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Professor Janine Mauzeroll

Correspondence language: English

Contact Information

The primary information is denoted by (*)

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Professor Janine Mauzeroll

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
Danish	Yes	No	Yes	Yes	No
English	Yes	Yes	Yes	Yes	Yes
French	Yes	Yes	Yes	Yes	Yes
Spanish; Castilian	Yes	Yes	Yes	Yes	Yes

Degrees

- 2005/5 — Post-doctorate, Chemistry, Université de Paris VII (Denis Diderot)
  Supervisors: Jean-Michel Savéant et Damien Marchal, 2004/6 - 2005/6
- 2004/5 — Doctorate, Chemistry, University of Texas at Austin
  Supervisors: Allen J. Bard, 1999/9 - 2004/5
- 1999/6 — Bachelor's, Chemistry, McGill University
  Supervisors: R. Bruce Lennox, 1998/5 - 1998/8

Recognitions

2015/1
Fred Beamish Award
Canadian Society for Chemistry Analytical Chemistry Division
Prize / Award
This Award is presented to an individual who demonstrates innovation in research in the field of analytical chemistry, where the research is anticipated to have significant potential for practical applications.

User Profile

Research Specialization Keywords: Cells, Electrochemistry, Enzymes, Ion Channels, Nanoelectrodes, Numerical Simulation, Oxidatif Stress, SECM, Self-Assembled Monolayers, Ultramicroelectrodes

Employment

2020/4
President of the McGill Association of University Teachers (MAUT)
Chemistry, Science, MAUT
Part-time
Tenure Status: Non Tenure Track

2018/9	Professor Chemistry, Science, McGill University Full-time, Professor Tenure Status: Tenure
2017/5 - 2020/4	External VP of the McGill Association of University Teachers (MAUT) Chemistry, Science, MAUT Part-time Tenure Status: Non Tenure Track
2012/1 - 2018/8	Associate Professor Chemistry, Science, McGill University Full-time, Associate Professor Tenure Status: Tenure
2006/7 - 2011/12	Associate Professor Chemistry Department / Faculty of Science, Science, Université du Québec à Montréal Full-time, Associate Professor Tenure Status: Tenure
2006/9 - 2011/4	Adjunct Professor Chemistry and Biochemistry, Science, Concordia University Full-time Tenure Status: Non Tenure Track
2005/6 - 2006/7	Assistant Professor Chemistry Department / Faculty of Science, Science, Université du Québec à Montréal Full-time, Assistant Professor Tenure Status: Tenure Track
2005/10 - 2005/11	Maître de conférence invité Laboratoire Environnement et Chimie Analytique, Science, École supérieure de physique et de chimie industrielles Part-time, Lecturer Tenure Status: Non Tenure Track
2005/6 - 2005/9	Professeur invité Laboratoire d'électrochimie moléculaire, Science, Université de Paris VII (Denis Diderot) Part-time, Visiting Professorship Tenure Status: Non Tenure Track

Research Funding History

Awarded [n=13]

2021/10 - 2027/9 Co-applicant	Protection of Metallic Surfaces from Bulk to Nano Through Molecular-level Innovation., Grant **Funding Sources:** New Frontiers in Research Fund Transformation Total Funding - 24,000,000 Portion of Funding Received - 1,200,000 Funding Competitive?: Yes
2019/1 - 2023/12 Co-applicant	Fatigue and Corrosion-Fatigue Behavior of 13Cr-4Ni Steels and Additively Manufactured Alloys, for Application to Large Size Components such as Hydrolic Turbines and Machineries, Grant **Funding Sources:**

Natural Sciences and Engineering Research Council of Canada (NSERC)
CRD
Total Funding - 605,260
Portion of Funding Received - 118,010
Funding Competitive?: Yes

Co-applicant : Bocher, Philippe; Bois-Brochu, Alexandre; Fihey, Jean-Luc; Harvey, Jean-Philippe;

Principal Applicant : Brochu, Myriam

2021/9 - 2023/8
Principal Applicant

Study of the synergistic effects of fatigue and corrosion in CA6NM steels and welds for hydraulic turbine applications, Grant

Funding Sources:
Mitacs
Accelerate
Total Funding - 94,000
Portion of Funding Received - 94,000
Funding Competitive?: Yes

2018/10 - 2022/10
Co-applicant

Green Surface Engineering for Advanced Manufacturing (Green-SEAM), Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Strategic Network
Total Funding - 4,500,000
Portion of Funding Received - 45,000
Funding Competitive?: Yes

2021/10 - 2022/9
Principal Applicant

Development of Hormone At-Home Testing Kits, Grant

Funding Sources:
Mitacs
Accelerate
Total Funding - 19,000
Portion of Funding Received - 19,000
Funding Competitive?: Yes

2020/5 - 2022/5
Co-applicant

FRQNT-QCAM Collaborative Project: Development of high spatial resolution electrochemical mapping of fuel cell and electrolyzers, Grant

Funding Sources:
CQMF-QCAM
Collaborative Project
Total Funding - 20,000
Portion of Funding Received - 6,667
Funding Competitive?: Yes

Co-applicant : Mauzeroll, Janine; Schougaard, Steen; Shuhui, Sun

2019/4 - 2022/3
Principal Investigator

Development of pH-Responsive Carriers for the Controlled Release of Encapsulated Acidifying and Antibacterial Agents, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
CRD
Total Funding - 223,200
Portion of Funding Received - 111,600
Funding Competitive?: Yes

Co-applicant : Thibodeaux, Christopher

2019/5 - 2021/5
Principal Applicant

FRQNT-QCAM Collaborative Project: Solid-state 2H NMR and molecular dynamics studies of redox-responsive liposomes: Understanding the mechanism of oxidatively-triggered membrane disassembly, Grant

Funding Sources:
CQMF-QCAM
Collaborative Project
Total Funding - 20,000
Portion of Funding Received - 10,000
Funding Competitive?: Yes

Co-applicant : Lafleur, Michel; Mauzeroll, Janine

2016/7 - 2020/7
Co-applicant

Structural Evolution of Electrode Materials and Mitigation of Degradation by Mn-Trapping in Li-Ion Batteries via Complementary Characterization Methods and Mathematical Modeling, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
CRD
Total Funding - 798,000
Portion of Funding Received - 195,000
Funding Competitive?: Yes

Co-applicant : Botton, Gianluigi; Protas, Bartosz; Schougaard, Steen B;

Principal Applicant : Goward, Gillian R

2018/6 - 2020/6
Co-applicant

Les études des électrocatalyseurs hybrides à l'échelle nano, Grant

Funding Sources:
Fonds de recherche du Québec - Nature et technologies (FRQNT)
Team
Total Funding - 162,000
Portion of Funding Received - 54,000
Funding Competitive?: Yes

Co-applicant : Bélanger, Daniel;

Principal Applicant : Byers, Joshua

2018/5 - 2020/4
Co-applicant

Development of Numerical & Experimental Tools to Support the Design of Corrosion Resistant Aluminum Alloys & Multimaterials Components, Grant

Funding Sources:
Centre québécois de recherche et de développement de l'aluminium (CQRDA)
PSO-V2B
Total Funding - 285,000
Portion of Funding Received - 285,000
Funding Competitive?: Yes

Principal Applicant : Gallant, Danick

2018/5 - 2020/4
Co-applicant

Quantification du comportement en fatigue-corrosion des aciers 13Cr-Ni utilisés pour fabriquer les roues de turbines hydrauliques, Grant

Funding Sources:
Consortium de Recherche et d'Innovation en transformation métallique (CRITM)
AXE 2 : Conception de produits métalliques avancés
Total Funding - 385,000
Portion of Funding Received - 84,932
Funding Competitive?: Yes

Co-applicant : Bocher, Philippe; Bois-Brochu, Alexandre; Fihey, Jean-Luc; Harvey, Jean-Philippe;

Principal Applicant : Brochu, Myriam

2016/4 - 2020/3
Principal Applicant

Developing High Speed Scanning Electrochemical Microscopy of Biological Substrates, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Discovery
Total Funding - 225,000
Portion of Funding Received - 225,000
Funding Competitive?: Yes

Completed [n=15]

2018/3 - 2020/3
Co-applicant

FRQNT-QCAM Collaborative Project: Multifunctional nanosensors for neuroscience: unraveling mechanisms of neurotransmission, Grant

Funding Sources:
CQMF-QCAM
Collaborative Project
Total Funding - 20,000
Portion of Funding Received - 10,000
Funding Competitive?: Yes

Co-applicant : Masson, Jean-François; Mauzeroll, Janine

2016/10 - 2019/10
Principal Applicant

Surface Engineering of Advanced Composite Coatings for Significant Enhancement to the Life Cycle of HydroPower Infrastructure, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
strategic
Total Funding - 427,500
Portion of Funding Received - 142,500
Funding Competitive?: Yes

Co-applicant : Chromik, Richard; Moreau, Christian

2018/4 - 2019/5
Principal Applicant

Modeling of ASTM A27 Carbon Steel Hydraulic Turbine Runner Degradation by Synergistic Effects of Erosion-Cavitation and Corrosion under Dynamic Turbulent Flow, Grant

Funding Sources:
Mitacs inc.
Accelerate
Total Funding - 30,000
Portion of Funding Received - 30,000
Funding Competitive?: Yes

2018/4 - 2019/3
Principal Investigator

Synthesis and Characterization of Superhydrophobic Coatings on Stainless Steel for Hydraulic Energy Systems, Grant

Funding Sources:
Mitacs Inc.
Globalink
Total Funding - 6,000
Portion of Funding Received - 6,000
Funding Competitive?: Yes

2017/12 - 2018/12
Principal Applicant

Redox Triggered Drug Carrier Liposome, Grant

Funding Sources:
Aligo Innovations
Sponsorship Investment
Total Funding - 25,000
Portion of Funding Received - 25,000
Funding Competitive?: No

2018/1 - 2018/12
Principal Investigator

Service contract: Engineering Duties within the Automotive and Surface Transport Portfolio (Mr. Richard Menini), Contract

Funding Sources:
National Research Council Canada (NRC) (Ottawa, ON)
Contract
Total Funding - 25,000
Portion of Funding Received - 25,000
Funding Competitive?: No

2016/1 - 2016/12
Principal Applicant

Idea to Innovation Grants: Manufacturing of Flow Systems and Microelectrodes having a Controlled Geometry, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Idea to Innovation Grants
Total Funding - 121,000
Portion of Funding Received - 121,000
Funding Competitive?: Yes

2014/10 - 2016/10
Co-applicant

Evaluating the Use of N-Heterocyclic Carbenes in Corrosion Resistant Coatings for Aluminum and Magnesium Alloys, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Strategic Partnership Grants
Total Funding - 458,553
Portion of Funding Received - 269,214
Funding Competitive?: Yes

Co-applicant : Crudden, Cathleen; Horton, Hugh

2016/4 - 2016/3
Principal Applicant

National Research Council Canada's Industrial Research Assistance Program, Grant

Funding Sources:
National Research Council Canada (NRC) (Ottawa, ON)
Industrial Research Assistance Program
Total Funding - 32,000
Portion of Funding Received - 32,000
Funding Competitive?: Yes

2015/1 - 2015/12
Principal Investigator

Testing and Evaluation of Electrochemical Cleaning, Contract

Funding Sources:
General Motors Canada
Contract
Total Funding - 15,600
Portion of Funding Received - 15,600
Funding Competitive?: No

2015/8 - 2015/10
Principal Investigator

Electrodes for HeKa, Contract

Funding Sources:

HEKA Electronik a division of Havard Bioscience Inc
Contract
Total Funding - 1,000
Portion of Funding Received - 1,000
Funding Competitive?: No

2012/7 - 2015/7
Co-investigator

In Situ Studies of Electrochemical Processes in Automotive Materials, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Automotive Partnership Canada
Total Funding - 2,281,600
Portion of Funding Received - 250,976
Funding Competitive?: Yes

Co-applicant : Button, Gianluigi; Protas, Bartosz; Schougaard, Steen; Sun, Andy;

Principal Investigator : Goward, Gillian

2011/3 - 2015/4
Principal Applicant

Predicting Corrosion of Magnesium Alloys with Complex Microstructure and Reactivity, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
Collaborative Research and Development Grant
Total Funding - 973,000
Portion of Funding Received - 324,333
Funding Competitive?: Yes

Co-applicant : Botton, Gianluigi; Shoesmith, David

2011/4 - 2015/4
Co-applicant

CREATE Training Program in Neuroengineering, Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC)
CREATE
Total Funding - 1,350,000
Portion of Funding Received - 120,000
Funding Competitive?: Yes

Principal Applicant : Lennox, RB and 10 co-applicants

2013/3 - 2015/4
Principal Investigator

Méthode analytique d'amplification à base de nanosphères électrochimiquement luminescentes permettant la detection de trace de biomarqueurs, Grant

Funding Sources:
Fonds Québécois de la Recherche sur la Nature et les Technologies (FQRNT)
Team
Total Funding - 150,000
Portion of Funding Received - 50,000
Funding Competitive?: Yes

Co-applicant : Canesi, Sylvain; Sleiman, Hanadi

Under Review [n=3]

2021/9 - 2024/8
Principal Applicant

Micro-electrochemical investigation of aluminum alloy / surface-finish / conversion coating combinations to explain their propensity to cosmetic corrosion, Grant

Funding Sources:
National Research Council Canada (NRC) (Ottawa, ON)
Collaborative R&D Initiative

Total Funding - 246,519
Portion of Funding Received - 147,911
Funding Competitive?: Yes

2021/9 - 2024/8
Principal Applicant

Using Dynamic Flow Electrolysis and Mechanochemistry to Enhance the Performance of Gold Production., Grant

Funding Sources:
Natural Sciences and Engineering Research Council of Canada (NSERC) Alliance
Total Funding - 459,714
Portion of Funding Received - 221,714
Funding Competitive?: Yes

Co-applicant : Friscic, Tomislav; Lumb, Jean-Philip

2021/9 - 2024/8
Co-applicant

Micro-electrochemical investigation of aluminum alloy / surface-finish / conversion coating combinations to explain their propensity to cosmetic corrosion, Grant

Funding Sources:
Centre québécois de recherche et de développement de l'aluminium (CQRDA)
Total Funding - 223,041
Portion of Funding Received - 134,520
Funding Competitive?: Yes

Principal Applicant : Morel, Alban

Student/Postdoctoral Supervision

Bachelor's [n=2]

2019/5 - 2019/8
Principal Supervisor

Merino, Guido (Completed) , McGill University
Thesis/Project Title: Development of a pH Sensor for Crevice Corrosion
Present Position: BSc. in Chemistry, McGill University

2018/4 - 2018/9
Co-Supervisor

Song, Amy (Completed) , McGill University
Thesis/Project Title: *In situ* Monitoring of pH Variations of the Mussel Byssus
Present Position: BSc. Student, McGill University

Bachelor's Honours [n=10]

2019/5 - 2019/8
Principal Supervisor

Karageorghis, Philip (Completed) , McGill University
Thesis/Project Title: Quantification of Galvanic Current Densities for Validation of a Digital Model
Present Position: BSc. in Chemistry, McGill University

2019/5 - 2019/8
Co-Supervisor

Szeptycki, Hannah (Completed) , McGill
Thesis/Project Title: Use of a Gold-Silver Alloy Nanoparticle Ring as an Electrocatalyst
Present Position: BSc. in Chemistry, McGill University

2017/9 - 2017/12
Co-Supervisor

Meng, Beryl (Completed) , McGill University
Thesis/Project Title: *In Situ M*onitoring of pH Variations of the Mussel Byssus
Present Position: JD Candidate, Law School, Queen's University

2017/5 - 2017/9
Principal Supervisor

Robert, Anaïs (Completed) , McGill University
Thesis/Project Title: In vitro Cytotoxicity of Redox-Sensitive Liposomes Co-Encapsulating Doxorubicin and Indomethacin
Present Position: MSc. in Neuroscience, McGill University

2017/5 - 2018/1 Principal Supervisor	Lin, Monica (Completed) , McGill University Thesis/Project Title: Preparation and Evaluation of Ferrocene-containing Surfactants in Redox-sensitive Liposomes Present Position: PhD. Candidate U. Texas, UT Austin
2017/5 - 2018/1 Principal Supervisor	Potts, Karlie (Completed) , McGill University Thesis/Project Title: Design of a Spectroelectrochemical Instrument to further Investigate Electrochemilumiscence Wystems Present Position: MSc. in Chemistry, McGill University
2017/5 - 2017/9 Principal Supervisor	Sifakis, Joseph (Completed) , McGill University Thesis/Project Title: A Study on the Dependence of Response Time and Sensitivity of Peroxide Oxidation Towards the Surface Roughness of Platinum Microelectrodes Present Position: PhD. Candidate, University of Chicago
2016/4 - 2017/8 Principal Supervisor	Halimi, Ilias (Completed) , McGill university Thesis/Project Title: ?Surface Analysis of Advanced Composite Coatings for Significant Enhancement to the Life Cycle of HydroPower Infrastructure Present Position: PhD. Candidate, U. Toronto
2015/5 - 2016/5 Principal Supervisor	Gordon, Jesse (Completed) , McGill university Thesis/Project Title: Electrochemical Luminescence Instrument Design Present Position: PhD. Candidate, MIT
2014/5 - 2015/4 Principal Supervisor	Gateman, Samantha (Completed) , McGill University Thesis/Project Title: Development of Hg/Pt Hemispherical Nanoprobes for the Localized Quantitative Detection of Mn^{2}?:Proof of Concept Present Position: PhD. Candidate, McGill University

Master's Thesis [n=1]

2016/9 - 2019/7 Principal Supervisor	Skånvik, Sebastian (Completed) , McGill University Thesis/Project Title: Measuring MRP1 Transport Activity in SECM Feedback Mode Present Position: PhD. Candidate, Aarhus University, Aarhus University, Denmark

Doctorate [n=21]

2021/9 - 2025/8 Principal Supervisor	Abdolhosseini, Marzieh, McGill University Thesis/Project Title: N/A Present Position: PhD Candidate
2020/9 - 2025/9 Principal Supervisor	Suduwella, Thilini Malsha (In Progress) , McGill University Thesis/Project Title: Scanning Electrochemical Microscopy Studies of Corrosion Systems Present Position: PhD. Candidate
2020/9 - 2025/9 Principal Supervisor	Du, Changyue (In Progress) , McGill University Thesis/Project Title: Electrochemical Studies of Redox Triggered Self-Assembled Materials Present Position: PhD. Candidate
2019/9 - 2024/9 Principal Supervisor	Yassine, Sarah (In Progress) , McGill University Thesis/Project Title: In-situ corrosion characterization during fatigue crack growth testing Present Position: PhD Candidate
2019/9 - 2024/9 Principal Supervisor	Leslie, Nathaniel (In Progress) , McGill University Thesis/Project Title: Super-resolution SECM imaging Present Position: PhD Candidate

2019/1 - 2024/1 Principal Supervisor	Zhou, Hu (In Progress) , McGill University Thesis/Project Title: Corrosion Modeling of Tafel Behavior of Aluminum Alloy Present Position: PhD. Candidate, McGill University
2018/9 - 2019/8 Co-Supervisor	Zhou, Haifeng (Completed) , Jiangnan University Thesis/Project Title: Combination of Electrochemistry and SERS for Cell Metabolite Analysis Present Position: PhD. Candidate Intern, Jiangnan University
2017/9 - 2021/8 Principal Supervisor	Li, Yuanjiao (In Progress) , McGill University Thesis/Project Title: Scanning Micropipet Cell Microscopy Study of Aluminum Alloys Present Position: PhD. Candidate, McGill University
2017/9 - 2021/8 Co-Supervisor	Dawkins, Jeremy (In Progress) , McGill University Thesis/Project Title: Investigations of Dual Layer Cathode Assemblies Present Position: PhD. Candidate, McGill University
2016/9 - 2021/9 Principal Supervisor	Moussa, Siba (In Progress) , McGill university Thesis/Project Title: Developing a Fabrication Methodology for D-Serine Biosensors for in vitro Studies Present Position: PhD. candidate, McGill, McGill University
2016/9 - 2021/4 Principal Supervisor	Pan, Yani (In Progress) , McGill University Thesis/Project Title: Development of Noble Metal and Alloyed Nanoparticle Rings of Electrocatalyst Present Position: PhD. candidate, McGill University
2015/9 - 2020/12 Principal Supervisor	Gateman, Samantha (Completed) , McGill University Thesis/Project Title: Investigation of Corrosion Protecting Complex Composite Materials for Metal Systems using Scanning Electrochemical Microscopy Present Position: PhD. candidate, McGill University
2015/9 - 2019/12 Principal Supervisor	Stephens, Lisa (Completed) , McGill University Thesis/Project Title: Model Development for Corrosion Phenomenon on Metal-Coating Present Position: PhD. candidate, McGill University
2015/7 - 2021/8 Principal Supervisor	Odette, William (Completed) , McGill University Thesis/Project Title: Investigating Redox-Active Vesicles for Drug Delivery Transport Purposes Present Position: PhD. candidate, McGill, McGill University
2014/10 - 2019/8 Principal Supervisor	Dayeh, Malak (Completed) , McGill University Thesis/Project Title: Localized Investigation of the Electrochemical Properties of Lithium-Ion battery Materials Using Scanning Micropipette Contact Method Present Position: PhD. Candidate, McGill University
2013/9 - 2019/7 Principal Supervisor	Danis, Andrew (Completed) , McGill University Thesis/Project Title: Developing a Tailorable Spectroelectrochemical System for the Assessment of Novel Ruthenium Nanospheres Present Position: Postdoctoral Fellow, University of Illinois at Urbana-Champaign
2013/9 - 2019/8 Principal Supervisor	Payne, Nicholas (Completed) , McGill University Thesis/Project Title: Electrochemical Scanning Probe Methods for the Investigation of Passivating Surface Films and Permeable Media Present Position: PhD. candidate, McGill University
2011/9 - 2017/6 Principal Supervisor	Polcari, David (Completed) , McGill University Thesis/Project Title: Investigation of Live Cell Processes using Scanning Electrochemical Microscopy Present Position: Business Manager at Systems for Research, Systems for Research

2011/9 - 2015/9 Principal Supervisor	Dauphin Ducharme, Philippe (Completed) , McGill University Thesis/Project Title: Development of Magnesium Selective Sensor for Corrosion Studies Present Position: Postdoctoral Fellow, University of California, Santa Barbara
2011/5 - 2016/8 Principal Supervisor	Danis, Laurence (Completed) , McGill University Thesis/Project Title: Development of Commercial Shear-Force Based Microelectrodes Present Position: Technical Advisor (patents), ROBIC
2011/4 - 2015/9 Principal Supervisor	Kuss, Sabine (Completed) , McGill University Thesis/Project Title: Electrochemical Quantification of Multidrug Resistance Phenotype Present Position: Assistant Professor, U. Manitoba, Department of Chemistry U. Manitoba

Post-doctorate [n=11]

2020/2 - 2022/2 Principal Supervisor	Chhin, Danny (In Progress) , McGill University Thesis/Project Title: Modeling of corrosion systems Present Position: Postdoctoral Fellow
2019/9 - 2021/8 Principal Supervisor	Mena Morcillo, Emmanuel (Completed) , McGill University Thesis/Project Title: Development of experimental tools to support thedesign of corrosion resistant aluminum alloys & multi-materials components Present Position: Postdoctoral Fellow
2019/2 - 2019/11 Principal Supervisor	Pasqualeti, Anielli (Completed) , McGill University Thesis/Project Title: Modeling of ASTM A27 Mild Steel Hydraulic Turbine Runner Degradation by Synergistic Effects of Erosion-Cavitation and Corrosion under Dynamic Turbulent Flow Present Position: Postdoctoral Fellow
2018/11 - 2019/11 Principal Supervisor	Paschoalino Jr., Waldemir (Completed) , McGill University Thesis/Project Title: Investigation of the Electrocatalytic Activity of Sensors based on Graphene Oxide Decorated with Pt, Au or Ag by Scanning Electrochemical Microscopy Present Position: Postdoctoral Fellow
2018/6 - 2018/10 Principal Supervisor	Georgescu, Nicholas (Completed) , McGill University Thesis/Project Title: Modeling of ASTM A27 Mild Steel Hydraulic Turbines Runners Degradation by Synergistic Effects of Erosion-Cavitation and Corrosion under Dynamic Turbulent Flow. Present Position: Research Associate, Case Western Reserve University
2017/1 - 2019/1 Co-Supervisor	Ghavidel, Mohammadreza (Completed) , McGill University Thesis/Project Title: Potentiometric Titration and Mn Ions Detection In Order to Study Multifunctional Materials Present Position: Corrosion and Materials Specialist, Camber Technology Corporation
2015/12 - 2017/11 Principal Supervisor	Perry, Samuel (Completed) , McGill University Thesis/Project Title: Electrochemical Sensors for Biological Systems and Corrosion Present Position: Research Fellow, University of Southampton
2014/9 - 2015/11 Principal Supervisor	Kuss, Christian (Completed) , McGill University Thesis/Project Title: Simulating Galvanic Corrosion Present Position: Assistant Professor, Department of Chemistry U. Manitoba
2014/3 - 2018/1 Principal Supervisor	Noyhouzer, Tomer (Completed) , McGill University Thesis/Project Title: Investigation of Redox Active Giant Unilamellar Vesicles Present Position: Specialist, New Technology Analysis, CATSA / ACSTA
2013/1 - 2016/5 Co-Supervisor	Snowden, Michael (Completed) , McGill University Thesis/Project Title: SECM Application to Battery Technology Present Position: KTP Research Associate, Process Instruments, Burnley, UK

2012/4 - 2015/4 Principal Supervisor	Mengesha, Ushula Tefashe (Completed) , McGill University Thesis/Project Title: PredictingCorrosion Behavior of Magnesium Alloys Present Position: Postdoctoral Fellow, NRC Alberta

Diploma [n=2]

2015/5 - 2015/9 Principal Supervisor	Lessard, Alicia (Completed) , Collège Jean-de-Brébeuf Thesis/Project Title: Thermodynamic Studies of Electrochemical Processes Present Position: Medical student, McGill University
2013/5 - 2015/8 Principal Supervisor	Langlois-Therien, Timothé (Completed) , Collège Jean-de-Brébeuf Thesis/Project Title: Electrochemical Deposition of Pt on Indium Tin Oxide Glass to use as Counter Electrode in Dye-Sensitized Solar Cells Present Position: BSc. Student in Neuroscience, McGill University

Event Administration

2019/1 - 2020/1	Chair, Electrochemistry-Gordon Research Conference: Fundamental Electrochemistry Fostering Innovations in Energy, Analytical and Biochemical Sciences, Conference, 2020/1 - 2020/1
2017/6 - 2018/1	Vice-Chair, Electrochemistry-Gordon Research Conference: Advances in Fundamental Electrochemistry Applied to Catalysis, Biochemistry, Organic Chemistry, Analytical Chemistry, and Energy, Conference, 2018/1 - 2018/1
2016/7 - 2017/5	Co-Organizer, 100th Canadian Chemistry Conference and Exhibition- Surface Electrochemistry, Conference, 2017/5 - 2017/6

Editorial Activities

2018/1 - 2020/12	Member of the Editorial Advisory Board, ACS Analytical Chemistry, Journal
2017/1 - 2020/12	Member of the Editorial Advisory Board, ChemElectroChem, Journal
2016/12 - 2020/12	Technical Editor for the Organic & Bioelectrochemistry area, Journal of The Electrochemical Society, Journal
2016/1 - 2020/1	Member of the Editorial Board, Journal of the Electrochemical Society, Journal

Committee Memberships

2019/5	Committee Member, McGill Internal Selection Committee - CFI 2020 Innovation Fund, Canada Foundation for Innovation McGill's Internal Selection Committee as an internal expert reviewer. The mandate of the committee is to review proposals and provide feedback, both scientifically and on overall feasibility, to enhance the proposals during the development phase.

2019/3	Committee Member, International Scientific Committee of the D-amino acids International Research Center, DAAIR The D-amino acids International Research Center (DAAIR) has been established by the Fondazione Istituto Insubrico di Ricerca per la Vita (http://www.ricercaperlavita.it/en/), an Italian no-profit foundation aimed to support research in the life science field. This Center aims to facilitate the exchange of information and collaboration between researchers active in the D-amino acid field, boost scientific dissemination activities, serve as a tool for scientific and professional education, support, perform, and coordinate studies in the field of D-amino acids and advance technology transfer to enterprises.
2016/1	Committee Member, Member of the NSERC Chemistry Liaison Committee (NCLC), Natural Sciences and Engineering Research Council of Canada (NSERC)
2016/1	Committee Member, Member of the Organic & Bioelectrochemistry Division's Executive Committee of the ECS, Electrochemical Society
2017/1 - 2018/12	Committee Member, Multidisciplinary Assessment Committee (MAC) for the Canada Foundation for Innovation's (CFI) 2017 Innovation Fund competition, Canada Foundation for Innovation
2015/1 - 2015/12	Committee Member, Member of the Advisory Committee of CFI for the John R. Evans Leaders Fund (JELF), Canada Foundation for Innovation
2015/1 - 2015/12	Committee Member, Member of the multidisciplinary assessment committee (MAC) of CFI for the Innovation Funds, Canada foundation for innovation

Presentations

1. (2021). Developing in-situ methods to track concentration profiles in lithium ion batteries. Post Lithium Storage Cluster of Excellence,1st Virtual International Workshop on Post-Li Research: Women in Focus (July 27), Berlin, Germany
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No
2. D. Rollison, I. Zenyuk, P. Kamat J. Yang, S. Minteer, K. Mathiram, M. Hatzell, J. Mauzeroll, C. Haynes, A. Stephan, D.Siegel, J. Noël. (2021). Career Panel. Next Generation Electrochemistry (NGenE) Panel, June 16 (Virtual), Chicago, United States
   Invited?: Yes, Keynote?: No
3. P. Kamat, J. Mauzeroll, S. Minteer, A. Stephan. (2021). Publishing electrochemical research. Next Generation Electrochemistry (NGenE) Panel, June 16 (Virtual), Chicago, United States
   Invited?: Yes, Keynote?: No
4. C. Haynes, J. Mauzeroll, M. Shen, J. Venton. (2021). Frontiers in neuroelectrochemistry. Next Generation Electrochemistry (NGenE) Panel, June 15 (Virtual), Chicago, United States
   Invited?: Yes, Keynote?: No
5. (2021). The Wonderful World of Scanning Electrochemical Microscopy (SECM). Inside Scientific Webinar (March 10), London, Canada
   Invited?: Yes, Keynote?: No
6. (2021). The Wonderful World of Scanning Electrochemical Microscopy. Guelph University Department of Chemistry Talk. April 28 (Virtual), Guelph, Canada
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

7. (2021). Surfaces of Engineering Alloys and Complex Architectures Studied Using Electrochemical Imaging. 72th Annual Meeting of the International Society of Electrochemistry, 29 August-3 September (Virtual), Jeju Island, Korea, Republic of
Invited?: Yes, Keynote?: Yes

8. (2020). Development and Application of D-Serine Enzymatic Biosensors in Neuroscience Research. Queens College, City University of New York Department of Chemistry Seminar, Virtual Presentation (Nov. 2), New York, United States
Invited?: Yes, Keynote?: No

9. (2020). Super-resolution Scanning Electrochemical Microscopy. Pittcon (March 2), Chicago, United States
Invited?: No, Keynote?: No

10. (2020). The Wonderful World of Scanning Electrochemical Microscopy. University of Michigan, Department of Chemistry Virtual conference (Nov17), Ann Arbour, United States
Invited?: Yes, Keynote?: No

11. (2019). Redox-Triggered Disassembly of Nanosized Liposomes Containing Ferrocene-Appended Amphiphiles. 102nd Canadian Chemistry Conference and Exhibition Symposium (Division): Analytical, Physical and Interfacial Electrochemistry in Honour of Jacek Lipkowski Session: Analytical, Physical and Interfacial Electrochemist. June, 5, Quebec, Canada
Main Audience: Researcher
Invited?: No, Keynote?: Yes

12. (2019). Development and Application of D-Serine Enzymatic Biosensors in Neuroscience Research. 235th ECS Meeting Symposium: K01: Bioelectrochemistry: From Nature-Inspired Electrochemical Systems to Electrochemical Biosensors, May 27, Dallas, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

13. (2019). Neurologically Relevant Enzyme Expression and Engineering for D-Amino Acid Enzymatic Electrochemical Biosensor Development.236th ECS Meeting (October 13-17), Atlanta, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

14. (2019). Super-resolution electrochemical microscopy. 11th Potter’s Lodge Meeting on Electrochemistry (September 4), Blue Mountain Lake, NY, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

15. (2019). Diversity Training in STEM for Students. Workshop, June 28, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

16. (2019). Redox Triggered Vesicles a Promising Approach for Drug Delivery. Departmental Seminar on Chemical Bond Activation, June 24, Oldenburg, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

17. (2019). From Macro to Micro: Using Electrochemical Methods to Investigate the Effect of Alloy Chemistry on Corrosion. Cluster of Excellence RESOLV Ruhr-Universität Bochum Seminar (July 1), Bochum, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

18. (2019). Diversity Training in STEM for Faculty. Workshop, June 28, Berlin, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

19. (2019). Quantitative SECM: Mathematical Method. 10th Workshop on Scanning Electrochemical Microscopy and Related Techniques (September 29), Paris, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No

20. (2019). Jobs in North America. Seminar with PhD. students, June 25, Oldenburg, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

21. (2019). Using Macro and Micro Electrochemical Methods to Understand the Corrosion Behavior of Stainless Steel Thermal Spray Coatings & Mg/Al Diffusion Couples. 236th ECS Meeting (October 13-17), Atlanta, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

22. (2019). The Wonderful World of Scanning Electrochemical Microscopy (SECM). 236th ECS Meeting (October 13-17), Atlanta, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

23. (2019). Combined Photoelectrochemical and Simulated Insights into the Electrogenerated Chemiluminescence Coreactant Mechanism. 102nd Canadian Chemistry Conference and Exhibition Session:Analytical Platforms and Functional Materials, June 5, Quebec, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

24. (2019). Microelectrodes: An Overview of Probe Development and Bioelectrochemistry Applications. Prof. Wittstock Research Group Seminar, June 25, Oldenburg, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

25. (2018). Development and Application of D-serine Enzymatic Biosensors in Neuroscientific Research. Western University Department of Chemistry Lecture, Dec. 11, London, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

26. (2018). The Power Hour. Gordon Conference in Electrochemistry, Jan. 7, Ventura, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

27. (2018). The Wonderful World of Scanning Electrochemical Microscopy (SECM). UBC Lectures in Modern Chemistry, Apr. 3, Vancouver, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

28. (2018). Single Particles Cathode Material Electrochemical Properties from Micro-Pipets Methods. Material Research Society Fall Meeting, Nov. 26, Phoenix, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

29. (2018). The Wonderful World of Scanning Electrochemical Microscopy (SECM). University of Victoria Chemistry Seminar, Apr. 5, Victoria, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

30. (2018). Microelectrodes: An Overview of Probe Development and Bioelectrochemistry Applications from 2013 to 2018. XVIe colloque du Groupe Français de Bioélectrochimie, Sept. 24, Sète, France
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

31. (2018). The Wonderful World of Scanning Electrochemical Microscopy (SECM). Simon Fraser University Chemistry Seminar Series (Apr. 4), Burnaby, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

32. (2017). Properties of Lithium Battery Particles from Electrochemical Micro-Pipets Measurements. 20th Topical Meeting of the International Society of Electrochemistry (March 20, 2017), Buenos Aires, Argentina
Main Audience: Researcher
Invited?: No, Keynote?: No

33. (2017). Detection of D-Serine Using an Enzymatic Amperometric Biosensor and Its Localized Detection Using Scanning Electrochemical Microscopy. 232nd ECS Meeting, Oct 5th, National Harbor, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

34. (2017). Localized Detection of D-serine using an Enzymatic Amperometric Biosensor and Scanning Electrochemical Microscopy. IDAR 2017 The 3rd International Conference of D-Amino Acid Research. July 10-13., Varese, Italy
Main Audience: Researcher
Invited?: Yes, Keynote?: No

35. Perry S. (2017). Pourbaix Diagrams as a Root for the Simulation of Polarization Curves for Corroding Metal Surfaces. 232nd Electrochemical Society Meeting, Oct 4th, National Harbor, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

36. (2017). Determination of the Relationship between Expression and Functional Activity of Multidrug Resistance-Associated Protein 1 using Scanning Electrochemical Microscopy. The 9th Workshop on SECM and Related Techniques, Aug 13-17, Warsaw, Poland
Main Audience: Researcher
Invited?: Yes, Keynote?: No

37. Perry S. (2017). Finite Element Simulation of the Coreactant Electrogenerated Chemiluminescence Mechanism. 232nd ECS Meeting, Oct. 4, National Harbor, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

38. (2017). Corrosion Studies of Titanium Stabilized Stainless Steel Using Scanning Electrochemical Microscopy for Hydropower Applications. 232nd ECS Meeting, Oct. 4, National Harbor, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

39. (2017). Expression / Functional Activity Relationship of Multidrug Resistance-Associated Protein 1 Investigated By Scanning Electrochemical Microscopy. 232nd ECS Meeting, Oct. 4, National Harbor, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

40. (2017). Potentiodynamic Polarisation Curves (PDP): To Fit or Not to Fit. 100th Canadian Chemistry Conference and Exhibition, May 29, Toronto, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

41. (2017). Experiment-Supported Model Development for Data Treatment of Diffusion and Activation Limited Polarization Curves of Magnesium and Steel Alloys. 232nd ECS MEETING, Oct. 3, National Harbor, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

42. (2017). A Modular Flow-through Platform for Spectroelectrochemical Analysis. 100th Canadian Chemistry Conference and Exhibition, May 29, Toronto, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

43. (2016). Redox Triggered Drug Delivery Liposomes Applied to Cancer Studies. Gordon Conference in Electrochemistry, Jan. 12, Ventura, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

44. (2016). Redox Triggered Vesicles a Promising Approach for Drug Delivery. Chemistry Seminar of the University of Akron, Nov. 8, Akron, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

45. (2016). Redox Triggered Vesicles a Promising Approach for Drug Delivery. Fall Symposium of the Electrochemical Society (Canadian Section), Nov. 12, Oshawa, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: Yes

46. (2016). Redox Triggered Drug Delivery Liposomes Applied to Cancer Studies. University of Oldenburg Talk, May 19, Oldenburg, Germany
Main Audience: Researcher
Invited?: Yes, Keynote?: No

47. (2015). Use of Scanning Electrochemical Microscopy to investigate Mg Alloy Corrosion. Faraday Discussion, Apr. 15, London, United Kingdom
Main Audience: Researcher
Invited?: Yes, Keynote?: No

48. (2015). New Tools in Scanning Electrochemical Microscopy for Magnesium Alloy Corrosion Characterisation. Chemistry Department of University of Urbana-Champaign, Nov. 13, Champaign, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No

49. (2015). Disk-Shaped Amperometric Enzymatic Biosensor for In Vivo Detection of D-Serine. NSERC-CREATE Training Program in Integrated Sensor Systems (ISS), May 2, Sherbrooke, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

50. (2015). Assessment of Multidrug Resistance on Cell Co-Culture Patterns Using Biological Scanning Electrochemical Microscopy. Chemistry Departmental Talk, University of Toronto, Feb. 2, Toronto, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

51. (2015). Determination of Live Cell Electrochemical Kinetics by Forced Convection Effect of Biological SECM Constant Height Imaging Mode. The 8th International Workshop on SECM, Oct. 12, Xiamen, China
Main Audience: Researcher
Invited?: Yes, Keynote?: No

52. (2015). New Tools in Scanning Electrochemical Microscopy for Magnesium Alloy Corrosion Characterization. 98th Canadian Chemistry Conference and Exhibition, June 15, Ottawa, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

53. (2015). Use of Scanning Electrochemical Microscopy to investigate Mg Alloy Corrosion. NACE Corrosion 2015, March 17, Dallas, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

Broadcast Interviews

2013/09/24 - 2013/09/24	The Role of Industrial Partners Industrial partners, and researchers, share best practices on preparing your partners to take part in a site visit., Putting Your Best Foot Forward: How to Prepare for a Successful NSERC Site Visit, NSERC video resource http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/SitesVisits-VisitesEvaluation_eng.asp

Text Interviews

2020/10/16	Managing Expectations: balancing life under COVID-19, ECS Blog: https://www.electrochem.org/ecs-blog/ecs-adapts-advances-mauzeroll
2016/12/14	Five Questions for Technical Editor Janine Mauzeroll New Technical Editor of the Journal of The Electrochemical Society, concentrating in the Organic & Bioelectrochemistry Topical Interest Area., ECS Redcat Blog: http://www.electrochem.org/redcat-blog/five-questions-technical-editor-janine-mauzeroll/ and Interface Vol. 24, No. 1, Spring 2017

Publications

Journal Articles

1. Pan, Y*; Paschoalino, WJ; Blum, AS; Mauzeroll, J. (2021). Recent Advances in Bio-Templated Metallic Nanomaterial Synthesis and Electrocatalytic Applications. ChemSusChem. 14: 758-791.
   Published
   Refereed?: Yes, Open Access?: Yes
2. Noyhouzer, T; Payne, NA*; Moussa, S*; Beaulieu, I; Mauzeroll, J. (2021). Portable and Sustainable Activated Carbon-Based Device for Electro-Assisted Water Purification. Environmental Science: Water Research & Technology. 7(3): 622–629.
   Published
   Refereed?: Yes
3. Zhang, Y; Chern, D*; Schulz, R; Mauzeroll, J; Chromik, RR. (2021). Manufacturing and Tribological Behavior of Self- Lubricating Duplex Composites: Graphite-Reinforced Polymer Composites and Polymer-Infiltrated Metal Networks. Journal of Materials Engineering and Performance. 30: 103-115.
   Published
   Refereed?: Yes
4. Moussa, S*; Van Horn, M; Shah, A*; Pollegioni, L; Thibodeaux, C; Ruthazer, E; Mauzeroll, J. (2021). Editors' Choice—A Miniaturized Enzymatic Biosensor For Detection of Sensory-Evoked $_{D}$-serine Release in the Brain. Journal of the Electrochemical Society. 168(2): 025502.
   Published
   Refereed?: Yes, Open Access?: Yes
5. Dawkins, JIG*; Savignac, L*; Mauzeroll, J; Schougaard, SB. (2021). Determining the Effect of Dissolved CO_2 on Solution Phase Li^+ Diffusion in Common Li-ion Battery Electrolytes.Electrochem. Commun.125: 106979.
   Published
   Refereed?: Yes
6. William, O*; Hennecker, C*; Mittermaier, A; Mauzeroll, J. (2021). EDTA-gradient Loading of Doxorubicin into Ferrocene-containing Liposomes: Effect of Lipid Composition and Visualization of Triggered Release by Cryo-TEM. Langmuir.
   Accepted
   Refereed?: Yes

7. Pan, Y*; Blum, AS; Mauzeroll, J. (2021). Tunable Assembly of Protein Enables Fabricationof Platinum Nanostructures with Different Catalytic Activity. ACS Applied Materials & Interfaces.
Submitted
Refereed?: Yes

8. Dawkins, JIG*; Pan, Y*; Ghavidel, MZ; Yuan, Y; Tong, V*; Botton, GA; Mauzeroll, J; Schougaard, SB. (2021). Enhanced Lithium-Ion Battery Performance using Dual-Layer Positive Electrodes. ChemElectroChem.
Submitted
Refereed?: Yes

9. Li, Y*; Morel, A; Gallant, D; Mauzeroll, J. (2021). Ag^+ Interference fromAg/AgCl Wire Quasi-Reference Counter Electrode Inducing Corrosion PotentialShift in an Oil-Immersed Scanning Micropipette Contact Method Measurement. Analytical Chemistry. 93(28): 9657-9662.
Published
Refereed?: Yes

10. Moussa, S*; Chhin, D; Pollegioni, L; Mauzeroll, J. (2021). Quantitative measurements of free and immobilized RgDAAO Michaelis-Menten constant using an electrochemical assay reveal the impact of covalent cross-linking on substrate specificity. Analytical and Bioanalytical Chemistry.
Accepted
Refereed?: Yes

11. Zhou, H*; Chhin, D; Morel, A; Gallant, D; Mauzeroll, J. (2021). Potentiodynamic Polarization Curves at High Scan Rates Quantitatively Interpreted using the High Field Model. npj Materials Degradation.
Submitted
Refereed?: Yes

12. Pan, Y*; Mauzeroll, J. (2020). Boosting CO_2 Reduction: Creating an Efficient Path for Gas Transport. Joule. 4(4): 712-714.
Published
Refereed?: Yes

13. Dawkins, JIG*; Ghavidel, MZ; Chhin, D; Beaulieu, I; Hossain, MS; Feng, R; Mauzeroll, J; Schougaard, SB. (2020). Operando Tracking of Solution-Phase Concentration Profiles In Li-ion Battery Positive Electrodes using X-Ray Fluorescence. Anal. Chem.92: 10908–10912.
Published
Refereed?: Yes

14. Li, Y*; Morel, A; Gallant, D; Mauzeroll, J. (2020). Oil Immersed-Scanning Micropipette Contact Method Enabling Long-term Corrosion Mapping. Anal. Chem.92(18): 12415–12422.
Published
Refereed?: Yes

15. Zhou, H*; Yu, R*; Ran, G*; Moussa, S*; Song, Q; Mauzeroll, J; Masson, J-F. (2020). In-situ dynamic reaction of Ag NPs: strategy for the construction of asensitive electrochemical chiral sensor. Sensors and Actuators B: Chemical. 319
Published
Refereed?: Yes

16. Stephens LI*, Payne NA*, Mauzeroll J. (2020). Super-Resolution Scanning Electrochemical Microscopy. Analytical Chemistry. 92(5): 3958-3963.
Published
Refereed?: Yes

17. Gateman SM*, Page K*, Halimi I*, Nascimento ARC*, Savoie S, Schulz R, Moreau C, Parkin CM, Mauzeroll J. (2020). Corrosion of One-Step Superhydrophobic Stainless-Steel Thermal Spray Coatings. ACS Appl. Mater. Interfaces. 12(1): 1523–1532.
Published
Refereed?: Yes

18. Hossain, M S; Stephens, LI*; Hatami, M*; Ghavidel, M; Chhin ,D*; Dawkins, JI*; Savignac, L*; Mauzeroll, J; Schougaard, SB. (2020). Effective Mass Transport Properties in Lithium Battery Electrodes. ACS Appl. Energy Mater. 3(1): 440–446.
Published
Refereed?: Yes

19. Perry SC, Gateman SM*, Malpass-Evans R, McKeown N, Wegener M, Nazarovs P, Mauzeroll J, Wang L, Ponce de León C. (2020). Polymers with Intrinsic Microporosity (PIMs) for Targeted CO_2 Reduction to Ethylene. Chemosphere. 248: 125993.
Published
Refereed?: Yes

20. Pan Y*, Paschoalino Jr W, Bayram A, Blum AS, Mauzeroll J. (2019). Biosynthesized Silver Nanoring as A Highly Efficient and Selective Electrocatalyst for CO_2 Reduction Reaction. Nanoscale. 11(40): 18595–18603.
Published
Refereed?: Yes

21. Danis AS*, Metera KL, Payne NA*, Sleiman HF, Mauzeroll J. (2019). The Bottom-Up Characterization and Self-Assembly of Electrogenerated Chemiluminescence Active Ruthenium Nanospheres. ChemElectroChem. 6(13): 3499-3506.
Published
Refereed?: Yes, Open Access?: Yes

22. Stephens LI*, Mauzeroll J. (2019). Flux: Software for Analysing SECM Data. Journal of The Electrochemical Society. 166(16): H861-H865.
Published
Refereed?: Yes

23. Moussa Siba *, Mauzeroll Janine. (2019). Microelectrodes: An Overview of Probe Development and Bioelectrochemistry Applications from 2013 to 2018. Journal of the Electrochemical Society. 166(6): G25-G38.
Published
Refereed?: Yes

24. Stephens LI*, Mauzeroll J. (2019). Demystifying Mathematical Modeling of Electrochemical Systems. Journal of Chemical Education. 96(10): 2217-2224.
Published
Refereed?: Yes

25. Dayeh M*, Ghavidel M, Mauzeroll J, Schougaard S. (2019). Micropipette Contact Method to Investigate High-Energy Cathode Materials by using an Ionic Liquid. ChemElectroChem. 6(1): 195-201.
Published
Refereed?: Yes, Open Access?: Yes

26. Odette WL*, Payne NA*, Khaliullin RZ, Mauzeroll J. (2019). Redox-Triggered Disassembly of Nanosized Liposomes Containing Ferrocene-Appended Amphiphiles. Langmuir. 35(16): 5608-5616.
Published
Refereed?: Yes

27. Payne NA* and Mauzeroll J. (2019). Identifying Nanoscale Pinhole Defects in Nitroaryl Layers with Scanning Electrochemical Cell Microscopy. ChemElectroChem. 6: 5439– 5445.
Published
Refereed?: Yes, Open Access?: Yes

28. Nascimento ARC*, Gateman SM*, Mauzeroll J, Savoie S, Schulz R, Moreau C. (2019). Electrochemical Behavior, Microstructure, and Surface Chemistry of Thermal-Sprayed Stainless-Steel Coatings. Coatings. 9(12): 835-851.
Published
Refereed?: Yes

29. Payne N*, Dawkins J*, Schougaard S, Mauzeroll J. (2019). Effect of Substrate Permeability on Scanning Ion Conductance Microscopy: Uncertainty in Tip-Substrate Separation and Determination of Ionic Conductivity. Analytical Chemistry. 91(24): 15718-15725.
Published
Refereed?: Yes

30. Gateman SM*, Halimi I*, Nascimento ARC*, Lacasse R, Schulz R, Moreau C, Mauzeroll J. (2019). Using Macro and Micro Electrochemical Methods to Investigate the Corrosion Behavior of Stainless Steel Thermal Spray Coatings. npj Materials Degradation. 3(25): 1-9.
Published
Refereed?: Yes

31. Danis A*, Gordon JB*, Karlie PP*, Stephens LI*, Perry SC, Mauzeroll J. (2019). Simultaneous Electrochemical and Emission Monitoring of Electrogenerated Chemiluminescence through Instrument Hyphenation. Analytical Chemistry. 91(3): 2312-2318.
Published
Refereed?: Yes

32. Perry SC, Gateman SM*, Stephens LI*, Lacasse R, Schulz R., Mauzeroll J. (2019). Pourbaix Diagrams as a Simple Route to First Principles Corrosion Simulation. Journal of the Electrochemical Society. 166(11): C3186–C3192.
Published
Refereed?: Yes

33. Gateman SM*, Georgescu NS, Kim M-K*, Jung I-H, Mauzeroll J. (2019). Efficient Measurement of the Influence of Chemical Composition on Corrosion: Analysis of an Mg-Al Diffusion Couple Using Scanning Micropipette Contact Method. Journal of Electrochemical Society. 166(16): C624–C630.
Published
Refereed?: Yes

34. Stephens LI*, Payne NA*, Skånvik SA*, Polcari D, Geissler M, Mauzeroll J. (2019). Evaluating the Use of Edge Detection in Extracting Feature Size from Scanning Electrochemical Microscopy Images. Analytical Chemistry. 91(6): 3944-3950.
Published
Refereed?: Yes

35. Perry SC, Gateman SM*, Sifakis J*, Pollegioni L, Mauzeroll J. (2018). Enhancement of the Enzymatic Biosensor Response through Targeted Surface Roughness. Journal of the Electrochemical Society. 165(12): G3074-G3079.
Published
Refereed?: Yes

36. Noyhouzer T*, Perry SC*, Vicente-Luis A*, Hayes P, Mauzeroll J. (2018). The Best of Both Worlds: Combining Ultramicroelectrode and Flow Cell Technologies. Journal of the Electrochemical Society. 165(2): H10-H15.
Published
Refereed?: Yes

37. Gateman SM, Stephens LI, Perry SC, Lacasse R, Schulz R, Mauzeroll J. (2018). The role of titanium in the initiation of localized corrosion of stainless steel 444. npj Materials Degradation. 2(5): 1-8.
Published
Refereed?: Yes, Open Access?: Yes

38. Stephens LI*, Padmos JD*, Narouz MR*, Al-Rashed A*, Li C-H*, Payne N*, Zamora M*, Crudden CM, Mauzeroll J, Horton JH. (2018). The Structural and Electrochemical Effects of N-Heterocyclic Carbene Monolayers on Magnesium. Journal of the Electrochemical Society. 165(13): G139–G146.
Published
Refereed?: Yes

39. Danis A*, Potts K*, Perry S*, Mauzeroll J. (2018). Combined Spectroelectrochemical and Simulated Insights into the Electrogenerated Chemiluminescence Coreactant Mechanism. Analytical Chemistry. 90(12): 7377-7383.
Published
Refereed?: Yes

40. Noyhouzer T, Bellemare–Alford D*, Payne NA*, Martineau E, Mauzeroll J. (2018). Unfolding the Hidden Reactions in Galvanic Cells. Electrocatalysis. 9(4): 531-538.
Published
Refereed?: Yes

41. Stephens LI*, Mauzeroll J. (2018). Altered Spatial Resolution of Scanning Electrochemical Microscopy induced by Multifunctionaldual Barrel Microelectrodes. Analytical Chemistry. 90(11): 6796-6803.
Published
Refereed?: Yes

42. Zhu J, Hiltz J, Tefashe UM, Mauzeroll J, Lennox RB. (2018). Microcontact Printing Patterning of an HOPG Surface by an Inverse Electron Demand Diels–Alder Reaction. Chemistry – A European Journal. 24(35): 8904-8909.
Published
Refereed?: Yes, Open Access?: Yes

43. Stephens LI*, Perry SC*, Gateman SM*, Lacasse R, Schulz R, Mauzeroll J. (2017). Development of a model for experimental data treatment of diffusion and activation limited polarization curves for magnesium and steel alloys. Journal of the Electrochemical Society. 164(11): E3576-E3582.
Published
Refereed?: Yes

44. Payne NA*; Stephens LI*, Mauzeroll J *co-first authors. (2017). The Application of Scanning Electrochemical Microscopy to Corrosion Research. Corrosion. 73(7): 759-780..
Published
Refereed?: Yes

45. Danis AS*,Odette WL*, Perry SC*, Canesi S, Sleiman H, Mauzeroll J. (2017). Cuvette-Based Electrogenerated Chemiluminescence Detection System for the Assessment of Polymerizable Ruthenium Luminophores. ChemElectroChem. 4: 1736-1743.
Published
Refereed?: Yes

46. Polcari D*, Perry SC*, Pollegioni L, Geissler M, Mauzeroll J. (2017). Localized Detection of D-Serine Using an Enzymatic Amperometric Biosensor and Scanning Electrochemical Microscopy. ChemElectroChem. 4(4): 920-926.
Published
Refereed?: Yes

47. Noyhouzer T, Snowden ME, Tefashe UM, Mauzeroll J. (2017). Modular Flow-Through Platform for Spectroelectrochemical Analysis. Analytical Chemistry. 89(10): 5246-5253.
Published
Refereed?: Yes

48. Polcari D*, Hernandez-Castro JA*, Kebin Li, Geissler M, Mauzeroll J. (2017). Determination of the Relationship between Expression and Functional Activity of Multidrug Resistance-Associated Protein 1 using Scanning Electrochemical Microscopy. Analytical Chemistry. 89(17): 8988–8994.
Published
Refereed?: Yes

49. Noyhouzer T, L'Homme C*, Beaulieu I, Kuss S*, Mazurkiewicz S*, Kraatz B*, Canesi S, Mauzeroll J. (2016). Redox Triggered Drug Delivery Vesicles: A Ferrocene Modified Phospholipid. Langmuir. 32(17): 4169-4178.
Published
Refereed?: Yes

50. Polcari D*, Dauphin-Ducharme P*, Mauzeroll J. (2016). Scanning Electrochemical Microscopy: A Comprehensive Review of Experimental Parameters from 1989-2015. Chemical Reviews. 116: 13234-13278.
Published
Refereed?: Yes

51. Danis L*, Gateman SM*, Kuss C, Schougaard SB, Mauzeroll J. (2016). Nanoscale Measurements of Lithium Ion Battery Materials Using Scanning Probe Techniques. ChemElectroChem. 4: 6-19.
Published
Refereed?: Yes

52. Snowden ME, Dayeh M*, Payne NA*, Gervais S*, Mauzeroll J,Schougaard SB. (2016). Measurement on isolated lithium iron phosphate particles reveals heterogeneity in material properties distribution. Journal of Power Sources. 325: 682-689.
Published
Refereed?: Yes

53. Kuss S*, Trinh D, Danis L*, Mauzeroll J. (2015). High-Speed Scanning Electrochemical Microscopy Method for Substrate Kinetic Determination: Method and Theory. Analytical Chemistry. 87(16): 8096–8101.
Published
Refereed?: Yes, Open Access?: No

54. Kuss S*; Trinh D; Danis L*; Mauzeroll J. (2015). High–Speed ScanningElectrochemical Microscopy Method for Substrate Kinetic Determination:Application to Live Cell Imaging in Human Cancer. Analytical Chemistry. 87(16): 8102–8106.
Published
Refereed?: Yes

55. Danis L*, Gateman SM*, Snowden ME*, Halalay C, Howe JY, Mauzeroll J. (2015). Anodic Stripping Voltammetry at Nanoelectrodes: Trapping of Mg^{2+} by Crown Ethers. Electrochimica Acta. 162: 169-175.
Published
Refereed?: Yes

56. Danis L*, Polcari D*, Kwan A*, Gateman SM*, Mauzeroll J. (2015). Fabrication of Carbon, Gold, Platinum, Silver and Mercury Ultramicroelectrodes with Controlled Geometry. Analytical Chemistry. 87(5): 2565-2569.
Published
Refereed?: Yes

57. Dauphin-Ducharme P*, Kuss C,* Rossouw D*, Payne N A*, Danis L*, Botton G A, Mauzeroll J. (2015). Corrosion product formation monitored using the feedback mode of scanning electrochemical microscopy with carbon microelectrodes. Journal of the Electrochemical Society. 162(12): C677-C683.
Published
Refereed?: Yes

58. Asmussen RM*, Binns J, Jakupi P*, Dauphin Ducharme P*, Tefashe UM*, Mauzeroll J, Shoesmith DW. (2015). Reducing the corrosion rate of magnesium alloys using ethylene glycol for advanced electrochemical imaging. Corrosion Science. 93: 70-79.
Published
Refereed?: Yes

59. Dauphin Ducharme P*, Asmussen RM*, Shoesmith DW, Mauzeroll J. (2015). In-situ Mg^{2+} release monitored during magnesium alloy corrosion. Journal of Electroanalytical Chemistry. 736: 61-68.
Published
Refereed?: Yes

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Intellectual Property

Patents

1. Electrochemical Flow Cell and Ultramicroelectrode. Canada. PCT/CA2016/050314. 2016/03/18.
Patent Status: Pending
Inventors: Mauzeroll J, Danis L, Noyhouzer TA, Snowden ME, Tefashe UM

2. Redox-Sensitive Vesicles. Canada. PCT/CA2016/050039. 2015/01/19.
Patent Status: Pending
Inventors: Mauzeroll J, Noyhouzer TA, Snowden ME, Dauphin Ducharme P, Mazurkiewicz S, L'homme C, Desjardins S, Canesi S