Marco Lloyd C. Mangayayam
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Education

Tallinn University of Technology
(Tallinn, Estonia)
September 2014 – June 2016
MSc Environmental Engineering and Management
GPA: 4.75 (*Cum Laude*)

University of the Philippines - Diliman
(Quezon City, Philippines)
June 2009 – May 2014
BS Civil Engineering
GPA: 1.81

Published Scientific Articles

Mangayayam, Marco, et al. "**FeOx magnetization enhancing E. coli inactivation by orders of magnitude on Ag-TiO 2 nanotubes under sunlight.**"*Applied Catalysis B: Environmental* 202 (2017): 438-445.

Scientific Research Projects

École Polytechnique Fédérale de Lausanne (Lausanne, Switzerland) | February 2016 – June 2016
Master thesis: FeOx-Ag-TiO_2 nanocomposites for *E. coli K12 inactivation*
The research highlights the synthesis and characterization of FeOx-Ag-TiO_2 nanocomposites. The E. coli K12 bacterial strain was used as a model biopollutant for the photocatalytic activity. Furthermore spectroscopic techniques and analytical techniques were used to postulate a synergistic inactivation mechanism.

Università degli studi di Parma (Parma, Italy) | June 2015 – July 2016
Research project: Photocatalytic and characterization of TiO_2 nanopowders and nanotubes derived from various precursors.
Various TiO_2 nanopowders were prepared via sol-gel synthesis from different titanium precurors. The powders were identified using standard characterization. Series of photocatalytic activity were experimentally done to nanopowders under UV and visible light using model dye pollutants – Methyl Orange, Methylene Blue.

University of The Philippines – Diliman (Quezon City, Philippines) | March 2014
"Design and Plan of Wastewater Treatment Facility in Project 6, Quezon City"
Project 6 is considered to be one of the densest area in Quezon City where some of the houses are built during Spanish Era and therefore, no sewage lining was implement. The aim of the study is to design and plan a 4-stage compact wastewater treatment facility to service environmental loading in the said area.

Relevant Skills

Material synthesis: (hydrothermal, solvothermal, sol-gel), basic thin film preparation (anodisation),

Characterization: XRD, SEM/TEM, XPS, Raman Spectroscopy, UV-VIS (DRS), HPLC, LC-MS

Software: MatLab, OriginPro, Labspec, OpenLCA, BibTex, MS Office,

Soft skills: Organizing, trouble-shooting, writing experience, entrepreneurial thinking

Language fluency: English, Filipino

Sports/Hobbies: running, swimming, table tennis, team building, trekking

Scholarships and Awards

SWISS-EUROPEAN MOBILITY GRANT, 2016
The grant is to partially fund the joint master thesis to be performed and supervised in the Group of Advanced Oxidation Process (GPAO) laboratory under Professor Pulgarin.

ERASMUS MUNDUS SCHOLARSHIP AWARD (ACTION 2) , 2014-2016
The scholarship award is entitled to excellent, non-european students to pursue graduate studies in a recognized european institution.

CEPALCO Scholarship, 2012-2014
The scholarship is given to students from University of the Philippines – Diliman, College of Engineering, which attained prescribed academic qualifications for the award.

Hilarion Esquivel Memorial Scholarship, 2009-2014
The scholarship award is given to pursuing BSc Civil Engineering students in the University of the Philippines Diliman, which attained the prescribed academic qualifications for the award.
International Seminars and Workshops Attended

Non-academic Activities

CLIMATE-KIC Summer School/The Journey 2015
Hessen, Germany – Berlin, Germany – West Midlands, UK
August 2015
Attended the 5-week intensive summer program of Climate-KIC to enhance young individuals their entrepreneurial capability, formulate products to mitigate and adapt to climate change and help tackle climate-relevant issues in Europe

Japan East Asia Network of Exchange Students- Science and Technology Batch
Tokyo, Japan – Shizuoka, Japan
May 2014
Selected to be one of the ambassadors to be sent to Tokyo and Shizuoka prefecture. The workshop tends to explore the R&D thrust especially in water technology, and preserving biodiversity, as well as culture

Shell Innovation Summit Malaysia 2013
Kuala Lumpur, Malaysia
September 2013
One of the 5 students to participate in Energy conference hosted by the Royal Dutch Shell and its subsidiary in Malaysia

Co-Chairperson, National Civil Engineering Symposium 2013
September 2013
UP Association of Civil Engineering Students
Chosen to be the co-chairperson of the biggest civil engineering student gathering in the Philippines. The task ranges from brainstorming relevant topics up to the logistics of the entire symposium