

Advanced Research Scholar – Grants-related

Arniel Ching Dizon

Mindanao State University – Iligan Institute of Technology



Field of Study:	<i>Polymer Science and Engineering</i>
Research Period	<i>January – July 2017</i>
US University	<i>University of Missouri Columbia</i>
US Professor	<i>Prof. Galen J. Suppes / Prof. Patrick Pinhero</i>
Research Title	<i>Rigid Polyurethane Insulation Foams Made From Lignocellulosic Rice Straw</i>

Describe your research conducted in the US.

I was an advanced research scholar in the US performing USAID grant-related research activities for a collaboration between Mindanao State University – Iligan Institute of Technology and the University of Missouri Columbia. My objectives were 1) to learn basic and advanced characterization methods of bio-based polyol and polyurethane foams, and 2) to engage in the research activities of Professor Suppes' group in the US.

What was the highlight of your research in the US?

The highlight of my research was when I was introduced to Matlab-based simulation of reactions and physical processes that occur to form urethane foams. This is a new approach to polyurethane research with the goal of reducing the time and cost of urethane formulation development and developing more sustainable and lower cost urethane polymers.

In what way has the USAID scholarship changed you?

The USAID scholarship has given me the opportunity to work with one of the leading researchers on polyurethane research in the world. Aside from the research skills and approaches I learned during my stay in the US, I have also experienced working with graduate students who came from different parts of the globe. Working with people of different backgrounds and in living a foreign land allowed me to learn more about myself.

How would you use the knowledge and skills gained through your research to contribute or influence economic growth in the country?

I would continue my research on sustainable bio-based polyurethane production to help improve the process for commercialization and create a demand for biomass waste materials like rice straw and bagasse.

As a young scientist, what do you envision for the Philippine science, technology and innovation ecosystem in the next 10 years?

I envision a vibrant science, technology, and innovation ecosystem that focuses on the innovation of local materials and products, enables disaster prevention and adaptation, and supports local technology startups.

At present, Ching is an Assistant Professor of the Department of Chemical Engineering and Technology at Mindanao State University – Iligan Institute of Technology

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