

INDUSTRIAL APPLICATIONS AND MATERIAL EFFECTS MONDAY APRIL 8, 2019 (AFTERNOON)

1:45 PM – 3:15 PM
LECTURE ROOM D

Session Title: A Consortium for Radiation Science: Development of a Network of Facilities for Industrial Applications with Electron, Gamma-Ray and X-Ray Beam Capabilities
Session Chair: Dr. Mark S. Driscoll, The State University of New York, College of Environmental Science and Forestry

Presentation Titles: The speakers listed below will be giving an introduction and overview to stimulate discussions on this topic with members of the audience.

Dr. Mark S. Driscoll, State University of New York College of Environmental Science and Forestry

Dr. Walter E. Voit, University of Texas, Dallas

Dr. James Adams, NIST

Dr. Mohamad Al-Sheikhly, University of Maryland

* Representative from the International Irradiation Association

3:15 PM – 3:45 pm
Coffee Break

3:45 PM – 5:15 PM
RED AUDITORIUM

Joint Sessions: Medical Applications, Radiation Protection & Industrial Applications

Session Title: Chemistry and Biology of the DNA Damage and its Modification
Session Chair: Dr. Amitava Adhikary, Department of Chemistry, Oakland University

Dr. Michael Dingfelder, East Carolina University

Track Structure: Simulating the Physics and Chemistry Basis of Radiation Damage

Dr. David Becker, Oakland University

A Radiation Chemistry Track Structure Model in 3D for Ion-beam Irradiated DNA

Dr. Shubhankar Suman, Georgetown University

Role of Persistent DNA Damage Response in Heavy-Ion Space Radiation-Induced Carcinogenesis

Dr. Sudipta Seal, University of Central Florida

Understanding the Rare Earth Nanomaterials in Mitigation Radiation in Biological Environment

Dr. Jeffrey Buchsbaum, Radiation Research Program, National Institute of Health

DNA Damage and High LET Radiation and the Clinic – Biologic Dosimetry is the Goal

**INDUSTRIAL APPLICATIONS AND MATERIAL EFFECTS
TUESDAY APRIL 9, 2019 (AFTERNOON)**

**1:45 PM – 3:15 PM
LECTURE ROOM B**

Joint Sessions: Industrial Applications & Radiation Protection

Session Title: Cesium-137 Irradiators

Session Chair: Dr. Spencer Mickum, Hopewell Designs Inc.

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Impact from the Potential Shortage of Cs-137 Supply

Dr. Jacob Kamen, Mount Sinai Hospital

Successful Migration from Radioactive Irradiators to X-Ray Irradiators in One of the Largest Medical Centers in the U.S.A.

Dr. Lance Garrison, National Nuclear Security Administration

Development and Certification of Type B Containers for Self-shielded Irradiators

Dr. Ronnie Minniti, National Institute of Standards and Technology

Air Kerma Calibrations at NIST using Cesium-137

Dan Aitkenhead, Best Medical

Challenges Selling both Gamma and X-ray Blood Irradiators

3:15 PM – 3:45 PM

Coffee Break

**3:45 PM – 5:15 PM
LECTURE ROOM C**

Session Name: Low Energy Electron Beam Standards and Applications for Industry

Session Chair: Dr. Mark S. Driscoll, The State University of New York, College of Environmental Science and Forestry

Fred Bateman, National Institute of Standards and Technology (NIST)

Low Energy Laboratory Electron Beam Unit

Karl E. Swanson, President, PCT Ebeam and Integration

Current and Developing Applications for Low Voltage Electron Beam Systems

Fred Bateman, Karl Swanson and Ileana Pazos

Panel Discussion on Possible Research using NIST's New Low Energy Electron Beam System