

Rosalie McKay
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Education

PhD of Marine Biogeochemistry

August 2021 - Present

UiT the Arctic University of Norway

Supervisors: Dr. Karley Campbell and Dr. Rolf Gradinger

International Master of Environmental Chemistry

August 2017 - June 2019

Norwegian University of Science and Technology, Trondheim, Norway

Master Thesis: Experimental and modelling study of subsea oil releases: *focusing on small leaks from an aging oilfield on the Norwegian Continental Shelf*

Supervisor: Dr. Per Johan Brandvik, SINTEF

Bachelor of Science Specialization Chemistry

September 2008 - June 2011

University of Alberta, Edmonton, Canada

Diploma in Dental Hygiene

September 2004 - June 2007

University of Alberta, Edmonton, Canada

Research Experience and Qualifications

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- ◆ Student in the 2019 MOSAiC fieldschool. Experience in ship based Arctic fieldwork, deployment of ITP and courses on sea ice physics and properties, oceanography, biogeochemistry, ecology and atmospheric sciences. As well as, media literacy, education and outreach. Created an outreach video and blog as a MOSAiC Ambassador.
 - ◆ Master thesis work employed the use of the SINTEF MiniTower and SilCam for droplet breakup studies to optimize the Modified Weber Model for prediction of droplet sizes. The OSCAR oil spill simulation tool was used to determine oil fate and trajectory for environmental and contingency response considerations.
 - ◆ Master's level courses in Aquatic Chemistry, Marine Biogeochemistry, Marine Organic Environmental Chemistry, Arctic Toxicology, Arctic Environmental Pollution: Atmospheric Distribution and Processes, and Techniques for the Detection of Organo-Chemical Pollutants
 - ◆ Studied at the University Centre in Svalbard Spring 2018
 - ◆ AS-101 Arctic Survival and Safety – course completed at UNIS January 2018
 - ◆ Undergraduate research project focused on generating turnover in DNA-templated processes using destabilizing modifications and T4 DNA ligase. Laboratory techniques included UV-VIS spectroscopy, micro-pipettes, separation by denaturing polyacrylamide gel electrophoresis (PAGE), fluorescent imaging and ABI 392 solid-phase synthesizer using Glen Research reagents.
 - ◆ Advanced undergraduate courses in Inorganic, Organic, Physical, Environmental, Materials and Analytical Chemistry.

Publications

Kausar, A.; McKay, R. D.; Lam, J.; Bhogal, R. S.; Tang, A. Y.; Gibbs-Davis, J. M. "Tuning DNA Stability to Achieve Turnover in Template for an Enzymatic Ligation Reaction" *Angew. Chem.* 2011, 50, 8922-8926.

Work Experience

Acacia Dental Centre

January 2017 to August 2017

Canada Place Dental (formerly The Dental Studio)

June 2007 to January 2017

Duties as a Dental Hygienist: patient treatment and counselling, administering local anaesthetic, infection control and sterilization, dental radiography, legal charting and documentation, and treatment planning.

Professional Memberships

American Chemical Society member
Association of Polar Early Career Scientists member
Biogeochemical Exchange Processes at Sea-Ice Interfaces member
Golden Key International Honour Society member

Academic Awards

IASC Travel Bursary for the BEPSII Field School 2022, Cambridge Bay €1000
IASC Travel Bursary for the MOSAiC School 2019, Tromsø €1230
Alberta Dental Association and College Scholarship in Dental Hygiene 2006, Edmonton \$500
Louise McKinney Post-Secondary Scholarship 2006, Edmonton \$2500
University of Alberta Academic Excellence Scholarship 2002, Edmonton \$2000
University of Alberta Faculty of Science Academic Excellence Scholarship 2002, Edmonton \$2000

Activities and Interests

IASC, Cryosphere Working Group (CWG) Secretary 2022-Present:

- ◆ The International Arctic Science Committee (IASC) is a non-governmental, international scientific organization that encourages and facilitates cooperation in all aspects of Arctic research, in all countries engaged in Arctic research and in all areas of the Arctic region. As IASC CWG secretary, I support and facilitate the activities of the CWG in international and interdisciplinary science cooperation among the elected representatives of the working group.

APECS Norway, Arctic Frontiers Committee 2021-Present:

- ◆ APECS aims to encourage innovative and international interdisciplinary collaborations among early career polar researchers and to promote public education and outreach. As a member of the Arctic Frontiers Committee I organize seminars geared towards ECRs and coordinate poster judging at the yearly Arctic Frontiers Conference.

NTNU ReSTORE, Treasurer 2019:

- ◆ My friends and I created a voluntary student non-profit organization to collect used household items from departing students and redistribute them to arriving students in the fall. We hope to create a circular economy to help decrease waste and benefit students, fostering a culture of sustainability within the Trondheim student community.

APECS Norway, Polar Weeks Committee 2018-2019:

- ◆ APECS aims to encourage innovative and international interdisciplinary collaborations among early career polar researchers and to promote public education and outreach. As a member of the Polar Weeks committee for the Norwegian branch, I planned and participated in APECS scientific and public outreach events, including public presentations at NTNU.

NTNU Koien volunteer 2017-2018:

- ◆ This is a volunteer run student group dedicated to maintaining the network of NTNU student cabins around Trondelag. Volunteer activities are diverse, from building bridges and storage sheds, chopping firewood, scrubbing soot from cabin walls, painting and much more.

Edmonton and Area Land Trust volunteer 2015-2019:

- ◆ This is a non-profit conservation organization dedicated to conserving natural land belts in the Edmonton, Alberta area. Volunteering varies, from preservation work on the organization's land titles to public education.

Board member of Jump Alberta 2015-2017:

- ◆ This is a non-profit organization dedicated to promotion and improvement of the sport of show jumping in Alberta. I have worked on 5-year strategic planning, planned educational seminars for members and organized our yearly fundraising casino and gala.

Languages

English – Native language

French – Intermediate

Norwegian – Level 1

Additional Information

25-27/01/19 U of A course EXGEN 5449: R Language for Statistical Computing in Business Analysis

SINTEF OSCAR, SINTEF Silhouette Camera, SINTEF MiniTower

HSE training at both NTNU and SINTEF, Health Care Provider CPR training maintained yearly

Computing Skills: Proficient in Gold, Power Practice and Dentrrix dental software and Patterson and Dexis Imaging (digital radiograph software), as well as Microsoft Word, Microsoft Excel, Microsoft Outlook, PowerPoint, PC and Mac computers.

Norwegian Driver's Licence.