

The Origin of Life: A Battlefield for Dueling Worldviews

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The origin of life remains a long-standing unsolved problem in science. The basics of the chemistry of life are well understood, but the myriad ways in which biological molecules react in an inter-dependent fashion to carry out cellular functions is a growing body of knowledge. Various models for the origin of biological molecules have been put forth throughout the 20th and 21st centuries. These include undirected, mechanistic models, and models based on the principle of intelligent design. In this lecture, we will critically scrutinize and analyze these models using the principles of chemical thermodynamics, information theory, surface chemistry and photochemistry, all of which are relevant to the origin of life. The role of worldview, and the implications of one's opinion of this topic on his/her worldview, will also be discussed.

Dr. Scott Chambers is a Laboratory Fellow and Technical Group Leader of the Oxide Epitaxy Group at Pacific Northwest National Laboratory. His training is in chemical physics and physical chemistry, but his research over the bulk of his professional career has been in materials chemistry and physics. His research focuses on the making, modeling and understanding of complex metal oxide crystalline films and heterostructures. These materials are of significant interest in a variety of scientific and technological arenas, including next-generation electronics, photovoltaics and photocatalysis and quantum computation. Dr. Chambers was trained at the University of California at San Diego and Oregon State University. Before joining Pacific Northwest National Laboratory, he was a staff scientist at the Boeing High Technology Center in Seattle. He is a Fellow of the American Physical Society, the American Association for the Advancement of Science, and the American Vacuum Society. He was the recipient of E.W. Mueller Award for outstanding achievements in surface science from the Laboratory for Surface Studies at the University of Wisconsin in 2004, as well as a Federal Laboratory Consortium Excellence in Technology Transfer Award in 2002. He has published ~310 peer reviewed scientific papers, review articles, and book chapters, and has given ~230 invited lectures at universities, research laboratories and conferences worldwide. He holds three U.S. patents. Dr. Chambers and his family have lived in the Tri Cities since 1992. He and his family have been members of Bethel church for 25 years, and he has served as an elder at Bethel since 2002.

