

On the trail of the Chimera

The Atom-Probe at the Biological Frontier



Pacific Northwest
NATIONAL LABORATORY

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Frontiers in Chemical Imaging Seminar Series

Presented by

John A. Panitz, CEO High-Field Consultants, Inc



Abstract

The Atom-Probe may be the ultimate microanalytical tool because a single atomic or molecular species can be identified, imaged and mapped in three dimensions with atomic resolution in most materials [1]. The lure of identifying, imaging and mapping the constituent elements of a biological molecule in the atom probe has been an ongoing quest since its introduction [2-3]. This talk will focus on that quest and in the process describe why the Chimera is still elusive.

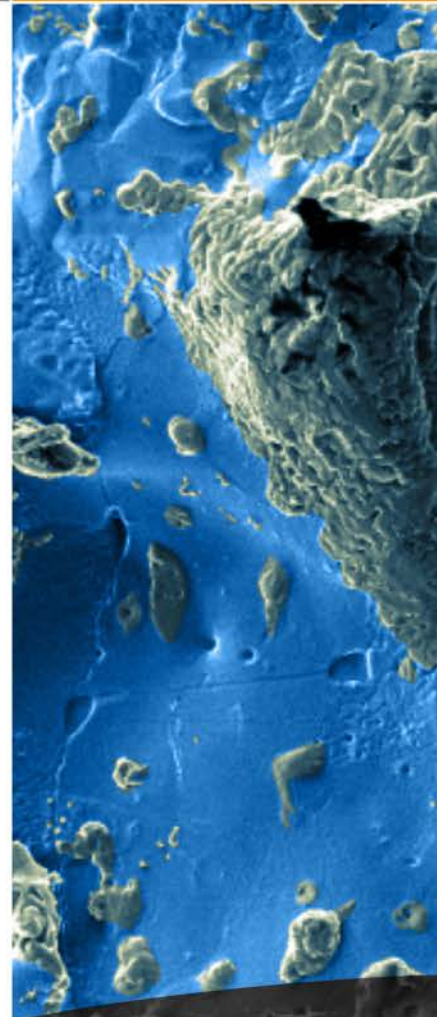
1. Thomas F. Kelly and David J. Larson. *Ann Rev. Materials Res* 42 (2012) 1.
2. Erwin W. Müller and John Panitz. *Proceedings of the 14th International Field Emission Symposium*. The National Bureau of Standards, Gaithersburg, MD (1967) 31.
3. Erwin W. Müller, John A. Panitz and S. Brooks McLane. *Rev. Sci. Instrum.* 39 (1968) 83.

Bio

John A. Panitz is Emeritus Professor of Physics at the University of New Mexico and Emeritus Professor of Cell Biology and Physiology in the School of Medicine. In 1993 Professor Panitz founded High-Field Consultants that specializes in phenomena that occur in high electric fields. He is the co-inventor of the Atom-Probe (with the late Erwin Müller) and has published more than a hundred articles and book chapters on major developments in atom probe instrumentation and the application of Atom-Probe technology in surface and material science, biology and medicine. J. A. Panitz invented Field Ion Tomography, the Imaging Atom-Probe (the progenitor of commercial atom probe tomographs) and the LiFE Detector, a novel immunochemical sensor with single analyte detection capability.

More Info: <http://japanitz.com/public/japanitz.html>

Host: Daniel Perea and Louis Terminello, CII Lead
POC: Marla Seguin 372-4029



Date: November 9, 2012

Location: EMSL 1077

Time: 10:00 am