Mayra Maritza Quemé Peña

Date of birth: September 28, 1989
Nationality: Guatemalan
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I. EDUCATION

Fall 2017- Present

PhD student in Chemistry
Synthetic, organic and biomolecular chemistry
Eötvös Loránd University, Faculty of Science, Institute of Chemistry, Budapest.
Supervisor: Beke-Somfai Tamás, Ph.D.

2012- 2015

Master of Engineering
Department of Chemical Engineering, Kyung Hee University
Thesis: Geometric Effect of Taylor Vortex on Agglomeration of Ni/Mn/Co hydroxide in Continuous Reaction Crystallization
Supervisor: Woo-Sik Kim, Ph.D.

2007-2011

Bachelor of Science
Department of Chemical Engineering, Universidad de San Carlos de Guatemala
Thesis: Evaluacion del metodo de digestor modelo TE-0501 como un metodo alterno para el analisis del jugo de la cana desfibrada en la industria azucarera de Guatemala (Evaluation of an alternative method at laboratory level for the juice from shredded sugar cane, applying the wet disintegration method, using the equipment digester model TE-0501 in a sugar cane mill in Guatemala)
Supervisor: Professor David Ricardo Cerezo, Msc.

II. RESEARCH EXPERIENCE

2012- 2015

Research Assistant, Master's level
Department of Chemical Engineering, Kyung Hee University
Advanced Materials Crystallization Laboratory
Project: Study of the hydrodynamic conditions in the synthesis of the cathode precursor Ni-rich hydroxide in the Couette-Taylor crystallizer for continuous crystallization
Supervisor: Professor Woo-Sik Kim, Ph.D

2010

Research Assistant, Research Laboratory of extracts of plants –LIEXVE- Engineering Research Centre, Universidad de San Carlos de Guatemala
Project: Extract of oleoresin paprika for the company ASEAL and extract of Origanum vulgare for the company AROMATECA.
Supervisor: Professor Mario Merida Mere, Msc.

III. TEACHING EXPERIENCE

Fall 2015 until Fall 2017

Physical chemistry Laboratory
Department of Chemical Engineering, Universidad de San Carlos de Guatemala
Teaching professor: Prepared and conducted weekly classes and practice in laboratory of 50 students as well as supervise reports and homework's.

Fall 2015 until Fall 2017

Physical chemistry and Thermodynamics
Department of Chemical Engineering, Universidad de San Carlos de Guatemala
Teaching professor: Prepared and conducted weekly classes (3 times per week) for 100 students as well as prepared homework's.

Fall 2010 until Spring 2011

Physical chemistry Laboratory
Department of Chemical Engineering, Universidad de San Carlos de Guatemala
Teaching assistant: Prepared and conducted weekly classes and practice in laboratory of 50 students as well as supervise reports and homework's.

Fall 2011 until Spring 2012

Thermodynamics 3 and Thermodynamics 4
Department of Chemical Engineering, Universidad de San Carlos de Guatemala
Teaching assistant: Conducted tutorials for a class of 80 students as well as supervise reports and homework's.

Fall 2011

Chemistry 1
Department of Science, Universidad de San Carlos de Guatemala
Teaching assistant: Conducted tutorials for a class of 80 students as well as supervise reports and homework's.

IV. EXTRA-CURRICULAR ACTIVITIES

January 2017- September 2017

Coordinator of the Committee of Protocol, for the National Olympiad in Science 2017 to be hold in Guatemala. (Volunteer).

October 2016- September 2017

Supervisor of the thesis: Diseño y elaboración del procedimiento operativo de cristalización del azúcar blanco estándar tipo B y crudo en Ingenio Madre Tierra, Santa Lucía Cotzumalguapa, Escuintla (Design and elaboration of the operative procedures of the standard white sugar crystallization type B and raw for the sugarcane mill Madre Tierra in Santa Lucía Cotzumalguapa, Escuintla).

2013- 2014

President of AEEGUC -Association of Guatemalan Students and Alumni from Korean Universities- (AEEGUC has the full support of the Embassy of Guatemala in South Korea. For confirmation contact information of H.E. Ambassador Gustavo Lopez to: embajador.guatemala.corea@gmail.com)

2009 Diploma in Water treatment and conditioning for the industry. Universidad de San Carlos de Guatemala

V. PUBLICATIONS

- ✓ Dien Khuong Thai, Quemé-Peña Mayra and Woo-Sik Kim. "Agglomeration of Ni-rich Hydroxide Crystals in Taylor Vortex Flow". Journal of Powder Technology. Volume 274, April 2015, Pages 5–13. Available online January 9th 2015.

- ✓ Quemé-Peña Mayra and Woo-Sik Kim. "Agglomeration of Ni-Rich Hydroxide in Reaction Crystallization: Effect of Taylor Vortex Dimension and Intensity". Journal of Crystal growth and Design, ACS publication. (Available online March 16th 2015, **DOI:** 10.1021/cg501727v)

- ✓ Quemé-Peña Mayra and Woo-Sik Kim. Continuously Expanding Taylor Vortex Effect on the Agglomeration of Ni-Rich Hydroxide Crystals. (Manuscript in preparation, 2015)

VI. PRESENTATIONS AND POSTERS

- ✓ Mayra Maritza Queme Pena*, Woo-Sik Kim. Geometric effect of Taylor-vortex flow on crystal agglomeration in reaction crystallization. Poster presented to The Korean Institute of Chemical Engineers in the fall symposium 2013. Daegu, South Korea.

- ✓ Quemé Peña Mayra Maritza*, Woo-Sik Kim. Geometric effect of Couette-Taylor crystallizer on agglomeration of Ni-rich hydroxide crystals in reaction crystallization. Poster presented to the Joint Congress of Asian Crystallization Technology Symposium-2014 and 11th International Workshop on Crystal Growth of Organic Materials. Nara City, Japan.

- ✓ Quemé Peña Mayra Maritza*, Anh-Tuan Nguyen, Woo-Sik Kim. Influence of Taylor Vortex Flow on the Cooling Crystallization of L-Lysine. Poster presented to the Joint Congress of Asian Crystallization Technology Symposium-2014 and 11th International Workshop on Crystal Growth of Organic Materials. Nara City, Japan.

- ✓ Mayra Maritza Queme Pena*, Woo-Sik Kim. Taylor Vortex effect on crystal agglomeration in continuous crystallizer. Oral presentation presented to The Korean Institute of Chemical Engineers in the spring symposium 2014. Changwon, South Korea.

- ✓ Mayra Maritza Queme Pena*, Woo-Sik Kim. Effect of Continuously Expanding Taylor Vortex on Crystal Agglomeration. Poster presented to The Korean Institute of Chemical Engineers in the fall symposium 2014. Daejeon Convention Center, South Korea.

- ✓ Quemé Peña Mayra Maritza*, Woo-Sik Kim. Crystal Agglomeration of Ni/Mn/Co-Hydroxide in Continuous Couette-Taylor Crystallizer. Poster presented to the 10th International Conference on Separation Science and Technology (ICSST14). Nara City, Japan.

- ✓ Quemé-Peña Mayra, Hwayong Kim and Woo-Sik Kim*. Agglomeration of Ni-rich hydroxide in Conical Taylor Vortex flow. Poster presented to Asian Pacific Confederation of Chemical Engineering (APCChE 2015 Congress incorporating Chemeca 2015). September 27th -October 1st, 2015 in Melbourne, Australia.

VII. SELECTED HONOURS AND AWARDS

2012-2014 KHU-SENACYT Graduate Scholarship in Science and Technology (Master's level)

2012-2014 Scholarship for International Student (Office of International Affairs) President Scholarship (Master's level)

VIII. MEMBERSHIP

2012- Present Member of the College of Chemical Engineers of Guatemala.

IX. LANGUAGE COMPETENCIES

- Spanish (Native language)
- English (TOEFL IBT 93 total points)