

# YVONNE LIGAYA F. MUSICO, PhD EnE

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## EDUCATION

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### **Postdoctoral, 2018**

University of California – Merced  
Thermal and Electrochemical Energy Laboratory (TEEL)  
5200 N. Lake Road, Merced, CA 95343

### **PhD in Environmental Engineering, June 2014**

University of the Philippines  
Diliman, Quezon City, Philippines

Dissertation: *Functionalized Graphene-Based Nanomaterials for the Removal of Lead (II) and Bacteria for Water and Wastewater Treatment Applications*

### **Visiting Research Scholar**

University of Houston  
Civil & Environmental Engineering  
N107 Engineering Building 1  
Houston, TX 77204-4003

### **MS Chemical Engineering, November 2004**

University of the Philippines  
Diliman, Quezon City, Philippines

Thesis: *Characteristics and Performance of Cow Manure, Pig Manure and Granular Sludge as Seeding Materials in the Start-up of UASB Reactor*

### **BS Chemical Engineering, March 1995**

Far Eastern University  
Morayta, Sampaloc, Manila, Philippines

Plant Design: *Manufacture of Pulp from Abaca Fiber*

### **Short Course**

### **Teaching Certificate Program (TCP), 2007**

Technological Institute of the Philippines  
Cubao, Quezon City, Philippines

## WORK EXPERIENCE

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### **Associate Professor 4, 2004 – present**

Technological Institute of the Philippines  
Cubao, Quezon City, Philippines

### **Instructor, 2001 – 2004**

Saint Thomas de Villanova Institute  
Visayas Ave., Quezon City, Philippines

**Research Engineer for MWSS Public Performance Audit Project, 2000 – 2001**

National Engineering Center, UP Campus  
Diliman, Quezon City, Philippines

**Quality Assurance Inspector, 1997**

Pacific Meat Company  
Rosario, Pasig, Philippines

**Quality Assurance Aide, 1996**

Swift Foods Incorporated (Dressing Plant)  
Manggahan, Pasig Philippines

**PUBLICATIONS AND PAPER PRESENTATION**

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**Publications**

- Musico, Y. L. F., Santos, C. M., Dalida, M. L. P., & Rodrigues, D. F. (2014). Surface Modification of Membrane Filters Using Graphene and Graphene Oxide-Based Nanomaterials for Bacterial Inactivation and Removal. *ACS Sustainable Chemistry & Engineering*. doi: 10.1021/sc500044
- Musico, Y. L. F., Santos, C. M., Dalida, M. L. P., & Rodrigues, D. F. (2013). Improved removal of lead(ii) from water using a polymer-based graphene oxide nanocomposite. [10.1039/C3TA01616A]. *Journal of Materials Chemistry A*, 1(11), 3789-3796. doi: 10.1039/c3ta01616a
- Musico, Y. L. F., (2011). Level of Faculty and Students in Technological Institute of the Philippines, Quezon City Campus for Summer 2008. *TIP-QC Research Journal*, 1(8).
- Musico, Y. L. F., (2011) The Potential of Calcium Carbonate from Philippine Green Mussel Shells as Extender in the Manufacture of Flat Latex Paints. *TIP- QC Research Journal*, 1(4).
- Musico, Yvonne (2010). Production of Bioplastic from Cassava Flour. Faculty research presented at the Technological Institute of the Philippines Research Colloquium 2010.
- Musico, Yvonne (2010). "Adsorption of Metro Clark Waste Management (MCWM) Leachate onto Activated Carbon". Research for MCWM Project of Technological Institute of the Philippines Project.

**Research Presentations**

- "Multifunctional Graphene-Based Nanocomposite Modified Membrane Filters for Heavy Metals and Bacteria Removal from Water" oral presentation during the Eighth International Conference at Hilton Houston North Hotel, Houston, Texas, USA, June 6 - 10, 2016.
- "Graphene-based Nanocomposite Modified Membrane Filters For The Removal Of Lead (II) From Water" oral presentation during the Asia Pacific Confederation of Chemical Engineers (APCChE) Congress 2015 Incorporating Chemeca 2015 at Melbourne Convention and Exhibition Centre, Melbourne, Victoria, Australia, September 27 - October 1, 2015.
- "Graphene-based Modified Membrane Filters for Inactivation and Removal of Bacteria" oral presentation during the 4<sup>th</sup> International Symposium on Graphene Devices (ISDG-4) at Hilton Bellevue, Bellevue, Washington, USA, September 21 - 25, 2014.
- "Lead (II) Adsorption Capacity of Poly(*N*-vinylcarbazole) Graphene Oxide" presentation during the 9th World Congress of Chemical Engineering incorporating 15th Asia Pacific Chemical Engineering Congress at Coex, Seoul, South Korea, August 18-23, 2013.
- "Heavy metal removal property of Graphene-based Polymer Nanocomposite," presented during Material and Research Society (2012) Fall Meeting and Exhibit at Hynes Convention Center, Boston, Massachusetts, November 25-30, 2012.
- "Start Up of High Rate Anaerobic Wastewater Treatment Systems Using Various Carrier Materials and Inoculants," paper presented during the Regional Symposium of Chemical Engineers 2005 in Hanoi, Vietnam.

## **AWARDS/HONORS**

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- 2<sup>nd</sup> Runner Up, Best Poster Presentation, PAASE Meeting and Exhibit in University of Houston, Houston, Texas, USA, May 5, 2012.
- First Runner Up, Search for Most Outstanding Faculty in TIP, AY 2009-2010
- Second Runner Up, Search for Most Outstanding Faculty Research in TIP, AY 2009-2010
- Winner, Search for Best PowerPoint Presentation (Instructional Material) in TIP, AY 2008-2009
- Third Placer, Search for Best PowerPoint Presentation (Instructional Material) in TIP, AY 2006-2007
- Third Placer, Search for Most Outstanding Faculty Research in TIP, AY 2006-2007

## **GRANTS/SCHOLARSHIP**

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Philippine-California Advanced Research Institute (PCARI)  
Engineering Research and Development for Technology (ERDT) Scholar, PhD EnE  
Department of Science and Technology Engineering and Science Educational Program (DOST-ESEP) Scholar, MS ChE  
Private Educational Student Fund Assistance (PESFA) Grantee, BS ChE

## **PROFESSIONAL AFFILIATIONS AND LICENSES**

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Philippine Institute of Chemical Engineers (PIChE)  
Philippine-American Academy of Science and Engineering (PAASE)  
American Chemical Society (ACS)  
Material Research Society (MRS)  
Registered Chemical Engineer in the Philippines (License No: 0022320)  
Registered Secondary Teacher in the Philippines – Major in Math (License No: 1021690)

## **SKILLS**

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Microsoft Office, Hydrus 1D, STANMOD, Typing, Internet  
Laboratory Skills in Chemistry, Biology, Biochemistry, Microbiology  
Languages

- Filipino – native language
- English - Speak fluently, read and write with high proficiency
- Spanish and French – Speak, read and write with basic competence

## **PERSONAL STRENGTH**

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Versatile, fast learner, patient, willing to learn new things, dynamic leadership, sense of responsibility, creative and resourceful, dependable

**PROFESSIONAL ACTIVITIES, TRAININGS AND SEMINARS ATTENDED FOR THE LAST FIVE (5) YEARS**

<b>No.</b>	<b>Title/Description</b>	<b>Training Firm or Trainer/Venue</b>	<b>Inclusive Dates</b>
1	Material Research Society (MRS) Fall 2016 Meeting and Exhibit	Hynes Convention Center, Boston, Massachusetts	November 27-December 2, 2016
2	The Eighth International Conference on Environmental Science and Technology (ICEST 2016)	American Academy of Sciences, Hilton Houston North Hotel, Houston, Texas, USA	June 6-10, 2016
3	Laguna Lake Development Authority (LLDA) Pollution Control Officer Accreditation Training	Laguna Lake Development Authority, Camelot Hotel., Mo. Ignacia, Quezon City	May 8-20, 2016
4	Basic Pollution Control Officers Training Course	Environmental Counselors, Inc., Unit E, 9 <sup>th</sup> Floor, Strata 100 Bldg., Emerald Ave., Ortigas Center, Pasig City	March 8 – 11, 2016
5	77 <sup>th</sup> Philippine Institute of Chemical Engineers (PIChE) Nantional Convention – Theme: “Chemical Engineers Addressing Challenges of ASEAN Integration”	Boracay Ecovillage Resort and Convention Center, Malay, Aklan	February 17-20, 2016
6	Asia Pacific Confederation of Chemical Engineers (APCChE) Congress 2015 Incorporating Chemeca 2015	Melbourne Convention and Exhibition Centre, Melbourne, Victoria, Australia	September 17 – October 1, 2015
7	76 <sup>th</sup> Philippine Institute of Chemical Engineers (PIChE) Nantional Convention – Theme: “Strengthening Chemical Engineering Towards One ASEAN Community”	The Legend Hotel, Puerto Princesa, Palawan,	February 18-21, 2015
8	ITSO Training on Patent Drafting 1	Intellectual Property Office of the Philippine/ Seminars Room A &B, Ground Floor, Technological Institute of the Philippines, Aurora Boulevard, Cubao, Quezon City	October 21-24, 2014
9	4 <sup>th</sup> International Symposium on Graphene Devices (ISGD-4)	Material Research Society (MRS)/ Hilton Bellevue, Bellevue, WA	September 21-25, 2014
10	Seminar-Workshop on Patent Search and Documentation	Intellectual Property Office of the Philippines/IPOPHL Multipurpose Hall, Taguig City	August 6-8, 2014
11	Forum on Emerging Technologies	DOST/Forum Hall 1, SMX Convention Center, Pasay City	July 24, 2014
12	Foundation Course on Intellectual Property	Intellectual Property Office of the Philippines/IPOPHL Multipurpose Hall, Taguig City	July 2-3, 2014
13	4 <sup>th</sup> PCIEERD Anniversary Meeting – Theme: “Juana Invest? Reaping the Returns of R & D”	DOST-PCIERD/ Edsa Shangrila Hotel, Ortigas Center	June 17, 2014
14	75 <sup>th</sup> Philippine Institute of Chemical Engineers (PIChE) Nantional Convention – Theme: “A Glorious Past, A Challenging Future”	Manila Hotel, Manila City	February 26-28, 2014
16	9 <sup>th</sup> World Congress of Chemical Engineers (WCEE) incorporating 15 <sup>th</sup> Asian Pacific Confederation of Chemical Engineering	Coex, Seoul, South Korea	August 18-23, 2013
17	Material Research Society (MRS) Fall 2012 Meeting and Exhibit	Hynes Convention Center, Boston, Massachusetts	November 25-30, 2012
18	Philippine American Academy of Science and Engineering Assembly	UH Hilton Hotel, University of Houston, Houston, Texas, USA	May 4-5, 2012
19	72 <sup>nd</sup> PIChE National Convetion – Theme: “Unleashing the Masked Potentials of the Filipino Chemical Engineers”	L’ Fisher Hotel, Bacolod City	February 16-18, 2011

**REFERENCES**

Excellent references available upon request