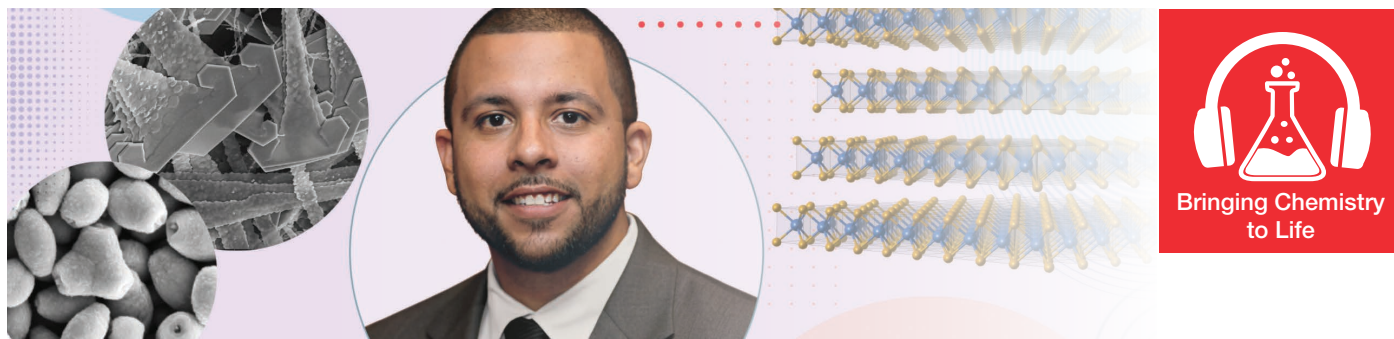


Bringing Chemistry to Life podcast series

ThermoFisher
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Season 3: The 2021 C&EN's Talented 12
Episode 10: On solid state materials, electrochemistry,
and the importance of roots



Episode abstract

Some people have an aura, which is something difficult to describe; some define it charisma, others call it charm. These are people you want to spend time with, because they make you feel good and always have something interesting to say. Jesús Velázquez is one of these people. A talented materials scientist, deeply attached to his motherland of Puerto Rico, and determined to give back what he feels life has given him.

Jesús' science is as generous as he is and brings disruptive potential with it. He studies nanostructured solid materials, particularly the so-called chalcogenides (metal complexes containing group 8 elements) and Chevrel phases ($M_xMo_6S_8$). These materials can be used for a variety of applications, the most promising being electrochemical reactions. Generating hydrogen from water, or reducing carbon dioxide to methanol, are among these applications.

This is a scientifically stimulating, and yet warming conversation. We span from solid phase material synthesis and characterization to coaching and mentoring young talent from underrepresented communities. A great way to close season 3!

About our guest

Jesús Velázquez, PhD

Assistant Professor, Department of Chemistry,
University of California - Davis

Jesús's group site: <https://velazquezlab.ucdavis.edu/>

C&EN Talented 12 profile of Jesús: <https://cen.acs.org/environment/Jesus-Velazquez/99/i30>

Jesús' Recent Publications:

- [Multi-dimensional designer catalysts for negative emissions science \(NES\): bridging the gap between synthesis, simulations, and analysis](#)
- [Machine Learning Guided Synthesis of Multinary Chevrel Phase Chalcogenides](#)
- [Adsorption of perfluorooctanoic acid from water by pH modulated Brønsted acid and base sites in mesoporous hafnium oxide ceramics](#)
- [Promoting Inclusive and Culturally Responsive Teaching Using Co-classes for General Chemistry](#)
- [Metal-promoted Mo₆S₈ clusters: a platform for probing ensemble effects on the electrochemical conversion of CO₂ and CO to methanol](#)

Jesús' Content Recommendations:

- [El alquimista](#) (A book by Paulo Coelho)
- [Chente Ydrach](#) (A podcast by a Puerto Rican comedian)
- [Bad Bunny](#) (A Puerto Rican rapper)
- [Tego Calderón](#) (A Puerto Rican rapper)

This podcast series is available via the following links



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