35th International Nuclear Air Cleaning Conference Marriott Hotel Charleston, SC June 3-5, 2018

Sunday June 3, 2018

5:00 – 6:00 Registration Opal Promenade

5:00 – 6:00 Welcoming Reception Sponsored by ISNATT Opal Promenade

5:00 – 6:00 Vendor's Exhibits Opal Two

> AAF International Camfil Jacobi Carbons MC AIR NUCON Intl Porvair Filtration

Monday June 6, 2016 8:00 Registration Opal Promenade 7:30 – 9:30 Breakfast Sponsored by AAF International Opal Promenade 9:30 – 5:00 Vendor's Exhibits

Opal Two

Monday Morning Sessions

Emerald One and Two

8:30 Welcome and Opening Remarks

Dr. Ronald R. Bellamy, President, ISNATT

8:50 – 9:05 Forty-Plus Years of Memories

Jim Edwards

Keynote Presentation

9:05 – 9:50 Nuclear Ventilation Regulations and Standards in the UK Bernard Swinnerton (Sellafield Sites)

9:50 – 10:00 Session Recap

Dr. Ron Bellamy, ISNATT

Break 10:00 – 10:45 am Opal Promenade, Sponsored by Jacobi Carbons

10:45 - 11:15 Use of Regenerable Sintered Metal Media Filters in Nuclear

Applications Chris Carter (Cavendish Nuclear) and Chris Chadwick (Porvair Filtration)

11:15 – 11:45 Air Cleaning Developments in China (Qun Lui, Lihong Han, & Jianrong Hou)

11:45 – 12:00 Session Recap Dr. Ron Bellamy, ISNATT

Lunch 12:15 – 1:30 pm Courtyard

Monday Afternoon Sessions

Emerald One and Two

Session Chairs: Andrew Stillo and James Kriskovich

- 1:30 2:45 Process Control for HEPA Filters: ACFM vs. ACFM Moderator: Dr. Charles Waggoner, ICET Panelists: Jerome Roberts (NTS) Dr. Craig Ricketts (EngrsCo) and Dr. Werner Bergman (Aerosol Sciences)
- 2:45- 3:00 Panel Discussion Recap

Break 3:00 – 3:30 Sponsored by Jacobi Carbons Opal Promenade

3:30 - 5:00 Afternoon Session

- **3:30 4:00 Examination of Alternative Nuclear Filtration Materials using the Mini High Temperature Test Unit (HTTU)** Lauren Finkenauer (LLNL)
- **4:00 4:30** Summary of ICET Test Results for Axial Flow HEPA Filters John Wilson (ICET)

4:30-4:40 Review and Recap of Day's Sessions

4:40 – 5:00 ISNATT Business Meeting Chaired by: Dr. Ron Bellamy Emerald One and Two

Poster Session and Social Hour 5:00 - 6:30 Sponsored by MSU-ICET

Yellow Topaz

- 1. Institute for Clean Energy Technology's Graduate Research Program a Mississippi State University Heejin Cho (ICET)
- 2. Test Plan for Performance Evaluation of Filters Subjected to ACFM and SCFM Air Flow Conditions Gentry Berry, Heejin Cho, and Charles Waggoner (ICET)

- 3. Accelerated Aging for Nuclear Grade HEPA Filter Media: Statistical Design and Analysis Katie Phillips, Coralie Rose, and Charles Waggoner (ICET)
- 4. Stability Studies and Accelerated Aging for Nuclear Grade HEPA Filter Media: Materials Lifetime Estimation Program Coralie Rose and Charles Waggoner (ICET)
- 5. **ICET Testing and Quality Assurance** Jaime Rickert (ICET)
- 6. Infrastructure for Evaluating Smoke Effects on HEPA Filters Spencer Phillips (ICET)
- 7. ICET Filter Testing and Qualifying Infrastructure John Wilson (ICET)
- 8. Design and Development of 3D Printed Ceramic Filter Media Architectures for Particulate Filtration Joseph Lee (UC Berkley and LLNL)
- 9. Transient Heating and Thermomechanical Stress Modeling of Ceramic HEPA Filters Brandon Bogle (ICET and LLNL)
- 10. Design and Development of Electro-Spun Nanoarchitectures of Materials for Extreme Environment Applications Dr. James Kelly (LLNL)
- **11. Next-Generation HEPA Filters for the DOE Complex** (LLNL)
- 12. Predicting Public Health Consequences of Toxic Chemical Contamination of Municipal Water Distribution Systems David Bradley, Ph.D., Ray Jablonski, Dennis Howell, Helen Mearns, Janet Moser, D.V.M., Ph.D. (DHS Science and Technology Directorate)
- **13. Models used in the Chemical Terrorism Risk Assessment** David Bradley, Ph. D., Carol A.S. Brevett, Ph.D., Jessica Cox, Rachel Gooding, Helen Mearns (DHS Science and Technology Directorate)
- **14. Experimental Apparatus and Test Variables for Evaluating Aging of TEDA Impregnated Activated Carbon** H S Kim (Korea Hydro & Nuclear Power Co. Ltd., Central Research Institute, KOREA)

Tuesday June 5, 2018

- 7:00 9:30 Breakfast Sponsored by Veolia Systems
 - Opal Promenade

8:00 – 5:00 Vendor's Exhibits

- Opal Two
- Morning Sessions
- Emerald One and Two
- Chairs Art Soma and Nicholas Zaremba
- 8:00 Opening Remarks Dr. Ron Bellamy, ISNATT
- **Keynote Presentation**
- 8:15 9:00 Status of R&D for Fuel Debris Retrieval at Fukushima Daiichi Nuclear Power Station Mr. Kenro Takamori, IRID General Manager, R&D Management
- 9:00 9:30 Defense Nuclear Facilities Safety Board David Grover (DNFSB)

9:30 – 10:00 ATI Filter Test Facility Report Chris Hart (ATI FTF) 10:00 – 10:15 Session Recap

Morning Break 10:15 – 11:00 Opal Promenade Sponsored by Jacobi Carbons

 11:00 – 11:30 High Equilibrium Time CREEVS Inleakage Measurements, Peter Lagus (Lagus Applied Technology)
11:30 – 12:00 Recent Advances in Nuclear Fuel Reprocessing Off-Gas

Treatment Dr. Robert Jubin (ORNL)

12:00– 12:10 Session Recap

Dr. Ron Bellamy, ISNAT

LUNCH 12:15 – 1:30 Emerald Three Dr. Steven Biegalski, Georgia Institute for Technology

Tuesday Afternoon Sessions Emerald One and Two Session Chairs: Dr. Heejin Cho and Andrew Duncan

- **1:30 2:00** Active Filter Tests for Radial and Square HEPA Filters & Parallel Canisters for Carbon Filter Test, Luis Rudenas (ANSTO)
- 2:00 2:30 Development of a Low Flow Rate Axial HEPA Filter for Radiological Applications Mark Sorna (Puget Sound Naval Shipyard)
- 2:30 3:00 Fire Detection in Adsorber Bed: Carbon Monoxide Monitoring vs. Thermocouples Clinton Summers, J. Louis Kovach (NUCON, Intl)
- **3:00 3:05 Recap of Session** Andrew Duncan, AAF Flanders

3:05 - 3:30 Afternoon Break Opal Promenade Sponsored by Jacobi Carbons

Final Session Emerald One and Two

3:30 – 4:00 HEPA Filter Failure Modes at Elevated Pressure, Temperature and Moisture Dr. Werner Bergman (Aerosol Sciences) and Gerard Garcia 4:00 - 4:30 A Novel Vapor Abatement Process for Low Concentrations of Mixed Toxic Gases. Clinton Summers, Larry Schaffer, Joe Enneking and J. Louis Kovach (NUCON, Intl)
4:30 - 4:45 Conference Summary and Final Announcements

Dr. Ronald Bellamy, ISNATT

Social Event 5:00 Topaz Room Sponsored by Camfil USA, Inc.,