



# CHEMISTRY SEMINAR 291

## A Tale of Two Projects: From Antimicrobial Peptides to CO<sub>2</sub> Reduction

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### ABSTRACT

This presentation highlights the results of studies performed in my laboratories (<http://angeles-boza.chemistry.uconn.edu/>) showing 1) how Cu<sup>2+</sup> and Zn<sup>2+</sup> are important components on the activity of two host defense peptides isolated from the tick *Ixodes sinensis* and the tunicate *Styela clava*; and 2) how <sup>13</sup>C kinetic isotope effects allow the identification of the species involved in CO<sub>2</sub> reduction catalysis. I will also show our initial attempts at using this knowledge to prepare novel antimicrobial agents and catalysts.

### BIO:

Dr. Angeles was born and raised in Peru. He obtained his undergraduate (B.S.) degree from the Catholic University in Lima and a Ph.D. in inorganic chemistry from Texas A&M University in 2007 (Advisor: Prof. Kim Dunbar). After a short stint at Halliburton, he did postdoctoral work at Texas A&M University (Advisor: Prof. Jean-Philippe Pellois) and Johns Hopkins University (Advisor: Prof. Justine Roth). He joined the Department of Chemistry at The University of Connecticut, where he is an Associate Professor. His research interests are in synthetic, structural, and mechanistic inorganic and bioinorganic chemistry, including the development of new catalysts for the reduction of CO<sub>2</sub> and the enhancement of antimicrobial activity of peptides.

