

RIZA MAGBITANG

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PROFESSIONAL EXPERIENCE

Research Specialist II

Harte Research Institute for Gulf of Mexico Studies
Texas A&M University Corpus Christi
Corpus Christi, TX
October 2024 - Present

Serving as the laboratory manager for the Coastal Ecosystem Processes Lab. Responsible for general lab operations, equipment upkeep, and laboratory safety compliance. Provides assistance in field work, sample processing and analyses.

Graduate Assistant

Division of Marine Science
University of Southern Mississippi
Stennis Space Center, MS
August 2021 – May 2024

Conducted time-series collection of river water samples from local rivers that drain into the MS Sound (East and West Pearl Rivers, and Jourdan River), as well as rainwater samples, and measured their nutrient levels and stable isotope composition ($\delta^{18}\text{O}$ and $\delta^2\text{H}$). Developed a flow cytometric method for detecting and enumerating *E. faecalis* in coastal water samples. Served as Teaching Assistant for graduate courses: Advanced Field Methods in Marine Science (MAR 591), Biological Oceanography (MAR 600), and Physical Oceanography (MAR 660).

University Research Associate II

Marine Science Institute
University of the Philippines – Diliman
Quezon City, Philippines
February 2020 – June 2021

Supervised projects of the Inorganic Biogeochemistry and Biotechnology Research Lab that mainly focused on the effects of trace metals and nutrients in phytoplankton growth and toxin production. Focal person for establishing the first Metallomics research facility in the country.

Product Dev't and Regulatory Officer

Advanced Agrisolutions Phils Corporation
Manila, Philippines
April 2017 – February 2020

Ensured overall regulatory compliance of the company (i.e., secured license to operate and registration of the entire product line). Liaised with local and foreign suppliers for the company's existing and potentially new products. Assisted sales team in various sales and marketing activities. Monitored field trials in different parts of the country. Implemented safety plans for company facilities and employees.

Visiting Specialist

Research Center for Environmental Changes
Academia Sinica, Taipei, Taiwan
August 2015 – December 2016

Person in charge of the operation and maintenance of the High-Resolution Inductively Coupled Plasma Mass Spectrometer (HR-ICP-MS) at the Marine Biogeochemistry Laboratory. Participated in a research cruise along the northwest portion of the Philippine Sea to collect various samples: phytoplankton, aerosol, and seawater. Experienced in trace metal analysis (class 100 clean room), and method validation using certified reference materials.

Science Research Specialist II

Marine Science Institute
University of the Philippines – Diliman
Quezon City, Philippines
August 2014 – June 2015

Worked under the program Discovery and Development of Health Products - Marine Component (DDHP-MC), particularly in the chemical synthesis of peptides from *Conus* snails that have analgesic bioactivity. Used HPLC to confirm reaction completion and to purify synthesized peptides.

University Research Associate I

Natural Sciences Research Institute
University of the Philippines – Diliman,
Quezon City, Philippines
January 2009 – December 2013

Handled research projects in various fields of chemistry such as natural products, persistent heavy metal pollutants, and CO₂ sequestration & storage. Experienced in numerous chemical analysis and instrumentation techniques, including but not limited to ICP-MS, HPLC, AAS, and FT-IR. Trained in handling laboratory mice and conducting in-vivo assays. Authored scientific papers in peer-reviewed journals; presented research papers in local and international conferences.

Volunteer Instructor and Workshop Facilitator

Pueblo Science
Toronto, Canada
April 2014 – Present

Serving as a workshop facilitator and instructor for training events organized for high school Science and Mathematics teachers in developing countries. The workshop involves introducing the teachers to Science experiments and Math activities that use indigenous materials available in schools that do not have sophisticated laboratories and science equipment.

EDUCATION

Master of Science in Marine Science

University of Southern Mississippi
Date conferred: August 2024

Master of Science in Chemistry*

University of the Philippines – Diliman
Quezon City, Philippines

**Unfinished; earned 37 units of research and coursework*

Bachelor of Science in Chemistry

University of the Philippines – Diliman,
Quezon City, Philippines
Date conferred: October 2008

AWARDS AND RECOGNITIONS

YSEALI Professional Fellow

Young Southeast Asian Leaders Initiatives Professional Fellows Program, Fall 2019
An educational and cultural exchange program funded by US State Department
Hosted by Guilford County, North Carolina, USA

Best Student Research Paper

Annual International Conference on Chemistry, Chemical Engineering, and Chemical Process (CCECP 2013)
Hotel Fort Canning, Singapore, February 25-26, 2013

SELECTED PRESENTATIONS IN SCIENTIFIC CONFERENCES

European Geosciences Union General Assembly 2015 (EGU 2015)

Assessment of Zambales Ophiolite formation as a viable site for CO₂ storage
Vienna, Austria, April 12-17, 2015

22nd KAIST-KYOTO-NTU-NUS Symposium on Environmental Engineering

Evaluation of rocks from Philippine Ophiolites for carbonation process during ambient CO₂ purged aqueous solutions exposure
Daejeon, South Korea, July 2-3, 2013

AOGS 2013 - 10th Annual Meeting and Geosciences World Community Exhibition

Dissolution of gaseous CO₂ into hyperalkaline aqueous solutions as a preliminary step to enhance sequestration
Brisbane, Australia, June 24-28, 2013

Annual International Conference on Chemistry, Chemical Engineering, and Chemical Process (CCECP 2013)

Mineral carbonation process in ophiolite complexes during the CO₂-purged aqueous solutions exposure
Singapore, February 25-26, 2013

26th Philippine Chemistry Congress

Cadmium and lead in dried fish samples by inductively coupled plasma mass spectrometry (ICP -MS)
Cebu City, Philippines, April 13-15, 2011

PUBLICATIONS

Magbitang, R.A. and Mojica, K.D.A. (in preparation) Development of a flow cytometry method for the identification and enumeration of *Enterococcus faecalis*.

Magbitang, R.A. and Lamorena, R.B. (2016) Carbonate formation on ophiolitic rocks at different pH, salinity, and particle size conditions in CO₂-sparged suspensions. *International Journal of Industrial Chemistry*, 7:359-367.

Magbitang, R.A., Bucsit, M.A., Tia, E.S.F, Rumbaoa, R.G., Cervas, L.L.M., Dimaya, D.A.P., and Rodriguez, I.B (2013) Cd and Pb in fruit juice, bottled tea, condiments and dried fish available in Philippine markets determined using ICPMS. *Science Diliman*, 25:1-13.

Magbitang, R.A., and Lamorena, R.B. (2013) Mineral carbonation process in ophiolite complexes during the CO₂-purged aqueous solutions exposure. *Proceedings of the Annual International Conference on Chemistry, Chemical Engineering, and Chemical Process (CCECP 2013)*. Doi:10.5176/2301-3761_CCECP.38

Magbitang, R.A., and Rodriguez, I.B. (2012) Cadmium and lead determination by ICPMS: Method optimization and application in carabao milk samples. *Science Diliman*, 24:1-11.

MEMBERSHIP IN SOCIETIES AND ORGANIZATIONS

Young Southeast Asian Leaders Initiative (YSEALI), February 2019 – present

Pueblo Science, 2014 - present

European Geosciences Union (EGU), April 2015 – April 2016

Asia and Oceania Geosciences Society (AOGS), June 2013 – June 2016

American Geophysical Union (AGU), January 2013 -January 2014

Kapisanang Kimika ng Pilipinas - Division of Analytical Sciences (KKP-DAS), April 2010 – April 2011

Philippine Association of Chemistry Students, Inc. (PACS), November 2005 – October 2008

University of the Philippines Chemical Society (UP ChemSoc), November 2005 – October 2008