



Contribution ID: 244

Type: **not specified**

Minerals, Metals and Materials: Understanding the World around Us

Wednesday, 20 November 2024 11:00 (20 minutes)

The growth of science and technology is accelerating, with new products and processes being developed in fields such as nanoscience and biotechnology. With this growth, industry is facing increasing pressure to innovate and is discovering that traditional analytical techniques are not answering all of their questions. For example, new materials are being developed daily that may have significantly different properties but are chemically indistinguishable using current analysis techniques. It is crucial for industry to understand these differences and develop these unique properties into new products. Today, industry is turning to new tools to shed light on old, and new, questions.

Industry has discovered the power of synchrotron light source facilities and the vast array of experimental facilities they house. Every year, thousands of researchers from around the world make discoveries that lead to viable products, patents, and technology transfer in areas including:

- Health: Research, including diagnosis and drug development related to many diseases such as cancers, heart disease, cystic fibrosis, and antibiotic-resistant infections.
- Agriculture: New insights on improved crop and plant development, fertilizers, drought and temperature resistance, and soil management.
- Environmental science (includes climate change): Advancements in mine remediation techniques, heavy oil extraction efficiencies, high-efficiency catalysts, renewable resources, and energy storage.
- Advanced materials: New insights and applications in high-temperature superconductors, fuel cells, eco-composite materials, solar power, catalysts, microdevices, nanotubes, and new materials.

This presentation will highlight how synchrotron light source facilities engage with and bring value to the private sector, showcasing some of the exciting new science emerging.

Primary author: CUTLER, Jeffrey (Sylter Science Inc.)

Presenter: CUTLER, Jeffrey (Sylter Science Inc.)

Session Classification: Plenary

Track Classification: AfLS