

Bringing Chemistry to Life podcast series

ThermoFisher
SCIENTIFIC

Season 2: The 2020 C&EN's Talented 12 Episode 6: The charm of the forgotten elements



Episode abstract

There is one thing Robert Gilliard, Jr. refutes categorically; that there is no innovation in chemistry. As an innovator, he has made a career on the risky proposition of finding value in a part of the periodic table that has been historically underappreciated, the main-group elements.

In his fearless exploration of the properties of magnesium, beryllium, bismuth and boron, Robert is discovering new chemistries and inventing new applications. He believes in moving beyond the well of tried-and-true chemistry to explore less-traditional approaches and making them part of the standard chemistry toolset.

This is a classic Bringing Chemistry to Life episode; one that those genuinely passionate about chemistry will love. Paolo and Robert speak about new properties, reactivities and applications in synthetic chemistry and material science, all coming from the “forgotten,” abundant and cheap main-group elements. A wonderful story of relentless pursuit of knowledge that proposes a vision for a very different chemistry of tomorrow.

About our guest

Dr. Robert J. Gilliard, Jr.

Assistant Professor, Department of Chemistry, University of Virginia

Robert's group site: <https://gilliardgroup.chem.virginia.edu/>

C&EN Talented 12 profile of Robert:

<https://cen.acs.org/materials/inorganic-chemistry/Robert-J-Gilliard-Jr/98/i31>

Recent Publications from Robert:

- [Stabilization of the Elusive 9-Carbene-9-Borafluorene Monoanion](#)
- [Surfactant Removal for Colloidal Nanocrystal Catalysts Mediated by N-Heterocyclic Carbenes](#)
- [s-Block Multiple Bonds: Isolation of a Beryllium Imido Complex](#)
- [A Stable, Crystalline Beryllium Radical Cation](#)
- [Stable Borepinium and Borafluorenum Heterocycles: A Reversible Thermochromic “Switch” Based on Boron Oxygen Interactions](#)

Robert's Content Recommendations:

- [Forgotten Genius](#) (a NOVA documentary episode on the chemistry and personal life of Dr. Percy Julian)
- [National Organization of Black Chemists and Chemical Engineers](#) (an organization website)
- [Law and Order: SUV](#) (a show enjoyed by Robert)
- [Xiaomanyc](#) (a YouTube channel on how languages bring people together)
- [Comedy Central Stand-Up](#) (Robert's favorite comedians: Katt Williams, Wanda Sykes, Eddie Murphy & Chris Rock)

This podcast series is available via the following links



Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use. © 2022 Thermo Fisher Scientific Inc. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified. 01_2022

thermo scientific