



Webinar #31

Prof. Darwin Barayang Putungan

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Title: A guided first-principles calculations tour of hydrogen evolution reaction (HER): Bulk surface, 2D monolayer, and 2D van der Waals heterostructure

Registration link: <https://tinyurl.com/3tkhjnz>

*Zoom details will be shared with the registered participants

Abstract

In this talk, I will present how the dimensionality of materials and their distinct features impact the Gibbs free energy of hydrogen adsorption, which is the lone descriptor of hydrogen evolution reaction. To illustrate this, I will provide a "guided first-principles calculations tour" beginning from bulk surface to 2D van der Waals heterostructures.

Short biography

Darwin B. Putungan is a Professor of Physics at the Institute of Mathematical Sciences and Physics (IMSP), University of the Philippines Los Baños (IMSPUPLB). He graduated from the University of the Philippines Los Baños (cum laude) in 2005 with the degree of Bachelor of Science in Applied Physics. He received his Master of Science in Physics in 2009 from the University of the Philippines Diliman, and Ph.D. in Physics in 2015 from the National Taiwan University under the Taiwan International Graduate Program (TIGP) fellowship. He was appointed as a Junior Associate of the Condensed Matter and Statistical Physics Research Group at the International Center for Theoretical Physics (ICTP), Trieste, Italy where he did postdoctoral research activities and visits starting 2019. He received several UP System International Publication Awards (IPA), UPLB Centennial Professorial Chair Awards (2018 and 2021), and the One UP Professorial Chair for Outstanding Teaching and Research Award (2019-2022; 2022-2025). He was conferred the rank of UP Scientist I under the UP Scientific Productivity System (2019-2022; 2022-2025) and was recognized as the First Prize winner in the National Academy of Science and Technology (NAST) Talent Search for Young Scientists in 2019. Also, he was the College of Arts and Sciences-UPLB Outstanding Researcher Awardee in 2022.

Panelist



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