

# Colleen Marciel F. Rosales

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## Education

2016-Present  
*Expected Graduation: 2021*      **Indiana University Bloomington**  
Ph.D. Environmental Science, Minor in Environmental Management (GPA: 3.980)

2011-2016  
2007-2011      **University of the Philippines Diliman**  
M.S. Chemistry – *Thesis Defense remaining*  
B.S. Chemistry

## Technical Skills

Wolfram/Mathematica • Igor Pro • MATLAB • Microsoft Office • Fluent in English, Filipino

## Research Experience

**Research Assistant**      **O'Neill School of Public and Environmental Affairs, Indiana University Bloomington**  
August 2016–present      *Participated in Field Campaigns listed below*

### **FIELD CAMPAIGNS**

June 2020–Present      Indiana University Research and Teaching Preserve (IURTP), Bloomington, Indiana  
June–August 2019      **Indiana/Indoor Radical and Aerosol Chemistry (iRACE 2019)**  
Indiana University Research and Teaching Preserve (IURTP), Bloomington, Indiana  
June 2018      **Home Observations of Microbial and Environmental Chemistry (HOMEChem 2018)**  
J.J. Pickle Research Campus, University of Texas at Austin  
July–August 2017      **Indiana Radical, Reactivity and Ozone Production Intercomparison (IRRONIC II)**  
Indiana University Research and Teaching Preserve (IURTP), Bloomington, Indiana

### **INTERNSHIPS**

February–July 2016      **Gwangju Institute of Science and Technology, South Korea**  
Aerosol Technology Monitoring Laboratory

January-December 2014      **Institute of Environmental Science & Meteorology, University of the Philippines**  
Project: Fabrication of a Wind Tunnel Instrument for the Determination of Particulate and Elemental Emission Factors From Selected Area and Point Sources in Metro Manila  
**Clean Air Asia**  
Project: Clean Air Ride Manila, Air Quality and Climate Change Program

November-Dec 2013      **Philippine Nuclear Research Institute**  
Project: Multi-Elemental Analysis of Marine Sediments of Manila Bay Using X-Ray Fluorescence Spectrometry

April–May 2010

## Teaching Experience

**Teaching Assistant**      **Advanced Math Camp for incoming MS Environmental Science & MPA students**  
August 2017 & 2018      Indiana University Bloomington

**Instructor of Record**      **Institute of Chemistry, University of the Philippines Diliman**  
June 2011-July 2015      Junior Faculty Representative to the Academic Performance Committee

## Writing Experience

**Science Content Editor**      **Phoenix Publishing House, Quezon City, Philippines**  
September 2016

**Content Writer**      **Rex Digital Publishing, Quezon City, Philippines**  
August 2015 – 2016      Chemistry content for Schoology online learning platform

## Science Policy

**Expert Reviewer**      **First Order Draft of the Sixth Assessment Report (AR6) Climate Change 2021: The Physical Science Basis from the Working Group I (WGI)**  
2019

**Member, Editorial Board**      **Yale State and Local Policy Review**  
2018-Present      Undergraduate Journal

**Project Officer**      **13<sup>th</sup> Annual UNU & GIST Joint Programme Symposium: Environmental Challenges in Urban Cities**  
August-December 2015      Institute of Environmental Science & Meteorology, University of the Philippines

## Awards Received

- Indiana University Provost Travel Award for Science (October 2020, July 2019 and December 2018)
- Second Place, Outstanding Research Award, CEW&T Research Poster Competition (May 2020 and April 2019)
- Best Student Presentation (Environmental Topics session), Association of O'Neill/SPEA PhD Students Annual Conference, Indiana University (February 2019 and 2020)
- Best Student Poster, Chemistry of Indoor Environments Meeting in Boulder, Colorado (October 2018)
- Promotion to Instructor Rank 2, Institute of Chemistry, University of the Philippines Diliman (2014)
- Local Research Fellowship, University of the Philippines Diliman (June 2013–May 2014)
- College Scholar (1 semester), Graduate level, University of the Philippines Diliman (2013)
- Passer, Philippine Chemistry Licensure Exam (2011)
- Prof. Victoria Reidenbach Scholarship, University of the Philippines Diliman (2007-2011)
- College Scholar (3 semesters), Undergraduate level, University of the Philippines Diliman (2008-2010)

## Publications

- Lamorena-Lim, R. B and Rosales, C. M. F. (2016). *Chemical Characterization and Behavior of Respirable Fractions of Indoor Dusts Collected Near a Landfill Facility*. Science Diliman. Volume 28, Number 1, pp. 17-33(17).
- Rosales, C. M. F. and Lamorena-Lim, R. B. (2015) *Possible Speciation of Heavy Metals in Indoor Air Particulate Matter Near a Landfill Area*. Conference Proceedings, Annual International Conference on Chemistry, Chemical Engineering and Chemical Process.

## Manuscripts in Preparation

- Rosales, C. M. F., Jiang, J., Lahib, A., Kumar, V., Bottorff, B., Reidy, K., Tasoglou, A., Huber, H., Dusanter, S., Boor, B., and Stevens, P.S. *Indoor Terpene Ozonolysis Initiates the Rapid Formation of Peroxy Radicals and Secondary Organic Aerosol*.
- Rosales, C. M. F. Reidy, E., Bottorff, B., Stevens, P.S, Cantrell, C.A., Mauldin, R., Anderson, D., Wood, E. *Intercomparison of OH, HO<sub>2</sub> and RO<sub>2</sub> Radical Measurements at an Indiana Forest*.
- Rosales, C. M. F., Jung, J., Cayetano, M. G. C. *Emissions and chemical components of PM<sub>2.5</sub> from simulated cooking conditions using traditional cookstoves and fuels under a dilution tunnel system*. For submission to Aerosol and Air Quality Research.
- Rosales, C. M. F. Lamorena, R. B. *In Silico Study of the Possible Roles of Humidity in Organic and Inorganic Species Formation on Ambient Particulate Matter using PHREEQC*. Submitted to International Journal of Environmental Science and Technology.

## Selected Presentations

- Rosales, C. M. F., Jiang, J., Lahib, A., Kumar, V., Bottorff, B., Reidy, K., Tasoglou, A., Dusanter, S., Boor, B., and Stevens, P.S. (2020). *Evolution of Indoor Air Chemistry During Household Mopping*. Association of O'Neill Ph.D. Students Annual Conference, Indiana University Bloomington.
- Lahib, A., Rosales, C. M. F., Bottorff, B., Reidy, E., Kumar, V., Dusanter, S., Tomas, A., and Stevens, P.S. (2019). *Measurements of Hydroperoxy and Total Organic Peroxy Radicals in an Indiana Forest Using Laser Induced-Fluorescence*. American Geophysical Union Meeting, San Francisco, CA.
- Rosales, C. M. F. *Creating Programs for Data-Intensive Field Campaigns*. Wolfram Technology Conference (2019). Urbana, Champaign, IL.
- Rosales, C. M. F., Reidy, E., Bottorff, B., and Stevens, P. (2018). *Measurements of hydroperoxyl and peroxy radicals during HOMEChem using LIF-FAGE*. Chemistry of Indoor Environments Meeting. University of Colorado-Boulder, CO.
- Rosales, C. M. F. and Lamorena-Lim, R. B. (2015) *Organic and Inorganic Species In Silico Formation On Particulate Matter Found In Complex Workplaces*. 30<sup>th</sup> Philippine Chemistry Congress, Davao City, Philippines.
- Rosales, C. M. F. and Cayetano, M. G. (2014) *Particulate Emission Factors of Key Area Pollution Sources Derived from Wind Tunnel Experiments*. 2014 International Aerosol Conference, BEXCO, Busan, South Korea.
- Rosales, C. M. F., Pabroa, P. C. B., Sta. Maria, E. J., Quirit, L. L., Gonzales, R. R. A. (2012). *Marine Sediment Analysis of Manila Bay by X-Ray Fluorescence Spectrometry*. 27<sup>th</sup> Philippine Chemistry Congress.

## Science Outreach

- Judge, American Geophysical Union Virtual Poster Showcase 2019
- Judge, CEW&T Women's Research Poster Competition 2018
- Volunteer, Science Fest, Indiana University Bloomington (2016 and 2017)

## Memberships & Affiliations

- American Association for the Advancement of Science (AAAS)
- American Geophysical Union (AGU)
- American Association for Aerosol Research (AAAR)
- Earth Science Women's Network (ESWN)
- Center of Excellence for Women and Technology (CEW&T)
- Integrated Chemists of the Philippines (ICP)