13) L. Yang, and P. Chen, "Polymeric Composite Membranes and Biomimetic Affinity Ligands for Bioseparation and Immunoabsorption," in **Molecular Interfacial Phenomena of Polymers and Biopolymers**, P. Chen, ed., Woodhead Publishing of Abington Hall, Cambridge, UK, pp. 609-672, Chapter 17, 2005.
- (14) S. Fung, Y. Hong, B. Dhadwar, X. Zhao and P. Chen, "Self-assembly of Ionic-complementary Peptides and their Applications in Nanobiotechnology," in **Handbook of Nanostructured Biomaterials and their Applications in Nanobiotechnology**, H.S. Nalwa, ed., American Scientific Publishers, Stevenson Ranch, CA, pp. 1-67, Chapter 1, 2005.
- (15) P. Chen, O.I. del Río and A.W. Neumann, "Axisymmetric Drop Shape Analysis," in **Physical Chemistry of Biological Interfaces**, A. Baszkin and W. Norde, eds., Marcel Dekker, New York,

N.Y., pp. 523-558, 2000, Chapter 15.

- (16) P. Chen, R.M. Prokop, S.S. Susnar and A.W. Neumann, "Interfacial Tensions of Protein Solutions Using Axisymmetric Drop Shape Analysis," in **Proteins at Liquid Interfaces**, D. Möbius and R. Miller, eds., Elsevier, Amsterdam, pp. 303-340, 1998, Chapter 8.
- (17) P. Chen, D.Y. Kwok, R.M. Prokop, O.I. del Rio, S.S. Susnar and A.W. Neumann, "Axisymmetric Drop Shape Analysis (ADSA) and its Applications," in **Drops and Bubbles in Interfacial Research**, D. Möbius and R. Miller, eds., Elsevier, Amsterdam, pp. 61-168, 1998, Chapter 2.
- (18) J. Gaydos, L. Boruvka, Y. Rotenberg, P. Chen and A.W. Neumann, "The Generalized Theory of Capillarity," in **Applied Surface Thermodynamics**, A.W. Neumann and J.K. Spelt, eds., Marcel Dekker, New York, pp. 1-52, 1996, Chapter 1.

Refereed Journal Publications – Issues Edited

- (1) P. Chen and S. Kan, editors, **Hot Topic Issue: Current Developments in Lithium Battery Materials**, in *The Open Materials Science Journal*, **5** (2011).

Refereed Journal Publications - Submitted

- (1) M. Wang, J. Duhamel and P. Chen, "Binding of the Self-Assembling Peptide EAK16IV to Oligodeoxynucleotides: Effect of Charge Distribution," *Nucleic Acids Research*, (submitted, 2014).

Refereed Journal Publications - Published or Accepted

- (1) A. Arizavi1, N.S. Mirbagheri1, Z. Hosseini, P. Chen and S. Sabbaghi, "Efficient removal of naphthalene from aqueous solutions using a nanoporous kaolin/Fe3O4 composite," *International Journal of Environmental Science and Technology*, <https://doi.org/10.1007/s13762-019-02521-1>, (2019).
- (2) Y. Hou, J. Wang, J. Liu, C. Hou, Z. Xiu, Y. Fan, L. Zhao, Y. Zhai, H. Li, J. Zeng, X. Gao, S. Zhou, D. Li, Y. Li, F. Dang, K. Liang, P. Chen, C. Li, D. Zhao and B. Kong, "Interfacial Super-Assembled Porous CeO2/C Frameworks Featuring Efficient and Sensitive Decomposing Li2O2 for Smart Li–O2 Batteries," *Adv. Energy Mater.* 2019, 1901751, DOI: 10.1002/aenm.201901751, (2019).
- (3) Mei Han, Jian Zhi, Tuan K Hoang, Yuting Li, Longyan Li, and P. Chen, "Artificial Solid Electrolyte Interphase for Thermally Stable Rechargeable Aqueous Zinc Batteries," *J. Power Sources*, (accepted, 2019).
- (4) A. Pourhossein, M. Rafizadeh and P. Chen, "Size-Controlled Fabrication of Egg-Like Protein Nanoparticles: Thermodynamic Characterization of the Interaction between Zein Nanoparticles and Serum Albumin," *Materials Research Express*, (accepted, 2019).
- (5) Wenlong Xiong, Tuan K. A. Hoang, Dongjie Yang, Moin Ahmed, Xueqing Qiu, P. Chen, "Electrolyte Engineering for a Highly Stable, Rechargeable Hybrid Aqueous Battery," *J. Energy Storage*, (accepted, 2019).
- (6) Majid Hassanzadeganroudsari, Amir Heydarinasab, Madjid Soltani, P. Chen, Azim Akbarzadehkhayavi, "Enhancing anti-cancer efficacy of carboplatin by PEGylated poly (butyl cyanoacrylate) nano-particles," *J. Drug Deliver Science and Technology*, (accepted, 2019).
- (7) Majid Hassanzadeganroudsari, Amir Heydarinasab, Azim Akbarzadeh khiyavi, P. Chen and M. Soltani, "In vitro investigation of anticancer efficacy of carboplatin-loaded PEGylated nanoliposome particles on brain cancer cell lines," *J. Nanopart. Res.* **21**:124 <https://doi.org/10.1007/s11051-019-4562-x>, (2019).
- (8) S. Gao, J. Hou, J. Zeng, J.J. Richardson, Z. Gu, X. Gao, D. Li, M. Gao, D. Wang, P. Chen, V. Chen, K. Liang, D. Zhao and B. Kong, " Superassembled Biocatalytic Porous Framework

- Micromotors with Reversible and Sensitive pH-Speed Regulation at Ultralow Physiological H_2O_2 Concentration,” *Adv. Funct. Mater.*, (accepted, 2019).
- (9) Lei Zhang, Jiang Xu, Feng Wang, Yong Ding, Toby Wang, Grace Jin, Matthew Martz, Zhongzheng Gui, Pingkai Ouyang, and P. Chen, “Histidine-Rich Cell-Penetrating Peptide for Cancer Drug Delivery and its Uptake Mechanism,” *Langmuir*, (accepted, 2019).
 - (10) Lei Zhang, Yuebiao Sheng, Alireza Zehtab Yazdi, Kaveh Sarikhani, Feng Wang, Yunsheng Jiang, Juewen Liu, Tao Zheng, Wei Wang, Pingkai Ouyang, and P. Chen, “Surface-Assisted Assembly of Histidine-Rich Lipidated Peptide for Simultaneous Exfoliation of Graphite and Functionalization of Graphene Nanosheets,” *Nanoscale*, (accepted, 2019).
 - (11) Aly Mitha, Hongyu Mi, Wenhan Dong, In Sik Cho, Jessica Ly, Skylar Yoo, Sydney Bang, Tuan K Hoang and P. Chen, “Thixotropic Gel Electrolyte containing Poly(ethylene glycol) with High Zinc Ion Concentration for the Secondary Aqueous $\text{Zn/LiMn}_2\text{O}_4$ Battery,” *Journal of Electroanalytical Chemistry*, (accepted 2019).
 - (12) Moin Ahmed, Aly Mitha and P. Chen, “Scalable Porous Zinc Anode to Improve the Cycling Performance of Aqueous Lithium Energy Storage Systems,” *Journal of Energy Storage*, (accepted, 2018).
 - (13) Moin Ahmed, Alireza Zehtab Yazdi, Siavash Borhan Dayani, Hamid Jahed and P. Chen, “Fabrication of Anode of Aqueous Energy Storage System via Supersonic Cold Spraying,” *ChemElectroChem*, (accepted, 2018).
 - (14) Xueqian Zhang, Xiaoxiao Huang, Dongdong Liu, Tuan K.A. Hoang, Xin Geng, P. Chen, Xiaodong Zhang and Guangwu Wen, “Binderless, bendable graphene/ $\text{Fe}_x\text{Sn}_{1-x}\text{O}_2$ anode for lithium-ion batteries without the necessity of a current collector,” *International Journal of Hydrogen Energy*, **43**, 21428-21440 (2018).
 - (15) Xiao Zhu; Hoang, Tuan; Tan, Guoqiang; Jia, Xilai; Tao, Ran; Wu, Feng; P. Chen, “Tuning Microstructures of Graphene to Improve Power Capability of Rechargeable Hybrid Aqueous Batteries,” *ACS Applied Materials & Interfaces*, (accepted, 2018).
 - (16) Sheng Lu, Feng Zhao, Qiuxin Zhang and P. Chen, “Therapeutic Peptide Amphiphile as Drug Carrier with ATP-triggered Release for Synergistic effect, Improved Therapeutic Index and Penetration of 3D Cancer Cell Spheroids,” *International Journal of Molecular Sciences*, (accepted, 2018).
 - (17) Jian Zhi, Shengkai Li, Mei Han, Yuxuan Lou and P. Chen, “Unveiling conversion reaction on intercalation-based transition metal oxides for high power, high energy aqueous lithium battery,” *Advanced Energy Materials*, **8**, 1802254, (2018).
 - (18) Lei Zhang, Lisha Zhao, Ping-Kai Ouyang and P. Chen, “Insight into the role of cholesterol in modulation of morphology and mechanical properties of CHO-K1 cells: An in situ AFM study,” *Frontiers of Chemical Science and Engineering*, (accepted, 2018).
 - (19) Moin Ahmed, Alireza Zehtab Yazdi, Aly Mitha and P. Chen, “Introducing Artificial Solid Electrolyte Interphase into the Anode of Aqueous Lithium Energy Storage Systems,” *ACS Applied Materials & Interfaces*, **10**, 30348-30356, doi: 10.1021/acsami.8b09268, (2018).
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Conference Proceedings/Presentations

- (1) P. Chen, "Molecular and nanomedicine in cancer therapy," Plenary Speech, Annual Conference of the Qingdao International Academician Park, Qingdao, China, August 2018.
- (2) P. Chen, "Rechargeable Hybrid Aqueous Battery," International Coalition for Energy Storage and Innovation (ICESI), Dalian, China, January 17-19, 2018.
- (3) P. Chen, "Introduction to a New Rechargeable Aqueous Battery," Vtron Group, Beijing, China, June 24, 2017.
- (4) W. Xu and P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug and Gene Delivery," China-Canada Nanotechnology Conference, Suzhou Industrial Park, October 26-28, 2016.
- (5) Baoling Chen and P. Chen, "Peptide mediated siRNA Delivery", the University of Bristol and WIN NanoMaterials Workshop, Waterloo, Ontario, Canada, June 2015.
- (6) Baoling Chen and P. Chen, "An Amphipathic, Cationic Peptide mediated siRNA Delivery in 3D culture", Biophysical Society of Canada Annual Meeting, Waterloo, Ontario, 2015.

- (7) Baoling Chen and P. Chen, "An Amphipathic, Cationic Peptide mediated siRNA Delivery in 3D culture", Canadian Chapter of the Controlled Release Society Annual Conference, Toronto, Ontario, 2015.
- (8) M. Sheikholeslam, S. Wheeler, K. Duke, M. Pritzker and P. Chen, "Peptide-Carbon Nanotube Hydrogels as Hybrid Scaffolds for Tissue Engineering," 2014 TERMIS-AM Annual Conference and Exposition" Washington, D.C., USA, December 13-16, 2014.
- (9) N. P. Khiabani, A. Bahramian, M. Soltani, K. Sarikhani, M. R. Ejtehad, P. Pourafshary, B. Khalaf and P. Chen, "On The Investigation of Calcium Chloride Aqueous Solutions/Hexane Interfaces: A Molecular Dynamics Study," Interdisciplinary Conference Series: Applied Mathematics, Modeling, and Computational Science (AMMCS-2014), Waterloo, Ontario, Canada, August 26-30, 2014.
- (10) K. Sarikhani, R.B. Thompson, C.B. Park and P. Chen, "Adsorption of surface-modified silica nanoparticles to a poly (lactic acid) – supercritical carbon dioxide interface," ACS 2014 Colloid & Surface Science Symposium, University of Pennsylvania, Philadelphia, PA. USA. June 22-25, 2014.
- (11) Lei Zhang, Tao Zheng, Ping-kai Ouyang and P. Chen, "Cholesterol dependent uptake of Ellipticine and Pirarubicin on A549 and CHO cells," SPM on SPM 2014, Toronto, Ontario, Canada, May 2014.
- (12) Baoling Chen, Wen Xu and P. Chen, "Peptide mediated siRNA delivery," Nano Ontario, Kingston, Ontario, Canada, November, 2013.
- (13) Mohammad Mohammadi, Madjid Soltani and P. Chen, "Effect of tumor hydraulic conductivity on drug concentration distribution inside a solid tumor," Canadian Cancer Conference, Toronto, Ontario, Canada, November, 2013.
- (14) Y. Zhao, Y. Zhang and P. Chen, "Electrochemical Performance of Lithium Gel Polymer Battery with Sulfur/Carbon Cathode," the 223rd ECS Meeting, Toronto, Ontario, Canada, May 12-16, 2013.
- (15) Kazem Jeddi and P. Chen, "Remarkable Improvement in Cyclability of Polymer Lithium-Ion Batteries by a New Electrolyte Containing Functionalized Poly(Methyl Methacrylate)," the 223rd ECS Meeting, Toronto, Ontario, Canada, May 12-16, 2013.
- (16) The Nam Long Doan and P. Chen, "Cyclability of Sulfur/Dehydrogenated Polyacrylonitrile Composite Cathode in Lithium-Sulfur Batteries," the 223rd ECS Meeting, Toronto, Ontario, Canada, May 12-16, 2013.
- (17) Y. Zhang, Y. Zhao and P. Chen, "A Novel Sulfur/Polypyrrole/Multi-Walled Carbon Nanotubes Nanocomposite Cathode with Core-Shell Tubular Structure for Lithium Rechargeable Batteries," the 223rd ECS Meeting, Toronto, Ontario, Canada, May 12-16, 2013.
- (18) M. Sheikholeslam, M. Pritzker and P. Chen, "Ionic-Complementary Peptide-Carbon Nanotube Nanocomposite Hydrogels," the 30th Annual Meeting of Canadian Biomaterial Society, Ottawa, ON, May 29-June 1, 2013 (Accepted).
- (19) M. Sheikholeslam, M. Pritzker and P. Chen, "Self-assembling Peptide-Carbon Nano-tube Hybrid Materials," the 1st Annual Engineering Graduate Student Research Symposium & Minute Madness, University of Waterloo, Waterloo, Canada, Mar 6-7, 2013.
- (20) Z. Bakenov, Y. Zhang, Y. Zhao and P. Chen, "Branched Sulfur/Polypyrrole Nanocomposite Cathode for Rechargeable Lithium Batteries," The 16th International Meeting on Lithium Batteries (IMLB 2012), Jeju, Korea, 17-22 June 2012.
- (21) Aishuak Konarov, The Nam Long Doan, Yongguang Zhang, Yan Zhao and P. Chen, "Simple preparation of sulfur polymer composite cathode," The 16th International Meeting on Lithium Batteries (IMLB 2012), Jeju, Korea, 17-22 June 2012.
- (22) The Nam Long Doan, Mahmoudreza Ghaznavi, Yongguang Zhang, Yan Zhao, Aishuak Konarov and P. Chen, "Reaction mechanism for sulfur and polyacrylonitrile in preparation of polymer/sulfur

- composite cathodes,” The 16th International Meeting on Lithium Batteries (IMLB 2012), Jeju, Korea, 17-22 June 2012.
- (23) P. Sadatmousavi and P. Chen, “Self-assembling peptide as a potential carrier for anticancer drug delivery,” NanoOntario, September 2012.
- (24) P. Sadatmousavi and P. Chen, “Diethylene Glycol (DEG) Functionalized Self-Assembling Peptides as a Potential Nanocarrier for Hydrophobic Anticancer Drug Deliver,” The 39th Annual Meeting & Exposition of the Controlled Release Society, Quebec City, Quebec, Canada, 15-18 July 2012. (Won the Canadian Chapter poster award at this meeting.)
- (25) Denise Gosselink, Y. Zhang, Y. Zhao, et al., “Branched Sulfur/Polypyrrole Nanocomposite Cathode for Rechargeable Lithium Batteries,” ECS Canada, Quebec, Canada, June 2012.
- (26) P. Sadatmousavi and P. Chen, “Self-assembling peptide nanofibers for drug delivery,” Graduate Student Research Conference, University of Waterloo, Waterloo, Ontario, 12 March 2012.
- (27) K. Sarikhani, C.B. Park and P. Chen, “Investigating the Effect of Temperature and Pressure on Surface Tension of Mesoporous Silica-Polypropylene composites,” The Polymer Processing Society Americas Conference 2012, Niagara Falls, Ontario, Canada, May 21-24, 2012.
- (28) K. Sarikhani, C.B. Park and P. Chen, “Effect of Temperature and Pressure on Surface Tension of Mesoporous Silica-Polypropylene composites,” NIPMMP annual conference, Montreal, Quebec, Nov. 14-15, 2011.
- (29) M. Soltani and P. Chen, “Numerical Study of Nano-Particle Drug Delivery to Solid Tumours,” The Canadian Cancer Research Conference, Toronto, Ontario, Canada, 27-30 November 2011.
- (30) P. Sadatmousavi and P. Chen, “Multifunctional Peptide Nanocarriers for Anticancer Drug Delivery,” The Canadian Cancer Research Conference, Toronto, Ontario, Canada, 27-30 November 2011.
- (31) M. Soltani and P. Chen, “Numerical Modeling of Nanoparticle Drug Delivery to Solid Tumors,” Nano Ontario, Hamilton, Ontario, Canada, October 2011.
- (32) F. Masood and P. Chen, “Biosynthesis and characterization of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) by *Bacillus cereus* S10 for nanoparticle preparation,” WIN-Soochow Nanotechnology Workshop, 19-27 July 2011.
- (33) P. Sadatmousavi and P. Chen, “Multifunctional Peptide Nanocarriers for Anticancer Drug Delivery,” Nano-Ontario Conference and Workshop, Toronto, Ontario, Canada, 21-23 June 2011.
- (34) M. Soltani and P. Chen, “Numerical Modeling of Nanoparticle Drug Delivery to Solid Tumors,” Graduate Student Research Conference, Waterloo, Ontario, Canada, April 2011. (Winner of the oral presentations)
- (35) S. Naahidi, M. Jafari, M. Logan, J. Rhee and P. Chen, “*In vitro* immunocompatibility and toxicity evaluation of self-assembling peptide EAK 16-II and anticancer drug pirarubicin,” 38th Annual Meeting & Exposition of the Controlled Release Society, Maryland, USA, July 2011.
- (36) Y. Zhang, Z. Bakenov, Y. Zhao and P. Chen, “Catalytic effect of metal oxide solid solution on sulfur based cathode in Li/S rechargeable battery,” the 219th meeting of Electrochemical Society, Monteval, Canada, 1-6 May 2011.
- (37) M. Soltani and P. Chen, “Numerical Modeling of Nanoparticle Drug Delivery to Solid Tumors,” Nanofluids: fundamentals and Applications II, Montreal, Canada, August, 2010.
- (38) S.A. Shakhshir, Y. Wang, I. Alefour, P. Chen and X. Li, “Impact of different surface wettability graphite channel on two-phase flow and water removal from polymer electrolyte membrane fuel cell (PEMFC),” IGEC V Conference, Waterloo, Canada, April, 2010.
- (39) M. Soltani and P. Chen, “Numerical Modeling of Nanoparticle Drug Delivery to Solid Tumors,” ASME 2010 International Mechanical Engineering Congress & Exposition, Vancouver, Canada, November 12-18, 2010.
- (40) M. Soltani and P. Chen, “Numerical Modeling of Nanoparticle Drug Delivery to Solid Tumors,”

- the University of Waterloo Graduate Student Research Conference 2010: Sharing Discovery, Waterloo, Canada, April 30, 2010.
- (41) Hasan, M.M., Li, Y.G., Park, C.B. and Chen, P., "PVT Behavior of HDPE/Organoclay Nanocomposite in Supercritical CO₂", SAMPE Fall Technical Conference 2010, Salt Lake City, UT, USA, October 11-14, 2010 (abstract accepted).
 - (42) Ibrahim Mustafa, G. Ibrahim, A. Elkamel, S. Elnashaie and P. Chen, "Aspects of Beta Amyloid Aggregation and Its Interaction with Acetylcholine Neurotransmitters and Alzheimers Disease," CSCBCE 2010, Toronto, Canada, March, 2010.
 - (43) B. Zargar, P. Chen and B. Ingalls, "A Synthetic Biology Approach to Bacteria-Mediated Tumor Targeting," FOSBE 2009 Conference, Denver, Colorado, USA, August 9-12, 2009.
 - (44) B. Zargar, P. Chen and B. Ingalls, "A Synthetic Biology Approach to Bacteria-Mediated Tumor Targeting," 11th Annual CSChE Ontario-Quebec Biotechnology Meeting, Waterloo, Ontario, Canada, June 18-19, 2009.
 - (45) I.H. Mustafa, A. Elkamel, S.S.E.H. Elnashaie, P. Chen, G. Ibrahim, "Mathematical modeling and bifurcation analysis of acetylcholine neurocycle," 2009 CORS/INFORMS International Meeting, Toronto, Ontario, Canada, June 17, 2009.
 - (46) I.H. Mustafa, A. Elkamel, S.S.E.H. Elnashaie, P. Chen, G. Ibrahim, "Effect of Choline and Acetate Substrates on Bifurcation and Chaotic Behavior of Acetylcholine Neurocycle and Alzheimer's and Parkinson's Diseases," 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, Canada, May 30-June 3, 2009.
 - (47) Z. Qian and P. Chen, "Peptide modified electrodes for biosensor applications," 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, Canada, May 30-June 3, 2009.
 - (48) F. Wang and P. Chen, "Peptide mediated anticancer drug delivery," 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, Canada, May 30-June 3, 2009.
 - (49) P. Sadatmousavi and P. Chen, "Peptide mediated anticancer drug delivery," 2009 Graduate Student Research Conference, Waterloo, Ontario, Canada, April 27-30, 2009.
 - (50) Liao, X., Li, Y.G., Park, C.B., and Chen, P., "Surface Tension of Linear and Branched PP in Supercritical CO₂ in Nanocomposites Melts: Modeling, Theoretical and Semi-empirical Solutions," PPS -25, Goa, India, March 1-3, 2009.
 - (51) L. Wei, C. Park, R. Thompson and P. Chen, "Measurement of the Surface Tension of Polymer/Gas Mixtures," CCMCP (Consortium for Cellular and Micro_Cellular Plastics), Toronto, ON, Canada, November 18-19, 2008.
 - (52) A. Firooz and P. Chen, "Effect of expansion and compression on surface tension of aqueous 1-octanol solutions," World Congress on Engineering and Computer Science, Berkeley, California, USA, October 22-24, 2008.
 - (53) H. Wang and P. Chen, "Different forms of anti-cancer drug ellipticine and their therapeutic efficacy," 6th International Nanomedicine and Drug Delivery Symposium (NanoDDS'08), Toronto, Ontario, Canada, October 18 and 19, 2008.
 - (54) M. Soltani and P. Chen, "Numerical Analysis of Drug Delivery to Solid Tumors," 6th International Nanomedicine and Drug Delivery Symposium (NanoDDS'08), Toronto, Ontario, Canada, October 18 and 19, 2008.
 - (55) Shan-Yu Fung, Hong Yang, Bing Han, Mingyao Liu and P. Chen, "Self-Assembling Peptide Based Delivery of the Hydrophobic Anticancer Agent Ellipticine: Peptide Sequence Effect on Complexation and In Vitro Delivery," 6th International Nanomedicine and Drug Delivery Symposium (NanoDDS'08), Toronto, Ontario, Canada, October 18 and 19, 2008.
 - (56) H. Yang, S. Fung, M. Pritzker and P. Chen, "Assembly of Peptide Nanofibers," 235th ACS National Meeting, New Orleans, LA, USA, April 6-10, 2008.
 - (57) A.M. Prpich, M.E. Biswas and P. Chen, "Surface tension and adsorption of volatile organic

- amphiphiles in aqueous solution,” AIChE's 2008 Spring National Meeting, New Orleans, LA, USA, April 6-10, 2008.
- (58) H. Yang, S. Fung, M. Pritzker and P. Chen, “Controllable Nanoscale Assembly of Peptide at Liquid/Solid Interfaces,” NanoForum Canada 2007, Waterloo, Ontario, Canada, June 18-20, 2007.
- (59) H. Park, C. Tzoganakis, C. Park and P. Chen, “Effect of Temperature and Pressure on Surface Tension of Polystyrene in Supercritical Carbon Dioxide,” ANTEC 2007 (Annual Technical Conference of the Society of Plastic Engineers), Cincinnati, Ohio, May 6-10 (refereed paper).
- (60) H. Park, C. Tzoganakis, C. Park and P. Chen, “Effect of Molecular Weight on the Surface Tension of Polystyrene in Supercritical Nitrogen,” PPS-23 (The Polymer Processing Society 23rd Annual Meeting), Salvador, Brazil, May 27-31, 2007 (refereed paper).
- (61) H. Yang, S.Y. Fung, M. Pritzker and P. Chen, “Surface-assisted assembly of an ionic-complementary peptide: controllable growth of nanofibers,” Graduate Research Conference, University of Waterloo, Waterloo, Ontario, Canada, April, 2007.
- (62) S.Y. Fung, H. Yang and P. Chen, “Self-Assembly of Ionic-Complementary Peptides: A New Model System to Study Amyloid Fibrillogenesis?” Graduate Research Conference, University of Waterloo, Waterloo, Ontario, Canada, April, 2007.
- (63) H. Yang, S. Fung, W. Sun, S. Mikkelsen, M. Pritzker and P. Chen, “Peptide Assembly on Graphite Surface and its Potential Application for Biosensor,” Graduate Research Conference, University of Waterloo, Waterloo, Ontario, Canada, April 5, 2007.
- (64) H. Park, C. Park, C. Tzoganakis and P. Chen, “Effect of Molecular Weight on the Surface Tension of Polystyrene in Supercritical Nitrogen,” CCMCP (Consortium for Cellular and Micro_Cellular Plastics), Toronto, ON, Canada, November 30, 2006.
- (65) M. Wang, M. Law, J. Duhamel and P. Chen, “Nanomaterial Mediated Gene Delivery System: Biophysical Characterization of Self-assembling Peptide and Oligonucleotide Complexes,” 2nd Nano Ontario Symposium, Waterloo, Ontario, Canada, May 19, 2006.
- (66) S.Y. Fung, H. Yang and P. Chen, “Self-Assembly of Ionic-Complementary Peptides. A New Model System to Study Amyloid Fibrillogenesis?” University of Waterloo Graduate Research Conference, Waterloo, Ontario, Canada, April, 2006.
- (67) H. Yang, M. Pritzker and P. Chen, “Characterization of copper(II) binding to the self-assembling peptide EAK16(II)GGH,” University of Waterloo Graduate Research Conference, Waterloo, Ontario, Canada, April, 2006.
- (68) S. Xiao, R. Huang, X. Feng, H.L. Hsu, P. Chen, P. Douglas, R. Pal and M. Nawawi, “Preparation of Crosslinked Poly(vinyl alcohol) Membranes by Using Trimesic Acid Chloride for Pervaporation Dehydration of Isopropanol,” 56th Canadian Chemical Engineering Conference, Sherbrooke Quebec, October, 2006.
- (69) N. Hyder, R. Huang and P. Chen, “Surface Energies of Poly(Vinyl Alcohol) Membranes for Pervaporation,” 56th Canadian Chemical Engineering Conference, Sherbrooke Quebec, October, 2006.
- (70) A. Prpich, M.E. Biswas and P. Chen, “Adsorption Dynamics of Aqueous 1-Octanal Solutions at the Vapor-Liquid Interface,” 2006 Annual Meeting, American Institute of Chemical Engineers, San Francisco, California, November 12-17, 2006.
- (71) N. Hyder, R. Huang and P. Chen, “Surface Energies of Poly(Vinyl Alcohol) Membranes for Pervaporation,” 2006 Annual Meeting, American Institute of Chemical Engineers, San Francisco, California, November 12-17, 2006.
- (72) H. Yang, M. Pritzker and P. Chen, “Salt effect on the self-assembled nanostructure of a metal ion binding peptide,” the 55th Canadian Chemical Engineering Conference, Toronto, ON, Canada, October 16-19, 2005.
- (73) Wang M., Duhamel J., Chen P., “Interaction Between Self-Assembling Peptide and

- Oligonucleotide: pH Effect,” the 55th Canadian Chemical Engineering Conference, Toronto, ON, Canada, October 16-19, 2005.
- (74) Fung S.Y., Bhola P.T., Duhamel J., Liu M., Chen P, “Peptide-Mediated Delivery of Hydrophobic Anticancer Agents,” the 55th Canadian Chemical Engineering Conference, Toronto, ON, Canada, October 16-19, 2005.
- (75) H. Park, C. Tzoganakis, C. Park and P. Chen, “Effect of dissolved gas on surface tension of polystyrene melts,” CCMCP (Consortium for Cellular and Micro Cellular Plastics), Toronto, ON, Canada, June 16-17, 2005.
- (76) Li, Y.G., Li, H.B., Wang, J., Park, C.B., Park, H.S. and Chen, P., "Measurement of Swollen Volume of PP Melt due to Gas Dissolution," SPE, ANTEC, Technical Papers, Paper #102060, Boston, MA, May 1-4, 2005.
- (77) Svang-Ariyaskul, R. Huang, R. Pal, P. Douglas, X. Feng and P. Chen, “Blended chitosan and polyvinyl alcohol membranes for the pervaporation dehydration of isopropanol,” the AIChE 2005 Spring Meeting, the Walt Disney World Dolphin Resort, Orlando, FL., April 23-27, 2005.
- (78) H. Park, C. Park, C. Tzoganakis and P. Chen, “Simultaneous measurements of surface tension and density of polystyrene melts in supercritical carbon dioxide using axisymmetric drop shape analysis,” CCMCP (Consortium for Cellular and Micro_Cellular Plastics), Toronto, ON, Canada, November 4-5, 2004.
- (79) Christine Keyes, Shan-Yu Fung, P. Chen and Jean Duhamel, “Self-Assembling Peptide as a Potential Carrier of Hydrophobic Compounds,” the 40th IUPAC World Polymer Congress MACRO 2004, 40th IUPAC World polymer Congress, Paris, France, July 4-9, 2004.
- (80) Svang-Ariyaskul, R. Huang, R. Pal, P. Douglas, X. Feng and P. Chen, “Two ply composite membranes of chitosan and carboxymethyl cellulose for pervaporation dehydration of isopropanol,” NAMS 2004, Honolulu, Hawaii, USA, June 26-30, 2004.
- (81) S.Y. Fung, Y. Hong, M. Wang, S.S. Dhadwar, C. Keyes, J. Duhamel and P. Chen, “Peptide self-assembly and its potentials in drug delivery,” Molecular Design in Drug Discovery & Development Symposium Series, Toronto, ON, Canada, July 8-9, 2004.
- (82) P. Shao and P. Chen, “Gold Nanotube Membranes: Preparation, Characterization and Application for Chiral Separation,” MMO Partnerships 2004, Toronto, Canada, June 22, 2004.
- (83) H. Park, C. Park, C. Tzoganakis and P. Chen, “Surface Tension of Polystyrene Melts in Supercritical Carbon Dioxide,” PPS-20 (Polymer Processing Society Annual Meeting and 20th Anniversary), Akron, Ohio, USA, June 20-24, 2004.
- (84) P. Shao, G. Ji and P. Chen, “Gold Nanotube Membranes: Preparation, Characterization and Application for Chiral Separation,” EnviroAnalysis 2004, Toronto, Canada, May 17-21, 2004 (invited talked).
- (85) S.Y. Fung, Y. Hong, M. Wang, S.S. Dhadwar, C. Keyes, J. Duhamel and P. Chen, “Peptide self-assembly and its applications in bio-nanotechnology,” NSERC Ontario NanoConference 2004, Toronto, Canada, April 2, 2004.
- (86) P. Chen, “Self-assembly of peptides and its applications,” Bubbles and Drop Symposium, Genova, Italy, April 25-28, 2004 (invited talk).
- (87) H. Park, C. Park, C. Tzoganakis and P. Chen, “Measurements of the surface tension of polymer/gas mixtures,” CCMCP (Consortium for Cellular and Micro_Cellular Plastics), Toronto, ON, Canada, March 4-5, 2004.
- (88) H.S. Park, C. Park, C. Tzoganakis and P. Chen, “Surface Tension Characterization of Polystyrene Melts using Axisymmetric Drop Shape Analysis,” The 53rd Canadian Chemical Engineering Conference, Hamilton, Ontario, Canada, October 28-30, 2003.
- (89) X. Yu, J. Duhamel, A.W. Neumann and P. Chen, “Polymeric Composite Membranes and Biomimetic Affinity Ligands for Bioseparation,” EMK Workshop on Membrane Technologies,

Hamilton, Ontario, Canada, September 26, 2003.

- (90) X. Yu and P. Chen, "Chitosan/Cellulose Composite Membranes for Bioseparation," MMO Partnership 2003, Toronto, Ontario, Canada, June, 2003.
- (91) C. Keyes, J. Duhamel, J. Bazaire, S. Fung and P. Chen, "A Self-assembling Peptide as a Potential Hydrophobic Drug Carrier," The Third Multidisciplinary Workshop: Self-assembly of Peptides & Proteins in Biology, Medicine & Engineering," Crete, Greece, August 1-5, 2003.
- (92) Y. Hong, R. Legge, S. Zhang and P. Chen, "Self-assembly of Peptides EAKs: Effect of Amino Acid Sequence and pH," The Third Multidisciplinary Workshop: Self-assembly of Peptides & Proteins in Biology, Medicine & Engineering," Crete, Greece, August 1-5, 2003.
- (93) M.E. Biswas, C. Keyes, J. Duhamel, I. Chatzis and P. Chen, "Study of Molecular Interactions using Surface Tension Measurements," M. Moo-Young Symposium on Biotechnology and Bioengineering: Challenges in the New Millennium, Waterloo, Ontario, Canada, September 5-7, 2002.
- (94) S.Y. Fung, C. Keyes, J. Duhamel and P. Chen, "Self-assembly of Oligopeptides: Concentration Effects," M. Moo-Young Symposium on Biotechnology and Bioengineering: Challenges in the New Millennium, Waterloo, Ontario, Canada, September 5-7, 2002.
- (95) M.E. Biswas, C. Keyes, J. Duhamel, I. Chatzis and P. Chen, "Study of Molecular Interactions using Surface Tension Measurements," From Cell to Society: UW's First Interdisciplinary Health Research Conference, Waterloo, Ontario, Canada, June 19-21, 2002.
- (96) Shane Fung, Yooseong Hong, Jeremy Bezaire, Christine Keyes, Jean Duhamel and Pu Chen, "Self-assembly of Oligopeptides," From Cell to Society: UW's First Interdisciplinary Health Research Conference, Waterloo, Ontario, Canada, June 19-21, 2002.
- (97) J. Long, C. Tzoganakis and P. Chen, "Surface Characterization of Hydrosilylated Polypropylenes," The 52nd Canadian Chemical Engineering Conference, Vancouver, October 20-23, 2002.
- (98) Shane Fung, Yooseong Hong, Jeremy Bezaire, Christine Keyes, Jean Duhamel and Pu Chen, "Self-assembly of Oligopeptides," The 52nd Canadian Chemical Engineering Conference, Vancouver, October 20-23, 2002.
- (99) J. Long, C. Tzoganakis and P. Chen, "Surface Characterization of Hydrosilylated Polypropylenes," The Institute for Polymer Research 2001 Symposium, Waterloo, Ontario, Canada, May, 2002.
- (100) Y. Hong, S. Fung, J. Bezaire, C. Keyes, J. Duhamel, R.L. Legge and P. Chen, "Study of Self-assembly of Oligopeptides," Surface Canada 2002, Ottawa, Ontario, Canada, May 12-15, 2002 (refereed abstract, selected oral presentation).
- (101) M.E. Biswas, C. Keyes, J. Duhamel, I. Chatzis and P. Chen, "Study of Molecular Interactions Using Surface Tension Measurements," Surface Canada 2002, Ottawa, Ontario, Canada, May 12-15, 2002 (refereed abstract).
- (102) L. Jones, J. Long and P. Chen, "The Impact of Contact Lens Care Regimens on the *In Vitro* Wettability of Conventional and Silicon-Hydrogel Contact Lens Materials," Association for Research in Vision and Ophthalmology (ARVO), Florida, USA, April, 2002 (accepted, refereed abstract).
- (103) J. Long, C. Tzoganakis and P. Chen, "Surface Characterization of Hydrosilylated Polypropylenes," Annual Technical Conference of the Society of Plastics Engineers, San Francisco, California, USA, May, 2002 (accepted, refereed paper).
- (104) Y. Hong, R. Legge and P. Chen, "Effects of Amino Acid Sequence and pH on Self-Assembly of Oligopeptides," The 51st Canadian Chemical Engineering Conference, Halifax, October 14-17, 2001.
- (105) S.Y. Fung, T.F. Bemmman, C. Keyes, J. Duhamel and P. Chen, "Aggregation of Oligopeptides: A Close Look at Concentration Dependence," The 51st Canadian Chemical Engineering Conference, Halifax, October 14-17, 2001.

- (106) J. Long, C. Tzoganakis and P. Chen, "Influence of Reaction Temperature on Surface Characteristics of Hydrosilylated Polypropylenes," The 51st Canadian Chemical Engineering Conference, Halifax, October 14-17, 2001.
- (107) L. Yang and P. Chen, "Chitoan-Cellulose Composite Membrane for Affinity Purification of IgG from Human Serums," University-Industry Opportunities in Polymer Physics, A Regional Workshop in Polymer Physics, University of Guelph, Canada, April 23-24, 2001.
- (108) J. Long and P. Chen, "Influence of Grafting Temperature on Surface Characteristics of Hydrosilylated Polypropylenes," University-Industry Opportunities in Polymer Physics, A Regional Workshop in Polymer Physics, University of Guelph, Canada, April 23-24, 2001.
- (109) J. Long and P. Chen, "Surface Characterisation of Surface-modified Polypropylene: Contact Angle Measurement and Atomic Force Microscopy," Poster, Gordon Research Conference: Polymers (West), Ventura, California, USA, January 7-11, 2001.
- (110) J. Long and P. Chen, "Modeling of Concentrated Suspension Flow," Abstract, The 74th ACS Colloid and Surface Science Symposium, Bethlehem, Pennsylvania, USA, June 19-June 21, 2000.
- (111) J. Long and P. Chen, "Program System for Interfacial Tension and Contact Angle Measurements using ADSA-P," Abstract, The 74th ACS Colloid and Surface Science Symposium, Bethlehem, Pennsylvania, USA, June 19-June 21, 2000.
- (112) S. Dalakoudis, K. Murji, T. Bemmam, E. Fan and P. Chen, "Structures of Self-Assembling Oligopeptides," Surface Canada 2000, London, Ontario, Canada, May 20-22, 2000.
- (113) J. Long and P. Chen, "Atomic Force Microscopy and Contact Angle Characterization of Surface Modified Polypropylene," Surface Canada 2000, London, Ontario, Canada, May 20-22, 2000.
- (114) P. Chen, "Film Tension Measurement," Poster, Gordon Research Conference: Colloidal, Macromolecular, and Polyelectrolyte Solutions, Ventura, California, USA, February 6-10, 2000.
- (115) P. Chen, "The Line Adsorption Equation: The One-Dimensional Counterpart of the Gibbs Adsorption Equation," Abstract, The 73rd ACS Colloid and Surface Science Symposium, Boston, Massachusetts, USA, June 13-June 16, 1999.
- (116) R.M. Prokop, P. Chen, Z. Policova, A. Jyoti, J. Distefano, K. Phillips and A.W. Neumann, "Surface Tension of a Lung Surfactant Solution Using Axisymmetric Drop Shape Analysis-Captive Bubble," Biannual Meeting of German Colloid Society, Essen, Germany, September 29-October 1, 1997.
- (117) P. Chen, Z. Policova, S. S. Susnar, C. R. Pace-Asciak and A. W. Neumann, "Dynamic Surface Tension Responses to Surface Area Changes of Mixed Solutions of a Protein and Other Biomolecules," Abstract, The 71th ACS Colloid and Surface Science Symposium, Newark, Delaware, USA, June 30-July 2, 1997.
- (118) P. Chen, S. S. Susnar, C. Mak, A. Amirfazli and A. W. Neumann, "Lens-Size Dependence of Contact Angle and Line Tension of the Dodecane-Water-Air System," Abstract, The 71th ACS Colloid and Surface Science Symposium, Newark, Delaware, USA, June 30-July 2, 1997.
- (119) J. Gaydos, P. Chen and A.W. Neumann, "Stability and the Quadrilateral Relation of Contact Lines," Abstract, The 71th ACS Colloid and Surface Science Symposium, Newark, Delaware, USA, June 30-July 2, 1997.
- (120) A. Amirfazli, P. Chen, S.S. Susnar, D.Y. Kwok and A.W. Neumann, "Experimental Strategies to Determine Line Tension," Keynote Lecture at the 9th International Conference on Surface and Colloid Science, Sofia, Bulgaria, July 6-12, 1997.
- (121) P. Chen, Z. Policova, S. S. Susnar, C. R. Pace-Asciak and A. W. Neumann, "Dynamic Surface Tension Response to Surface Area Changes of Protein/Small-Medium Organic Molecule Solutions," Abstract, The 70th ACS Colloid and Surface Science Symposium, Potsdam, NY, USA, June 17-19, 1996.
- (122) S.S. Susnar, P. Chen and A.W. Neumann, "Dynamic Surface Tension Response to Surface Area

Changes Using Axisymmetric Drop Shape Analysis (ADSA), Abstract, The 69th ACS Colloid and Surface Science Symposium, Salt Lake City, Utah, NY, USA, June 11-14, 1995.

- (123) P. Chen, "The Scanning Reference Electrode Technique for Localized Corrosion," Abstract, The 3rd Canadian Materials Science Conference, the RMC, Kingston, Ontario, July 18-21, 1991.
- (124) P. Chen and K.Y. Szeto, "Frustration Mediated Superconductivity in 2D-XY Magnets," Proceedings of the 17th IUPAP International Conference on Thermodynamics and Statistical Mechanics, Rio de Janeiro, 31 July-4 August, 1989.
- (125) P. Chen, "Investigation on Incommensurate and Commensurate (110) Phases in High T_c Superconductivity Single Crystal $YBa_2Cu_3O_7$," Proceedings of the Sixth Annual Conference on Physics (East China), Hefei, China, August, 1987.
- (126) P. Chen and Xin Jin, "TEM Study on Planar Defects in High T_c Superconductivity Materials," Proceedings of the 3rd National Low Temperature Physics Conference, Yantai, China, July, 1987.
- (127) P. Chen, Huiming Shao and Xin Jin, "Investigation on the Structure of $Y-Ba-Cu-Sn-O$ by X-ray Diffractions and TEM," Proceedings of the Beijing International Workshop on High Temperature Superconductivity, Beijing, China, June 29-July 1, 1987.

Invited Lectures/Talks

- (1) P. Chen, "RNAi and its Delivery," 2nd Forum for the Qingdao International Academician Park, Qingdao, China, August 18, 2018.
- (2) P. Chen, "Amino Acid Pairing Peptides," Shandong Academy of Sciences, Jinan, Shandong, China, July, 2018.
- (3) P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug and Gene Delivery," Weifang Medical School, Shandong, China, May, 2018.
- (4) P. Chen, "Rechargeable Hybrid Aqueous Battery: Artificial Solid-Electrolyte Interface," Western University, London, Ontario, Canada, October, 2017.
- (5) P. Chen, "Introduction to a New Aqueous Battery System," the 7th International Conference on Energy Storage," Keynote Speech, Suzhou, China, April 24-26, 2017.
- (6) P. Chen, "Overview of the Rechargeable Hybrid Aqueous Battery," Positec, Suzhou, Jiangsu, China, April 20, 2017.
- (7) P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug and Gene Delivery," Shandong University, Jinan, Shandong, China, December 2, 2016.
- (8) P. Chen, "NanoPeptide Biotechnology," Anhui Jinhe Industrial Co., Ltd., Chuzhou, Anhui, China, November 28, 2016.
- (9) P. Chen, "Progress in the Scale-up of Rechargeable Hybrid Aqueous Battery," Positec, Suzhou, Jiangsu, China, September 28, 2016.
- (10) P. Chen, "Transfection Reagents and Cancer Therapy," Qianhong, Changzhou, Jiangsu, China, September 22, 2016.
- (11) Denian Li, Alireza Zehtab Yazdi and P. Chen, "Synthesis of Graphene from Lignin," Guangzhou Institute of Energy Conversion, Guangzhou, China, September 19, 2016.
- (12) P. Chen, "Next Generation of the Rechargeable Hybrid Aqueous Battery," Guangzhou Institute of Energy Conversion, Guangzhou, China, September 19, 2016.
- (13) P. Chen, "Peptide Self/co-assembly and its application in drug and gene delivery," Alphamab, Suzhou, Jiangsu, China, September 18, 2016.
- (14) P. Chen, "Rechargeable Hybrid Aqueous Battery: A New Battery System," Shanghai University, Shanghai, China, April 9, 2016.
- (15) P. Chen, "NanoPeptide Biotechnology," Libo, March 30, 2016.
- (16) P. Chen, "High Energy Cathode Materials and their Scale-up," Bojie, Changzhou, Jiangsu, China, December 28, 2015.

- (17) P. Chen, "Progress in the Scale-up of Rechargeable Hybrid Aqueous Battery," Positec, Suzhou, Jiangsu, China, December 25, 2015.
- (18) P. Chen, "Transfection Reagents and Cancer Therapy," Huiyuan, Hefei, China, September 4, 2015.
- (19) P. Chen, "Rechargeable Hybrid Aqueous Battery: an alternative to energy storage systems," Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, Guangdong, China, August 27, 2015.
- (20) P. Chen, "Preclinic Study of Peptide Mediated siRNA Delivery," Xingjin, Shenzhen, China, August 22, 2015.
- (21) P. Chen, "Surface Thermodynamics and its Application to Nanobiosystems," South China University of Technology, Guangzhou, China, March 29, 2015.
- (22) P. Chen, "Scale-up of Rechargeable Hybrid Aqueous Battery," Positec, Suzhou, Jiangsu, China, March 27, 2015.
- (23) P. Chen, "Rechargeable Hybrid Aqueous Battery: an alternative to energy storage systems," Nanjing Normal University, Nanjing, Jiangsu, China, January 16, 2015.
- (24) P. Chen, "High energy cathode materials," Cnano, Zhengjiang, Jiangsu, China, January 14, 2015.
- (25) P. Chen, "Sensitization of drug-resistant colon cancer to topoisomerase I-inhibition by self-assembling peptide nanoparticle delivery of siRNA," Fushan, China, December 30, 2014.
- (26) P. Chen, "Progress on Rehab: anode and electrolyte" Positec, Suzhou, Jiangsu, China, October, 2014.
- (27) P. Chen, "Progress on Rehab," Positec, Suzhou, Jiangsu, China, August, 2014.
- (28) P. Chen, "Sensitization of drug-resistant colon cancer to topoisomerase I-inhibition by self-assembling peptide nanoparticle delivery of siRNA," South China University of Technology, Guangzhou, China, June, 2014.
- (29) P. Chen, "Rechargeable Hybrid Aqueous Battery," Positec, Suzhou, Jiangsu, China, April, 2014.
- (30) P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug and Gene Delivery," School of Pharmacy, University of Waterloo, Kitchener, Ontario, February, 2014.
- (31) P. Chen, "Rechargeable Hybrid Aqueous Batteries," Canada Japan Nanotech Conference, Tokyo, Japan, January 29-30, 2013.
- (32) P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug and Gene Delivery," the 6th Annual Protein & Peptide Conference (PepCon-2013), Suzhou, China, March 21-23, 2013.
- (33) P. Chen, "Battery research in the Pu Chen lab," Positec, Suzhou, China, January, 2013.
- (34) P. Chen, "High Energy Electrode Materials," Positec, Suzhou, China, January, 2013.
- (35) P. Chen, "Assessment of lithium/sulfur batteries," Positec, Suzhou, China, September 2012.
- (36) P. Chen, "Progress on rechargeable hybrid aqueous batteries," Positec, Suzhou, China, September 2012.
- (37) P. Chen, "Progress on high energy lithium/sulfur batteries," Positec, Suzhou, China, April 2012.
- (38) P. Chen, "Update of rechargeable hybrid aqueous batteries," Positec, Suzhou, China, April 2012.
- (39) P. Chen, "Progress on high purity polycrystalline silicon," Positec, Suzhou, China, April 2012.
- (40) P. Chen, "Co-operative education at Waterloo," Shanghai Institute of Technology, Shanghai, China, April 2012.
- (41) P. Chen, "Research in the Chen lab at Waterloo," South China University of Technology, Guangzhou, China, December 2011.
- (42) P. Chen, "Amino acid pairing peptides and their applications in drug and gene delivery," South China University of Technology, Guangzhou, China, December 2011.
- (43) P. Chen, "Lithium/sulfur batteries: from academic lab to industrialization," Positec Ltd., Suzhou, China, December 2011.
- (44) P. Chen, "Scale up ReHAB," Positec Ltd., Suzhou, China, December 2011.
- (45) P. Chen, "Metals and their alloys for cathode current collectors in ReHAB," Positec Ltd., Suzhou,

China, December 2011.

- (46) P. Chen, "Antimicrobial peptides and their anticancer activity," Shanghai Jiaotong University, Shanghai, China, December 2011.
- (47) P. Chen, "Peptide mediated siRNA delivery," Shanghai Jiaotong University, Shanghai, China, December 2011.
- (48) P. Chen, "Multifunctional delivery vehicle for anticancer drugs," Shanghai Jiaotong University, Shanghai, China, December 2011.
- (49) P. Chen, "Self-assembly of peptides and its applications in nanomedicine," Shanghai Institute of Technology, Shanghai, China, December 2011.
- (50) P. Chen, "Peptide self/co-assembly and its potential in nanomedicine," WIN-Soochow Nanotechnology Workshop, Waterloo, Ontario, Canada, 20-27 July 2011.
- (51) P. Chen, "Amino acid pairing peptides and their applications in drug and gene delivery," Taiwan-WIN Workshop, Waterloo, Ontario, Canada, April 2011.
- (52) P. Chen, "Hydrocarbon storage in nanoporous materials," Nanjing University of Technology, Nanjing, China, May 2011.
- (53) P. Chen, "Peptide mediated delivery of anticancer drugs," Shanghai Jiaotong University Medical School, Shanghai, China, May 2011.
- (54) P. Chen, "Biocompatibility evaluation of self/co-assembling peptides," Shanghai Jiaotong University Medical School, Shanghai, China, May 2011.
- (55) P. Chen, "Amino Acid Pairing Peptides and their use in siRNA delivery," Shanghai Jiaotong University Medical School, Shanghai, China, May 2011.
- (56) P. Chen, "Ion-exchange batteries," Positec Ltd., Suzhou, China, May 2011.
- (57) P. Chen, "High energy and power density Li/S batteries," Positec Ltd., Suzhou, China, May 2011.
- (58) P. Chen, "High purity polycrystalline silicon," Nanjing University of Technology, Nanjing, China, May 2011.
- (59) P. Chen, "High purity polycrystalline silicon," Positec Ltd., Suzhou, China, May 2011.
- (60) P. Chen, "Amino Acid Pairing Peptides and their Self/Co-Assembly," 2010 Nano, Surface and Graphene China, Nanjing University, Nanjing, China, September 10-12, 2010.
- (61) P. Chen, "Amino Acid Pairing and Peptide Design," Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Canada, October 13, 2010.
- (62) P. Chen, "AAP Peptide Assembly and its Applications," Department of Chemical Engineering, Shanghai Jiaotong University, Shanghai, China, September, 2010.
- (63) P. Chen, "AAP Peptide Assembly and its Applications," Nanjing University of Technology, Nanjing, China, September, 2010.
- (64) P. Chen, "Amino Acid Pairing Peptides and their Applications," Northeastern Normal University, Changchun, China, August, 2010.
- (65) P. Chen, "AAP Peptide Assembly," Nanjing University of Technology, Nanjing, China, May 18, 2010.
- (66) P. Chen, "Coop Education at Waterloo," Nanjing University of Technology, Nanjing, China, May 19, 2010.
- (67) P. Chen, "AAP Peptide Assembly," South China University of Technology, Guangzhou, China, April 20, 2010.
- (68) P. Chen, "Coop Education at Waterloo," South China University of Technology, Guangzhou, China, April 21, 2010.
- (69) P. Chen, "Amino Acid Pairing Peptides and their Applications," University of Southern California, Los Angeles, California, USA, November 20, 2009.
- (70) P. Chen, "Amino Acid Pairing Peptides and their Applications; Synthetic Biology and Integrative Science," WIN board of directors meeting, Waterloo, Ontario, Canada, November 13, 2009.

- (71) P. Chen, "Amino Acid Pairing Peptides and their Applications," 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, Canada, May 30-June 3, 2009.
- (72) P. Chen, "Amino Acid Pairing Peptides and their Applications; Synthetic Biology and Integrative Science," Nanjing University, Nanjing, China, July, 2009.
- (73) P. Chen, "NanoPeptide Technologies," 3rd Round of Leaders in Technology and Commercialization Program, Nanjing, China, October 11, 2009.
- (74) P. Chen, "Amino Acid Pairing Peptides and their Applications," NanoJapan, Tokyo, Japan, February, 2009.
- (75) P. Chen, "Amino Acid Pairing Peptides and their Applications in Drug Delivery," Ontario Institute of Cancer Research, Waterloo, Ontario, Canada, June 11, 2009.
- (76) P. Chen, "Peptide assembly and its applications: Integrating nanotechnology into biology and medicine..." Connecting Nanotechnology, Waterloo, Ontario, Canada, May 22, 2009.
- (77) P. Chen, "Peptide assembly and its applications; cellular foaming of polymers in supercritical fluids," Xerox Canada, Mississauga, Ontario, Canada, May 8, 2009.
- (78) P. Chen, "Peptide mediated siRNA delivery," McMaster University, Hamilton, Ontario, Canada, February 3, 2009.
- (79) P. Chen, "Peptide assembly and polymer foaming," GABAE Consulting, Waterloo, Ontario, Canada, January 14, 2009.
- (80) P. Chen, "Amino Acid Pairing Peptides and their Applications in Anticancer Drug Delivery," REACH, research alliance contact hub, Advancing Cancer Treatment, McMaster University, Hamilton, Ontario, Canada, November 12, 2008.
- (81) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China, August 21, 2008.
- (82) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Department of Chemistry, Tsinghua University, Beijing, China, August 20, 2008.
- (83) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Department of Chemical Engineering, Tsinghua University, Beijing, China, August 19, 2008.
- (84) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Institute of Nuclear and Alternative Resources, Tsinghua University, Beijing, China, August 18, 2008.
- (85) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Nanjing University of Technology, Nanjing, China, August 7, 2008.
- (86) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," Nanjing University, Nanjing, China, August 6, 2008.
- (87) P. Chen, "Amino Acid Pairing Peptides and its Applications; Synthetic Biology and Integrative Science," South China University of Technology, Guangzhou, China, July 28, 2008.
- (88) P. Chen, "Peptide assembly and its applications; cellular foaming of polymers in supercritical fluids," Dow Discussion Group on Interfacial Science (DDGIS), Dow Chemical, Midland, Michigan, USA, January 21, 2008.
- (89) P. Chen, "Nano-biomaterials and their medical applications," Department of Mechanical and Industrial Engineering, University of Toronto, Toronto, Ontario, Canada, January 25, 2008.
- (90) P. Chen, "PEM Fuel Cells I: Key Component Materials and Characterization," NRC-Auto21-Waterloo Fuel Cell Workshop, Waterloo, Ontario, Canada, October 25, 2007.
- (91) P. Chen, "Nano-Biomaterials for Drug and Gene Delivery," Special Seminar, Nanotechnology Engineering Program, University of Waterloo, Waterloo, Ontario, Canada, July 10, 2007.
- (92) P. Chen, "Nanostructures formed by amino acid pairing peptides and their uses thereof," Ogilvy

- Renault, Royal Bank Plaza, Toronto, Ontario, Canada, July 6, 2007.
- (93) P. Chen, "Self-assembly of peptides and its applications in biomedicine," Nanotechnology Engineering Program, University of Waterloo, Waterloo, Ontario, Canada, July 10, 2007.
- (94) P. Chen, "Self-assembly peptide based nanoparticles and their use in anticancer drug delivery," The Toronto General Hospital, MaRS Centre, Toronto, Ontario, Canada, July 16, 2007.
- (95) P. Chen, "Self-assembling peptides and their applications," Department of Chemistry, University of Toronto, Toronto, Ontario, Canada, April 20, 2007.
- (96) P. Chen, "Nanosystems on drug and gene delivery," North York General Hospital, Genetics Rounds, North York, Ontario, Canada, May 7, 2007.
- (97) P. Chen, "Nanotechnology in drug and gene delivery," CCABP Annual Scientific Symposium, Toronto, November 19, 2006 (keynote speaker).
- (98) P. Chen, "Bio-inspired nanomaterials for drug and gene delivery," CIAR Nanobiotechnology Fall School, MaRS Centre, University of Toronto, Toronto, Ontario, Canada, October 13-15, 2006 (keynote speaker).
- (99) P. Chen, "Atomic Force and Optical Microscopy Imaging on Nano-Biomaterials," UW Intramural Digital Imaging Symposium, Waterloo, Ontario, Canada, June 22, 2006.
- (100) P. Chen, "Self-Assembling Peptide Mediated Delivery of Oligonucleotides and Anticancer Drugs," Campbell Family Institute for Breast Cancer Research, Princess Margaret Hospital, Toronto, Ontario, Canada, May 1, 2006.
- (101) P. Chen, "Peptide-Mediated Delivery of Oligonucleotides," University Health Network, Toronto General Research Institute, and Department of Surgery, University of Toronto, Toronto, Ontario, Canada, January 11, 2006.
- (102) P. Chen, "Self-assembling Peptides for Drug and Gene Delivery," Department of Physics, University of Guelph, Guelph, Ontario, Canada, January 24, 2006.
- (103) P. Chen, "Part I: Chitosan-Cellulose Composite Membranes: Preparation and Application for affinity Purification of Biopolymers and Immunoabsorption," and "Part II: Gold Nanotube Membranes: Preparation, Characterization and Application for Chiral Separation," Dupont Canada, Kingston, Ontario, Canada, January 31, 2006.
- (104) P. Chen, "Nanotechnology in Biomedical Research: drug delivery and neurodegenerative disease," Department of Chemical Engineering, Faculty of Engineering, University of Waterloo, Waterloo, Ontario, Canada, February 21, 2006.
- (105) P. Chen, "Challenges in drug and gene delivery," Faculty of Materials Science and Engineering, Hefei University of Technology, Hefei, China, September 6, 2005.
- (106) P. Chen, "Molecularly engineered peptides for drug and gene delivery," Hefei National Lab for Physical Sciences at Microscale, University of Science and Technology of China, Hefei, China, September 5, 2005.
- (107) P. Chen, "Challenges in drug and gene delivery," College of Life Science and Pharmacy, Nanjing University of Technology, Nanjing, China, September 2, 2005.
- (108) P. Chen, "Peptide-mediated drug delivery," Department of Chemistry, Nanjing University, Nanjing, China, September 1, 2005.
- (109) P. Chen, "Molecularly engineered peptides for drug and gene delivery," Third Annual Nanomedicine Conference, University of Alberta, Edmonton, AB., March 14 and 15, 2005.
- (110) P. Shao, G. Ji and P. Chen, "Gold Nanotube Membranes: Preparation, Characterization and Application for Chiral Separation," EnviroAnalysis 2004, Toronto, Canada, May 17-21, 2004.
- (111) P. Chen, "Self-assembly of peptides and its applications," Bubbles and Drop Symposium, Genova, Italy, April 25-28, 2004.
- (112) P. Chen, "Self-assembly of peptides and its applications in nano-biotechnology," Waterloo, Canada, February 24, 2004.

- (113) P. Chen, "Peptide self-assembly and its applications in drug delivery," MIT, Cambridge, MA, USA, July 7, 2004.
- (114) P. Chen, "Self-assembly of Oligopeptides: Mechanism and Application," Department of Chemical Engineering, Texas A&M, College Station, Texas, USA, October, 2003.
- (115) P. Chen, "Self-assembly of Oligopeptides: Mechanism and Application," Department of Chemical Engineering, McMaster University, Hamilton, Ontario, Canada, June, 2003.
- (116) P. Chen, "Membrane Chromatography and Biomimetic Affinity Ligands for Bioseparation," The 1st Emerging Materials Knowledge Network Symposium, Toronto, Ontario, Canada, January 2003.
- (117) P. Chen, "Composite Membranes for Affinity Purification of Biopolymers and Immunoabsorption," The 20th Annual Membranes Conference, Newton, Massachusetts, USA., November 2002 (invited speaker, sponsored by BCC).
- (118) P. Chen, "Self-assembly of Oligopeptides," The Murray Moo-Young Symposium: Biotechnology and Bioengineering – Challenges in the New Millennium, Waterloo, Ontario, Canada, September, 2002 (keynote address).
- (119) P. Chen, "Self-assembly of Oligopeptides," Department of Chemical Engineering, McMaster University, Hamilton, Ontario, Canada, March, 2002.
- (120) P. Chen, "Interfacial Engineering Research," Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada, October, 2001.
- (121) P. Chen, "Self-assembling Oligopeptides as a Carrier for Drug Delivery," Apotex, Inc., Toronto, Ontario, Canada, September, 2001.
- (122) P. Chen, "Influence of Grafting Temperature on the Surface Characteristics of Hydrosilylated Polypropylenes," Department of Chemistry, Nanjing University, Nanjing, China, July, 2001.
- (123) P. Chen, "Interaction of Amino Acid Sequence and pH on Self-Assembly of Oligopeptides," Physics Department, Nanjing University, Nanjing, China, July, 2001.
- (124) P. Chen, "Influence of Grafting Temperature on the Surface Characteristics of Hydrosilylated Polypropylenes," UNILAB Research Center of Chemical Reaction Engineering, East China University of Science and Technology, Shanghai, China, June, 2001.
- (125) P. Chen, "Effect of Reaction Temperature on the Surface Characteristics of Hydrosilylated Polypropylenes," The Institute for Polymer Research 2001 Symposium, Waterloo, Ontario, Canada, May, 2001.
- (126) P. Chen, "Surface, Film and Line Tensions," Mechanical & Aerospace Engineering Department, University of California, Los Angeles, USA., November, 1999.
- (127) P. Chen, "Axisymmetric Drop Shape Analysis and Atomic Force Microscopy and their Applications," BioGroup Special Seminar, Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada, February, 1999.
- (128) P. Chen, "Atomic Force Microscopy for Polymer Surface Characterization," The Institute for Polymer Research 1999 Symposium, Waterloo, Ontario, Canada, May, 1999.
- (129) P. Chen, "Surface, Film and Line Tensions," Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada, January, 1998.
- (130) P. Chen, "Interfacial Dynamics of Surfactant and Biopolymer Solutions," Max-Planck Institute of Colloid and Interface Science, Berlin, Germany, October, 1995.
- (131) P. Chen, "Dynamic Surface Tension Response to Surface Area Changes of Protein/Small-Medium Organic Molecule Solutions," Institute of Polymer and Interface Science, Dresden, Germany, October, 1995.

Patents

- (1) Yu Liu and P. Chen, "Preparation of manganese dioxide electrode," CN 201910806059.2, Provisional Patent filed 29 August 2019, Pending.

- (2) Qiuyu Shi and P. Chen, "Synthesis of high capacity manganese dioxide cathode," CN 201910806040.8, Provisional Patent filed 29 August 2019, Pending.
- (3) Mei Han and P. Chen, "Dual ion aqueous battery with a doped vanadium oxide cathode," CN 201910619367.4, Provisional Patent filed 10 July 2019, Pending.
- (4) Mei Han and P. Chen, "Artificial solid electrolyte interphase on the cathode of aqueous batteries," CN 201910379771.9, Provisional Patent filed 30 April 2019, Pending.
- (5) Yunfeng Luo, Xiaosong Luo and P. Chen, "Cathode materials, cathode and battery there of," CN 201910363030.1, Provisional Patent filed 30 April 2019, Pending.
- (6) Shengkai Li and P. Chen, "Zinc manganese oxide based cathode and its application in aqueous battery," CN 201910355540.4, Provisional Patent filed 29 April 2019, Pending.
- (7) Yu Liu and P. Chen, "Preparation and use of gelatin modified electrodes," CN 201910297432.6, Provisional Patent filed 15 April 2019, Pending.
- (8) The Nam Long Doan, Xiaosong Luo and P. Chen, "Lead additive as hydrogen evolution suppressor in the Rehab," US 15/556277 CN 201710725709.1, National Phase filed 6 September 2017, Pending.
- (9) Jian Zhi, Tuan Hoang and P. Chen, "Ball milled active material for the Rehab cathode," CN 201710725709.1, Provisional Patent filed 26 May 2017, Pending.
- (10) P. Chen, "SiO₂ gel electrolyte for the Rehab," CN 201710381889.6, Provisional Patent filed 26 May 2017, Pending.
- (11) Jing Yan, Yang Liu and P. Chen, "Serial configuration B of the rechargeable hybrid aqueous battery," CN 201710381918.9, Provisional Patent filed 26 May 2017, Pending.
- (12) Jing Yan, Yang Liu and P. Chen, "Parallel configuration A2 of the rechargeable hybrid aqueous battery," CN 201710395324.3, Provisional Patent filed 26 May 2017, Pending.
- (13) P. Chen, "Anode formulation with active material and current collector for the Rehab," US 15/592014, National Phase filed 3 May 2017, Pending.
- (14) P. Chen, "Anode formulation with active material and current collector for the Rehab," CN 2017103048788, Provisional Patent filed 3 May 2017, Pending.
- (15) Yunfeng Luo and P. Chen, "TiO₂/Al₂O₃ additive to the anode of the Rehab," CN 2017103578089, Provisional Patent filed 19 May 2017, Pending.
- (16) Xiaosong Luo, Yang Liu, Xinyong Liu, Xiao Zhu and P. Chen, "Graphite composite as the cathode current collector in the Rehab," US 15/513640, National Phase filed 23 March 2017, Pending.
- (17) Xiaosong Luo, Yang Liu, Xinyong Liu, Xiao Zhu and P. Chen, "Graphite composite as the cathode current collector in the Rehab," EP15843519.8, National Phase filed 23 March 2017, Pending.
- (18) Jian Zhi, Shengkai Li, Sabri Thuraya and P. Chen, "TiO₂/SnO₂ coating of the cathode conductor in the Rehab," CN 201710203307.5, Provisional Patent filed 31 March 2017, Pending.
- (19) Alireza Zehtab Yazdi, Jian Zhi and P. Chen, "Multifunctional Graphene Film to Stabilize Aqueous Batteries via Restricted Gas Permeation and Controlled Lithium Diffusion," CN 201710011769.7, Provisional Patent filed 10 January 2017, Pending.
- (20) The Nam Long Doan, Xiaosong Luo and P. Chen, "Lead additive as hydrogen evolution suppressor in the Rehab," EP 16761088.0, National Phase filed 4 June 2016, Pending.
- (21) Jian Zhi and P. Chen, "Carbon and silica coating of LMO cathode active material," CN 201611262250.8, Provisional Patent filed 30 December 2016, Pending.
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Student awards:

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- Shengkai Li, MITACS Accelerate scholarship (graduate student level), 2018-
- Sajeev Kohli, Top prize, International BioGENEius Challenge (junior Nobel prize), June 2018, Boston, USA.
- Sajeev Singh Kohli, National Grand Prize and 1st Place Winner, Sanofi BioGENEius Canada, May 2018
- Sajeev Singh Kohli, Best in Category: Biotechnology, Waterloo Wellington Science and Engineering Fair, April 2018
- Yixin Zhou, MITACS Accelerate scholarship (graduate student level), 2018-
- Mei Han, MITACS Accelerate scholarship (graduate student level), 2018-
- Yu Liu, MITACS PDF fellowship, 2018-
- Sheng Lu, MITACS PDF fellowship, 2017-.
- Jian Zhi, MITACS PDF fellowship, 2016-18.
- Tuan Hoang, MITACS PDF fellowship, 2016-2018.
- Vivian Xu, MITACS PDF fellowship, 2015-2017.
- Kaveh Sarikhani, DAAD-Rise Professional Scholarship, Germany, 2015 (prestigious, via worldwide competition).
- Sameh Saad, MITACS PDF fellowship 2014.
- Mousa Jafari, NSERC PDF fellowship winner 2014 (success rate: 7%, 2 from the entire University of Waterloo).
- P. Sadatmousavi and P. Chen, "Diethylene Glycol (DEG) Functionalized Self-Assembling Peptides as a Potential Nanocarrier for Hydrophobic Anticancer Drug Deliver," The 39th Annual Meeting & Exposition of the Controlled Release Society, Quebec City, Quebec, Canada, 15-18 July 2012. Won the Canadian Chapter poster award at this meeting.
- Madjid Soltani, PhD thesis, University's 2013 Outstanding Achievement in Graduate Studies, June 2013.
- Mousa Jafari, PhD thesis, Chemical Engineering Medal for Proficiency in Research - Park Reilly Medal, May 2013.

Students for whom the applicant is/was principal supervisor

<i>Name</i>	<i>Years</i>	<i>Degree</i>	<i>Title of Project</i>	<i>Present Position</i>
Alam, Sarfaraz	19-	Postdoc	Protein corona drug and gene delivery	Postdoc, UW

Pu Chen

Liu, Yu	18-	Postdoc	Rechargeable hybrid aqueous batteries
Lu, Sheng	17-	Postdoc	Peptide-graphene complex nanocarriers
Mai, Hung	17-18	Postdoc	Ruthenium complexes for cancer treatment
Liu, X.	16-17	Postdoc	Rechargeable hybrid aqueous batteries

Postdoc, UW
Postdoc, UW
Postdoc, UW
Senior Engineer,
Battery Company,
China

Yazdi, A.Z.	15-18	Postdoc	Graphene functionalization
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Imperial Oil,
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Hoang Tuan	14-18	Postdoc	Rechargeable Hybrid Aqueous Batteries
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Senior Engineer,
Chemical

Xu, Vivian W.	15-17	Postdoc	Peptide mediated siRNA delivery
Zhi, Jian	15-	Postdoc	Rechargeable hybrid aqueous batteries

Postdoc, UW
Postdoc, UW

Wu, Xianwen	13-15	Postdoc	Energy materials
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Professor, Dept.
of Chem. Eng.,
China

Yan, Ji	13-14	Postdoc	Electrode materials
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Senior Engineer
ON

Doan, TNL	12-15	Postdoc	Electrode materials
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Chu, Dafeng	12-14	Postdoc	Peptide mediated siRNA delivery
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Senior Engineer
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Saad, Sameh	12-14	Postdoc	Surface Energy materials
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Senior Engineer
ON

Zhang, Huan	12-14	Postdoc	Energy materials
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Senior Engineer,
Battery Industry,
China

Wang, Xin	12-13	Postdoc	Energy materials
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Professor,
University of
South China,
China

Liu, Yang	11-15	Postdoc	Energy materials
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Senior Engineer
ON

Dong, Dex	11-14	Postdoc	Energy materials
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Senior Engineer,
Dept. of Chem.
Eng., U. Of
Waterloo, ON

Gosselink, D.	11-13	Postdoc	Energy materials
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Senior Engineer,
Hydro One, ON

Tangirala, R.	11-12	Postdoc	Energy materials
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Senior Engineer
UK.

Wang, Jian	11-12	Postdoc	Energy materials
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Postdoc, Dept. of
Chem. Eng., U.
Of Waterloo, ON

Li, Mingqi	10-13	Postdoc	Energy materials
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Professor, Dept.

				of Chem. Eng., China
Kan, X.	10-12	Postdoc	Energy materials	Professor, Dept. of Chem. Eng., Anhui Normal University, China
Feng, Z.	10-12	Postdoc	Energy materials	Postdoc, Dept. of Chem. Eng. U. of Waterloo, ON
Chen, Yuan	10-12	Postdoc	Energy materials	Senior Engineer Battery industry China
Han, Feng	10-11	Postdoc	Biomaterials and surface science	Senior Engineer Chemical Industry, China
Park, H.	09-10	Postdoc	Molecular level events of fouling on quartz sleeves in ultraviolet water disinfection reactors	Postdoc, Dept. of Chem. Eng., U. of Waterloo, ON
Wang, Y.	09-10	Postdoc	Nanoparticle-polymer composite surface Modification for PEM fuel cells	Postdoc, Dept. of Chem. Eng., U. of Waterloo, ON
Yang, H.	07-07	Postdoc	Surface-assisted assembly	Postdoc, Faculty of Pharmacy, Univ of Toronto, Canada
Shao, P.	04-05	Postdoc	Nanotube Membranes for Bioseparation	Senior Research Engineer, GE
Ji, G.	02-03	Postdoc	Nanotubule Membranes for Enantioseparation	Research Scientist, Industry
Yang, L.	00-02	Postdoc	Development of Novel Affinity Membranes for Fast Purification of Biomolecules and Immunoabsorption	Senior Biochemist Biovectra dcl, PEI
Susnar, S.	99-00	Postdoc	Hardware Development of Axisymmetric Drop Shape Analysis	Research Associate Univ. of Toronto
Kazemi, N.	19-	Visiting Professor	Drug formulation	Professor Department of Pharmaceutical Science University of Isfahan, Iran
Aghamiri, F.	18-	Visiting Professor	Rechargeable batteries and nanomaterials	Professor & Head Department of Chemical Engineering, University of Isfahan, Iran
Lu, Sheng	15-	Research	Cationic lytic peptides and cancer drug delivery	Research

		Associate		Associate, UW
Pan, Ran	15-	Research Associate	Peptide sequence design and siRNA delivery	Research Associate, UW
Han, Xiaoxia	13-	Research Associate	Peptide sequence design and siRNA delivery	Research Associate, UW
Sui, Weiping	12-15	Research Associate	Peptide sequence design and siRNA delivery	Professor, Jinan University, Jinan, Shandong, China
Jiang, X.	07-	Research Associate	Peptide-mediated delivery of siRNA	Research Associate
Sheng, Y.	06-	Research Associate	Modeling of peptide self-assembly	Associate Professor Nanjing Univ. China
Biswas, E.	05-06	Research	Surface Tension Measurement of Alcohol-Water	Research Engineer, America Chemical, Houston, TX, USA
Hong, Y.	05-05	Research Associate	Salt Effect on Peptide Self-assembly	Research Scientist LG Chem., South Korea
Bhola, P.T.	05-05	Research Associate	Peptide-mediated Delivery of Anticancer Agents	Research Associate
Li, Longyan	17-	Visiting Scholar	Aqueous batteries	Associate Professor Environmental Science, Nanjing University of Information Science & Technology, China
Wang, Quan	17-18	Visiting Scholar	Aqueous batteries	Associate Professor, Department of Chemistry and Materials Engineering, Changshu Institute of Technology, China
Sabbaghi, S.	17-	Visiting Professor	Water Purification using graphene modified membranes	Assoc. Professor Shiraz University, Shiraz, Iran
Chang, M.	17-	Visiting	Sodium ion aqueous batteries	Professor

Scholar

Foshan University
Guangdong
China
Professor
Jiangxi Univ.
China
Professor
Harbin Institute of
Technology
China
Professor
Xingjiang Univ.
China
Researcher
Chinese Academy
of Sciences
Guangzhou, China
Professor
Jilin Univ.
China

Professor
Shanghai Univ.
China
Professor
Nanjing Univ.
Aeronautics and
Astronautics
China
Professor
Chemistry, Jinan
University, Jinan,
Shandong, China
Professor
Chemistry,
Ankang
University
Senior Engineer
ON
Senior Engineer
ON
Professor
University
India
Professor
Isfahan University
of Technology,
Iran

Cheng, Zhe	16-	Visiting Scholar	Peptide assisted drug and gene delivery
Huang, X.	16-	Visiting Scholar	Rechargeable batteries
Mi, H.	16-17	Visiting Scholar	Rechargeable batteries
Li, Denian	16-	Visiting Scholar	Graphene synthesis from lignin
Xue, Bing	16-17	Visiting Scholar	Cathode additives for ReHAB
Zhao, H.B.	14-15	Visiting Scholar	Rechargeable hybrid aqueous batteries
Mi, C.H.	15-16	Visiting Scholar	Rechargeable hybrid aqueous batteries
Sui, Weiping	12-14	Visiting Scholar	Peptide mediated siRNA delivery
Yuan, G.	12-13	Visiting Scholar	Alternative energy and lithium batteries
Sadhu, Mikhail	11-12	Visiting Scholar	Biochemistry
Paron, Todd	11-12	Visiting Scholar	Energy materials
Karunaratne, N	10-11	Visiting Professor	Biochemistry
Aghamir, Foad	10-11	Visiting Professor	Surface Thermodynamics

Zhao, Yan	10-11	Visiting Scholar	Alternative energy and lithium batteries	Assistant Professor Hebei University of Technology China
Jan, Jerry	10-11	Visiting Scholar	Alternative energy and lithium batteries	Senior Engineer, Battery Industry, China
Wang, Jenny	10-11	Visiting Scholar	Alternative energy and lithium batteries	Senior Engineer, Battery Industry, China
Liu, H.	10-11	Visiting Scholar	Alternative energy and lithium batteries	Visiting Scholar
Tao, H.	09-10	Visiting Scholar	Alternative energy and lithium batteries	Professor Chemistry, Nanjing University
Yan, M. (Rosie)	09-10	Visiting Scholar	Solution behavior of lignosulphonate and its adsorption at solid-liquid interfaces	Senior Scientist South China University of Technology, China
H. Adihane	07-07	Sabbatical Leave	Peptide-mediated drug and gene delivery	Scientist, Bioeng. Chem. Eng. Div. National Chemical Lab, Pune, India
Sheng, Y.	06-09	Visiting Scholar	Modeling of peptide self-assembly	Associate Prof. Nanjing University, China
Xi, X.	06-07	Visiting Scholar	Surface Tension of Volatile Organic Compounds	Associate Prof. Yancheng Institute of Tech., China
Ouyang, X.	04-05	Visiting Scholar	Molecular Engineering of Self-assembling Peptides	Professor South China Univ. of Tech., China
Zhou, J.	03-04	Visiting Scholar	Molecular Engineering with TiO ₂	Professor Xiangtan Univ. Hunan, China
Artur du Plessis, A.	03-03	Visiting Scholar	Oligopeptide surface patterning	Research Engineer Lyon, France
Jia, L.	99-99	Visiting Scholar	Biomembrane Development Based on Biomolecular Immunoabsorption	Associate Prof. Dalian University of Technol. China
Gang, Q.	02-02	Visiting Scholar	Generalized theory of capillarity; line thermodynamics	Associate Prof. Hebei University China

Pourhossein, A.	16-18	Ph.D.	Zein assisted drug delivery	Exchange Ph.D. student
Xiong, W.	16-18	Ph.D.	Lignin additive to the ReHAB electrode	Exchange Ph.D. student
Chavoshi, A.	15-18	Ph.D.	Lithium ion batteries: silicon based anodes	Exchange Ph.D. student
Lu, C. Parker	14-15	Ph.D.	Rechargeable hybrid aqueous batteries	Exchange Ph.D. student
Tian, Ye	13-	Ph.D.	Rechargeable hybrid aqueous batteries	Research Assistant
Wang, Qiang	13-	Ph.D.	Rechargeable hybrid aqueous batteries	Research Assistant
Zhu, Xiao	13-18	Ph.D.	Rechargeable hybrid aqueous batteries	Exchange Ph.D. student
Zhang, Lei	13-18	Ph.D.	Peptide assembly and cancer drug delivery	Exchange Ph.D. student
Chen, B.	12-16	Ph.D.	Peptide mediated vaccine delivery	Senior Engineer Toronto, Canada
Mohammadi, M	12-15	Ph.D.	Modeling of peptide mediated drug delivery	Senior Scientist Toronto, Canada
Sarikhani, K.	11-16	Ph.D.	Surface thermodynamics	Senior Engineer Toronto, Canada
Ghaznavi, M.	11-16	Ph.D.	Modeling of peptide mediated vaccine delivery	Senior Scientist, University of Toronto, Toronto, ON
Pan, Ran	11-16	Ph.D.	Peptide mediated vaccine delivery	Senior Engineer, Apotex Toronto, Canada
Jeddi, Kazem	11-15	Ph.D.	Rechargeable battery electrolytes	Senior Engineer Toronto, Canada
Ding, Y. Frank	11-15	Ph.D.	Peptide mediated vaccine delivery	Engineer, Apotex Toronto, Canada
Li, Rong Lily	10-12	Ph.D.	Surface Thermodynamics	Senior Scientist, Guangdong, China
Sadatmousavi, P.	09-13	Ph.D.	Peptide mediated anticancer drug delivery	Scientist University of Waterloo, ON
Naahidi, S.	09-13	Ph.D.	Biocompatibility and immunogenicity of Nanomaterials	Research Assistant
Xu, W. (Vivian)	09-14	Ph.D.	Peptide mediated siRNA delivery	Research Assistant
Sheikholeslam, A.	09-14	Ph.D.	Peptide self-assembly and its application in biosensor design	Research Assistant
Wang, J. (Gene)	09-	Ph.D.	Peptide mediate drug and gene delivery	Research Assistant

Pu Chen				
Nasarian, R.	09-	Ph.D.	Assembly of AAP peptides	Research Assistant
Smid, C.	08-	Ph.D.	Peptide-mediated HIV vaccine delivery	Research Assistant
Kim, Y.	08-	Ph.D.	Polymer surface modelling	Research Assistant
Firooz, A.	07-	Ph.D.	Surface tension of organic solutions	Research Assistant
Zargar, B.	07-	Ph.D.	Synthetic Biology in Cancer Therapy	Research Assistant
Soltani, M.	08-	Ph.D.	Cancer Computational Fluid Dynamics	Research Assistant
Jafari, M.	07-	Ph.D.	Peptide-mediated delivery of siRNA	Research Assistant
Hassan, I.	06-	Ph.D.	Nanotube-Assisted Drug Delivery	Research Assistant
Hyder, M.N.	04-08	Ph.D.	Surface Phenomena in Membranes	Research Assistant
Yang, H.	03-07	Ph.D.	Bioelectrochemical Engineering	Research Assistant
Fung, S.	03-08	Ph.D.	Self-Assembly of Oligopeptides	Research Assistant
Park, H.S.	03-07	Ph.D.	Surface Tension of Polymer Melts	Research Assistant
Wang, M.	02-07	Ph.D.	Oligopeptides for Drug and Gene Delivery	Scientist, Lorus Therapeutics Inc. Toronto, Ontario, Canada
Biswas, M.E.	01-05	Ph.D.	Dynamics of Surface Adsorption	NSERC Postdoctoral Fellow, Johns Hopkins Univ. Baltimore, Maryland, USA
Hong, Y.	00-04	Ph.D.	Biocompatible Surfaces for Microelectronics	Senior Researcher LG Chem, South Korea
Long, J.	99-03	Ph.D.	Applied Surface Thermodynamics	Senior Research Engineer, Syncrude Canada, Edmonton, Alberta, Canada
Shi, Qiuyu	19-	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant
Jiao, Yuxiao	19-	M.A.Sc.	Peptide mediated drug delivery	Research Assistant
Zhao, Feng	19-	M.A.Sc.	Protein corona in drug delivery systems	Research Assistant

Pu Chen					
Zhou, Yixin	17-	M.A.Sc.	Peptide transfection reagents	Research Assistant	
Han, Mei	17-	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Li, Shengkai	17-	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Ahmed, Moin	16-18	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Mitha, Aly	16-18	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Husaini, K.	14-16	M.A.Sc.	Peptide mediated siRNA delivery	Research Assistant	
Sun, Kate	13-15	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Cui, Weijia	15-	M.A.Sc.	Peptide mediated siRNA delivery	Research Assistant	
Yu, Yan	12-14	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Konarov, A.	12-14	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Wan, Zizhen	12-14	M.A.Sc.	Peptide mediated anticancer drug delivery	Research Assistant	
Hwangbo, J.	12-14	M.A.Sc.	Rechargeable hybrid aqueous batteries	Research Assistant	
Han, Zhixu	12-14	M.A.Sc.	Modeling of rechargeable aqueous batteries	Research Assistant	
Zhao, Yan	11-13	M.A.Sc.	Rechargeable hybrid aqueous batteries	Engineer, Chemical Industry, China	
Li, Jing	11-13	M.A.Sc.	Rechargeable hybrid aqueous batteries	Engineer, Chemical Industry, Canada	
Li, Kai	11-13	M.A.Sc.	Modeling of rechargeable aqueous batteries	Engineer, Chemical Industry, USA	
Lu, S.	09-	M.A.Sc.	Peptide mediated anticancer drug delivery	Research Assistant	
Wang, N.	08-	M.A.Sc.	Surface physicochemistry of biopolymers	Research Engineer, RIM, Waterloo, ON	
Wei, H.	07-09	M.A.Sc.	Micro/nanocellular foaming of polymers	Research Assistant	
Wang, F.	07-	M.A.Sc.	Anticancer drug delivery	Research Assistant	
Sadatmousavi, P.	07-09	M.A.Sc.	Peptide-mediated anticancer drug delivery	Research Assistant	
Qian, Z.	07-09	M.A.Sc.	Peptide surface modification and biosensors	Research Assistant	

Cheng, J.	07-07	M.A.Sc.	Peptide-mediated gene delivery	Research Assistant
Zhou, M.	06-07	M.A.Sc.	Peptide-anticancer drug formulation	Research Assistant
Prpich, A.	05-07	M.A.Sc.	Peptide-mediated delivery of siRNA	Senior Associate Scientist, Pfizer Global Research & Development, Groton, CT, USA
Law, M.	05-07	M.A.Sc.	Peptide-mediated delivery of siRNA	Research Assistant
Yu, X.	03-05	M.A.Sc.	Composite Membranes for Bioseparation	Research Engineer, ShawCor Ltd. Toronto, ON
Goodchild, N.	02-02	M.A.Sc.	Nanotubule Membranes for Enantioseparation	British Exchange Student
Dhadwar, S.S.	02-04	M.A.Sc.	Oligopeptides as Drug Carriers	PhD Student U. of Toronto
Hsiao, W.W	01-02	M.A.Sc.	Development of Nanotubule Membranes for Enantioseparation	Research Assistant
Fung, S.	00-02	M.A.Sc.	Interfacial Engineering of Oligopeptides	PhD Student U. of Waterloo
Leramey, C.	00-00	M.A.Sc.	Surface Tension Study of Contaminant Adsorption at Liquid Interfaces	French Exchange Student
Dalakoudis, S.	00-00	M.A.Sc.	Interfacial Engineering of Oligopeptides: Scaffolding in Tissue Engineering	Sales Engineer Systems for Research Ontario, Canada
Bemmann, T.	00-02	M.A.Sc.	Scanning Probe Microscopy for Biomembranes	Product Manager Beresford Box Corp. Ontario, Canada
Xia, F.	00-02	M.A.Sc.	Generalized Theory of Capillarity	Program Analyst Dept. of Justice Nova Scotia
Yu, Zhimou	18-	B.A.Sc.	Aqueous batteries	Design Project Co-op student
Su Emma	18-	B.A.Sc.	point-of-care (POC) diagnostics	Design Project
Chapagain, B.	18-	B.A.Sc.	point-of-care (POC) diagnostics	Design Project
Zeitler, D.J.	18-	B.A.Sc.	point-of-care (POC) diagnostics	Design Project
Romane, C.J.	18-	B.A.Sc.	point-of-care (POC) diagnostics	Design Project
Goertz, C.	18-	B.A.Sc.	Transdermal drug delivery	Design Project
Meadowcroft	18-	B.A.Sc.	Transdermal drug delivery	Design Project
Barber, C.	18-	B.A.Sc.	Transdermal drug delivery	Design Project
Wahid-Pedro	18-	B.A.Sc.	Transdermal drug delivery	Design Project
Lee, S.W.	18-18	B.A.Sc.	Aqueous batteries	Co-op student
Rastogi, P.	18-18	B.A.Sc.	Aqueous batteries	Co-op student

Huang, A.	18-18	B.A.Sc.	Aqueous batteries	Co-op student
Martz, M.	17-17	B.A.Sc.	Aqueous batteries	Co-op student
Khan, Saad	17-17	B.A.Sc.	Aqueous batteries	Co-op student
Liu, W.	17-17	B.A.Sc.	Aqueous batteries	Co-op student
Lu, Phillip	17-17	B.A.Sc.	Peptide mediated siRNA delivery	Co-op student
Oh, Nathan	17-17	B.A.Sc.	Peptide mediated siRNA delivery	Co-op student
Liu, J.	17-17	B.A.Sc.	Peptide mediated siRNA delivery	Co-op student
Parimoo, H.	16-	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Yeh, H-K.	16-	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Huang, Allan	16-	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Bertens, Koen	16-	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Sabri, T.	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Abdullahi, F.	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Romanet, C.	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Cho, H.	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Huang, Yan	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Su, Jane	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Lee, Christine	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Satguneswaran	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Jathiga Elaseya				
Utomakili, E.	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Waye, Naomi	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Chen, Henry	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Acton, Matt	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Zhou, Yuxiao	16-16	B.A.Sc.	Peptide assembly and drug delivery	Co-op student
Haime, Jessica	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Ghazal, Adam	16-16	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Valappil, G.	16-16	B.A.Sc.	Graphene and drug delivery	Co-op student
Jiang, Y.	15-15	B.A.Sc.	Graphene and drug delivery	Co-op student
Truong, Tuan	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Wang, C.	15-15	B.A.Sc.	Peptide assembly and drug delivery	Co-op student
Chan, Eugenia	15-15	B.A.Sc.	Peptide assembly and drug delivery	Co-op student
Valappil, G.	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Hong, Taylor	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Martz, M.	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Lotocki, Victor	15-15	B.A.Sc.	Surface tension	Co-op student
Lu, Phillip	15-15	B.A.Sc.	Peptide mediated drug delivery	Co-op student
Nguyen, Nam	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Hwang, J.	15-15	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Oh, Han Kyul	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Khan, Afsanul	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Chen, Franz	14-14	B.A.Sc.	Peptide synthesis	Co-op student
Hong, Andrew	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Park, C.	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Chu, Jeffrey	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Luo, Anqi	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Choi, Doris	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student
Wang, Claudia	14-14	B.A.Sc.	Rechargeable hybrid aqueous batteries	Co-op student

Ayyaswamy, P.	10-	B.A.Sc.	Physicochemical characterization of peptides	Co-op Student
Singh, K.	10-	B.A.Sc.	Physicochemical characterization of peptides	Co-op Student
Vlasco, M.	10-	B.A.Sc.	Energy materials	Co-op Student
Kwan, J.	10-	B.A.Sc.	Mesoporous nanocomposites	Co-op Student
Willms, D.	10-	B.A.Sc.	Peptide mediated siRNA delivery	Co-op Student
Ng, V.	09-	B.A.Sc.	Peptide mediated anticancer drug delivery	Co-op Student
Jin, S.	09-	B.A.Sc.	Peptide self-assembly	Co-op Student
Mamo, T.	09-	B.A.Sc.	Peptide mediated anticancer drug delivery	U/G Researcher
Faruk, N.	08-	B.A.Sc.	Peptide mediated HIV Vaccine Delivery	Co-op Student
Bacinello, D.	08-08	B.A.Sc.	Physicochemistry of AAP Peptides	Graduate Student France
Pham, M.N.A.	08-09	B.A.Sc.	Surface Tension of Organic Solutions	Co-op Student
Khan, M.	08-09	B.A.Sc.	Peptide Self-Assembly	Co-op Student
Sabet, A.	08-09	B.A.Sc.	Peptide Secondary Structures	NSERC Summer Res. Award
Chiran, G.	08-08	B.Sc.	Peptide mediated siRNA delivery	U/G Researcher
Hanewich- Hollatz, M.	08-08	B.A.Sc.	Peptide Assisted Biosensor Design	NSERC Summer Res. Award
Ching, A.	08-08	B.A.Sc.	Assembly of Peptides	NSERC Summer Res. Award
Cao, E.	08-09	B.A.Sc.	Atomic Force Microscopy of biomaterials	U/G Researcher
Chen, Q.	08-09	B.A.Sc.	Peptide gelation for drug encapsulation	U/G Researcher
Muzar, E.	07-07	B.A.Sc.	Peptide-mediated drug delivery	U/G Researcher U. of Toronto
Chau, A.	07-07	B.A.Sc.	Peptide-drug interaction	U/G Research Assistant
Gauthier, S.	07-07	Dip. Eng.	Force-induced peptide assembly	U/G Researcher France
Bains, A.S.	07-07	B.A.Sc.	Nanostructure of peptide assemblies	U/G Research Assistant
Patange, O.	06-07	B.A.Sc.	Self-assembly of novel peptides	U/G Research Assistant
Zeng, Z.	06-07	B.Sc.	Peptide-siRNA Binding	U/G Research Assistant
Girouard, G.	06-07	B.A.Sc.	Surface tension of volatile organic molecules	URA
Mamo, T.	06-07	B.A.Sc.	Self-assembly of novel peptides	URA
Marson, C.	06-07	B.A.Sc.	Surface tension of volatile organic molecules	URA
Asarizadeh, M.	05-06	B.A.Sc.	Peptide-mediated delivery of anticancer drugs	U/G Research Assistant (URA)
Law, M. Assistant	05-05	B.A.Sc.	Peptide-Mediated Gene Delivery	Research
Bhola, P.T.	04-05	B.A.Sc.	Encapsulation and Release of Anticancer Agents using Self-assembling Peptides	U/G Research Assistant
Ilagan, B.	04-04	B.A.Sc.	Self-Assembly of Peptides	U/G Research Assistant
Sun, C.	03-04	B.Sc.	Biomembrane Separation	U/G Research Assistant

Keng, K.T.	03-03	B.A.Sc.	Wettability of Adhesive Tapes	Singaporean Exchange Student
Artur du Plessis, A.	02-03	B.Eng.	Oligopeptide surface patterning	French Exchange Student
Lin, Y.E.	03-03	B.A.Sc.	Self-assembly of an Ionic-complementary Peptide EAK 16-II: Effect of Salt NaCl	Student Co-op Research
Lau, L.S.	02-02	B.A.Sc.	Surface tension measurement of oligopeptides	Co-op Research Student
Sarathy, S.M.	02-02	B.A.Sc.	Surface characterisation of polymeric tapes	Co-op Research Student
Keyes, C.	01-02	B.Sc.	Self-assembly of oligopeptides	Co-op Research Student
Bezaire, J.	01-02	B.A.Sc.	Irreversibility of oligopeptide Aggregation	NSERC U/G Research Award Recipient
Lozano, A.	00-00	B.A.Sc.	Latex synthesis and modification	U/G Research Assistant
Cornu, E.	99-99	B.A.Sc.	Surface tension measurement as a means to Monitor the air-stripping process	French Exchange Student
Kundu, S.	99-00	B.A.Sc.	Biomembrane development using oligopeptides	PhD Student U. of Waterloo
Lalji, A.	99-99	B.A.Sc.	Synthesis of surface modified latex via emulsion Polymerization	U/G Research Assistant
Henderson, A.	99-99	B.A.Sc.	Comparison between two image analysis schemes For pendant liquid drops	U/G Research Assistant
Lucyshyn-Wright, R.	99-99	B.Sc.	Software development of Axisymmetric Drop Shape Analysis (ADSA)	U/G Research Assistant
Vuong, P.	99-00	B.A.Sc.	Surface thermodynamics of biomaterials	U/G Research Assistant
Churchill, F.	99-00	B.A.Sc.	Latex Synthesis and Characterization	U/G Research Assistant
Lee, J.S.C.	98-00	B.A.Sc.	Surface Tension Characterization of Polystyrene Latex: Concentration Dependence@	U/G Research Assistant
Bell, A.	98-00	B.A.Sc.	Surface Tension Characterization of Polystyrene Latex: Temperature Dependence@	U/G Research Assistant
Mak, C.	95-99	B.A.Sc.	Surface Thermodynamics of Liquid-Liquid-Fluid Systems	U/G Research Assistant

T. Mamo	URA	09/2009-5/2011	Peptide mediated anticancer drug delivery
Jordon Chung	Co-op student	09/2010-04/2011	Li-Battery Technology Research
Ho Jae Cheang	Co-op Student	09/2011-04/2012	Li-Battery Technology Research
Kyung Eun (Kate) Sun	Co-op Student	01/2011-04/2011	Li-Battery Technology Research
Chad Sweeting	Co-op Student	05/2011-08/2011	Peptide self/co-assembly
Muhammad Malik	Co-op Student	05/2011-08/2011	Li-Battery Technology Research
Kayvan Riazi Kermani	Co-op Student	01/2011-04/2011	Material biocompatibility
Kyung Eun (Kate) Sun	Co-op Student	09/2011-12/2011	Li-Battery Technology Research
Josua Markus	Co-op Student	01/2011-04/2011	Li-Battery Technology Research
Helen Fan	Co-op Student	01/2011-08/2011	Peptide-lipid interaction

Megan Logan	Co-op Student	09/2011-12/2011	Peptide biocompatibility
Jordan Chang	Co-op Student	Winter 2012	Li-Battery Technology Research
Josua Markus	Co-op Student	Winter 2012	Li-Battery Technology Research
Matthew Li	Co-op Student	Winter 2012	Li-Battery Technology Research
TAKAYUKI FUKADA	Co-op Student	Winter 2012	Li-Battery Technology Research
Kyung Eun (Kate) Sun	Co-op Student	Winter 2012	Li-Battery Technology Research
Muhammad Jahangir Malik	Co-op Student	Spring 2012	Li-Battery Technology Research
Kyung Eun (Kate) Sun	Co-op Student	Fall 2012	Li-Battery Technology Research
Ho Jae Cheang	Co-op Student	Fall 2012, Winter 2012	Li-Battery Technology Research
Hayden Soboleski	Co-op Student	Winter 2012	Li-Battery Technology Research
Eric Beauregard	Co-op Student	Spring 2012	Li-Battery Technology Research
Eugene Kovalenko	Co-op Student	Spring 2012	Drug Delivery Research
Aaminah Ahmad	Co-op Student	Winter 2012	siRNA Research
Chad Mitchel	Co-op Student	Winter 2012	Drug Delivery Research
Shant Nepal	Co-op Student	1/2013 – 4/2013	Preparation of various high energy cathode materials for lithium rechargeable batteries
Eugene Kovalenko	URA	1/2013 – 4/2013	Thermodynamic Characterization of Interaction between a Peptide-Drug Complex with Serum Proteins
Kimoon Yoo	Co-op Student	1/2013 – 4/2013	Physical chemistry characterization of nanoparticles
Yazan Bdour	Co-op Student	1/2013 – 4/2013	Peptide mediated siRNA delivery
Luke Li	Co-op Student	1/2013 – 4/2013	Development of novel Lithium sulfur battery
Diana Askhatova	Co-op Student	5/2013 – 8/2013	Peptide mediated siRNA delivery in 2D cell culture
Hazel Hye Min Park	Co-op Student	5/2013 – 8/2013	Characterization of various high energy cathode materials for lithium rechargeable batteries
Ho Jea Cheang	URA	5/2013 – 8/2013	Stability test of LiMn ₂ O ₄ on acidic aqueous electrolytes
Piyush Nanda	Co-op Student	5/2013 – 8/2013	Immobilization, Direct Electrochemistry and Electro catalysis of Hemoglobin Using a Novel Modified Electrode Based on EFK8-SWNT Hybrid Coating
Pavel Grebenyuk	Co-op Student	5/2013 – 8/2013	Peptides synthesis and purification
Luke Li	Co-op Student	5/2013 – 8/2013	Performance of aqueous batteries using different current collectors
Jason Li	URA	9/2013 – 12/2013	Stimuli-responsive cationic anti-cancer peptide
Kimoon Yoo	Co-op Student	9/2013 – 12/2013	Peptide mediated siRNA delivery in 3D cell culture
Keely Duke	Co-op Student	9/2013 – 12/2013	Effect of carbon nanotubes incorporated in the peptide hydrogel on the NIH-3T3 cells' behavior

Fourth Year Design Projects:

Gel electrolyte for rechargeable hybrid aqueous battery, 2016-

- 1) Henry Chen, thhchen@uwaterloo.ca
- 2) Jane Su, ying.skyj@gmail.com
- 3) Christine Lee, cmsmlee@uwaterloo.ca
- 4) Julie Cho, h32cho@uwaterloo.ca
- 5) Yan Huang, huangyan82922@gmail.com

Graphene modified polymer membrane for water purification, 2016-

Patrick Chen, patrick.chen@uwaterloo.ca
 Max Andrew Fondyga, mafondyga@uwaterloo.ca

James Victor Figueiredo, Jvfigueiredo@uwaterloo.caJeff Martin, jt3marti@uwaterloo.ca

Rechargeable hybrid aqueous batteries, Chemistry 494A project, 2016-

Shengkai Li, e_li1994@hotmail.com

Students for whom the applicant is/was co-supervisor (when the applicant was a Ph.D. student with Professor A.W. Neumann at the University of Toronto)

M.A.Sc. students: 2

U/G Research Assistants/Thesis Students: 10

Total Grants and/or Contracts

<i>Name of Applicants</i>	<i>Total of Proposal (Funding Source and Program)</i>	<i>Amount per Year</i>	<i>Years of Tenure</i>
i) As Principal Investigator			
P. Chen	Molecular self-assembly of amino acid pairing peptides and their derivatives	33,000	2017-2022
P. Chen	New generation of lithium batteries Positec, multinational corporation, Canada, US, Europe, and China (Industrial Support)	286,000	2015-2018
P. Chen	Surface thermodynamics and adsorption Kinetics (NSERC Discovery Grant)	29,000	2012-2-17
P. Chen	New generation of lithium batteries Positec, multinational corporation, Canada, US, Europe, and China (Industrial Support)	1,300,000	2010-2015
P. Chen et al.	Atomic force microscope for drug delivery Li-ion battery and electronics materials Research (NSERC RTI-1)	149,919	2011-2013
P. Chen	Amino acid pairing peptide mediated Delivery of siRNA (CIHR and NSERC)	195,838	2010-2013
P. Chen, M. Foldvari	Self-assembling peptides for anticancer drug Delivery (NSERC CRD Grant)	90,000	2010-2013
P. Chen, H. Park	Fundamental study on the initial molecular level events occurring during generalized fouling on quartz sleeves in ultraviolet water disinfection photoreactors (MITACS)	45,000	2009-2010
P. Chen	Amino Acid Pairing Peptides and their Applications in Drug Delivery (C4 POP 2)	35,000	2009
P. Chen	Co-assembling Peptides and their Applications in siRNA Delivery and as Transfection Agents (C4 POP 1)	20,000	2009
P. Chen, C. Park R. Thompson	Micro/nanocellular foaming of polymers in supercritical fluids: a rational approach (NSERC Strategic Grant)	87,560	2007-2010
P. Chen	Surface Thermodynamics and Adsorption Kinetics (NSERC Discovery Grant)	28,020	2007-2012

P. Chen, M. Pritzker R. Thompson & 5 others	Peptide Synthesis System for Shared Use (NSERC RTI-1)	128,439	2007
P. Chen	Dean's Graduate Student Support Award	10,000	2006-
P. Chen	UW Incentive Program for Research	8,000	2006
P. Chen	CFI and OIT, Facilities for Nano-Bio-materials Research	384,209	2005
P. Chen	Canada Research Chair in Nano-Bio-Materials (Chem. Eng. UW)	20,000	2004-2014
P. Chen	Canada Research Chair in Nano-Bio-Materials	100,000	2004-2014
P. Chen	Self-assembling Oligopeptides for Drug and Gene Delivery (CIHR Seed Grant)	6,000	2003
P. Chen	Bonding between Flexcon Films and EHC Handrails (Escalator Handrail Company, Onatrio, Contract)	10,000	2002
P. Chen, A.W. Neumann J. Duhamel	Development of Novel Polymeric Membranes and Biomimetic Affinity Ligands for Bioseparation and Immuno-adsorption (Emerging Materials Knowledge Network, ORDCF and MMO)	89,764	2002-2004
P. Chen, R.L.A. Legge, M.D. Pritzker	Facilities for Development of a Novel Affinity Membrane for Fast Purification of Biomolecules and Immuno-adsorption (NSERC Equipment Grant)	49,502	2001
P. Chen, A. Nathan M.D. Pritzker, C. Tzoganakis	Scanning Probe Microscope for Surface Characterization and Molecular Engineering (NSERC Equipment Grant)	72,340	2001
P. Chen	Interfacial Engineering of Polymeric and Biological Materials (Premier's Research Excellence Award, Ontario)	150,000	2001-2005
P. Chen, L. Jones	Wettability of Multipurpose Solutions with Contact Lens Materials (Allergan, USA., Contract)	26,692	2000
P. Chen	Free Energy Characterization of Polymer Surfaces (Materials and Manufacturing Ontario (MMO), New Faculty Program)	30,000	2000
P. Chen	Study of Injection Moulded Corner Splitting (British Tire & Rubber Sealing Systems North America and MMO, Interact Program)	20,000	2000
P. Chen	Surface Thermodynamics and Adsorption Kinetics of Surfactants and Biopolymers (NSERC Individual Research)	28,350	1999-2007
P. Chen	Protein-Protein and Protein-Lipid Interactions at Interfaces (UW R.A. Support Program for New Faculty)	6,750	1999-2001
P. Chen	Apparatus for Multi-functional Axisymmetric Drop Shape Analysis	73,007	1999

	(NSERC Equipment Grant)		
P. Chen, Z.Y.J. Chen	Protein Adsorption at Liquid-Liquid Interfaces (UW Interdisciplinary Grant Award)	20,000	1999
P. Chen	Waterloo Centre for Interfacial Engineering (Canada Foundation for Innovation (CFI) - New Opportunities)	80,000	1999
P. Chen	Polymer Surface Characterization (Institute for Polymer Research, UW, Special Research Grant)	15,000	1999
P. Chen	Applied Surface Thermodynamics (UW Faculty Startup Fund)	30,000	1998

Total Funding Received as PI	10,798,466
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ii) As Co-Applicant

X. Li, P. Chen	Liquid water removal through nano-creation of superhydrophobic surface properties in PEM fuel cells (NSERC Strategic Grant)	98,700	2008-2010
R. Legge, P. Chen & 3 others	Surface plasmon resonance (SPR) facility Investigating biomolecule interactions	129,172	2007
P. Chou, P. Chen & 3 others	Ultracentrifuge for shared use	132,000	2007
M. Liu, P. Chen (co-PI) & B. Han	Ventilator-induced lung injury: from Mechanotransduction to molecular therapy (CIHR Operating Grant)	157,000	2006-2011
C.B. Park & 3 others	CFI and OIT, Facilities for Manufacturing Microcellular and Nanocellular Plastics	1,715,225	2004
Siva Sivoththaman & Six others	CFI and OIT, Centre for Advanced Photovoltaic Devices and Systems	11,400,000	2004
E. Jervis, P. Chen, P. Fieguth	High-throughput Single Cell Imaging for Proteome Analysis and Drug Discovery (NSERC Strategic)	89,930	2003-2006
R.Y.M. Huang, P. Chen & three others	Development and Preparation of Novel Thin Film Composite Membranes for the Pervaporation Dehydration of Organic Solvents of Industrial Interest (NSERC Strategic)	84,430	2003-2006
J. Forrest, P. Chen and six others	Facility for Confined Complex Fluids and Polymers Characterization (CFI and OIT)	1,644,353	2002
M. Pritzker, P. Chen, R.L. Legge	Advanced Electrochemical System for Materials Science, Polymer and Biochemical Applications (NSERC Equipment)	43,630	2000
A. Nathan, P. Chen	Flexible Electronics (NSERC Strategic)	123,500	1999-2002

Total Funding Received as Co-Investigator	17,114,720
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