

42nd International Pyrotechnics Society Seminar – Summary Report

The complete report, containing many pictures of the events, may be found in the Newsletters Section of the Members Only Area on the IPS website, at www.intpyrosoc.org.

On 10th to 15th July 2016, the 42nd International Pyrotechnics Society Seminar was held in dedication to the late **Dr. David Dillehay** (Treasurer of IPSUSA Seminars, Inc.), at the Doubletree by Hilton in a hot and sunny Grand Junction, Colorado, USA, hosted by IPSUSA Seminars Inc., (Pic. 1) under the auspices of the International Pyrotechnics Society (Pic. 2).

There were 141 attendees together with spouses from 21 nations (Australia, Belgium, Brazil, Canada, China, Finland, France, Germany, Israel, Japan, Korea, Norway, Singapore, South Africa, Spain, Sweden, Switzerland, The Netherlands, Turkey, UK, USA) during the Seminar (Pic. 3).

Following opening remarks by **Dr. Gregory Knowlton** (President of IPSUSA Seminars, Inc.) and a memoir of the late **Dr. David Dillehay** given by **Mr. David Turner** (Vice President of IPSUSA Seminars, Inc.), there was 1 keynote lecture, 3 invited lectures, 53 oral presentations, and 21 poster presentations. There were also two award ceremonies for young research scientists, each followed by their award winning lectures on Thursday (14th July):

Dr. Bernard E. Douda IPS Young Scientist Award: **Dr. Jonathan Dilger** (NSWC Crane, USA)

Frank Carver Bursary: **Mr. Robert Timms** (University of East Anglia, UK)

Among many topics of keynote lectures and presentations, there were topics related to synthesis and characterization of nano-scale energetic materials, development of greener energetic materials, 3-D printing of energetic materials, and ignition and combustion characteristics of energetic materials.

Some of the many notable lectures and presentations included:

Engineered Particles for Improved Propellants and Their Characterization

Steven Son, Purdue University, School of Mechanical Engineering (USA)

Continuous and Reactive Nanocrystallisation: New Concepts and New Processes to Design Energetic Materials for Technological Breakthrough

Denis Spitzer, NS3E Research Laboratory (FRANCE)

Development and Characterization of an Energetic Binder for Additive Manufacturing

Alice Dow, Christopher Williams, CAPCO LLC (USA)

New Strategies for Reducing the Mechanical Sensitivity of CL-20 with Reserved High Energy

Zhijian Yang, Ling Ding, Fude Nie, China Academy of Engineering Physics (CHINA)

Case Studies of Rapid Chemical Neutralization and Destruction of Bulk and Residual Energetics

Valentine A. Nzungung, MuniRem Environmental (USA)

This year's Seminar too was full of social events: a Casual Mixer on Sunday (10th July) evening, a Picnic on Monday (11th July) evening, the Spouses' Tour on Tuesday (12th July), a Rafting Tour by energetic attendees on Wednesday (13th July), a tour of a local winery followed by the Banquet at the winery on Thursday (14th July) night, and the Wine and Cheese Farewell Social (15th July) to conclude the Seminar, that the attendees and spouses thoroughly enjoyed.

The next Seminar will be held on 8th to 13th July, 2018 at the Marriott Hotel in Fort Collins, Colorado, USA. Further details will be announced in due course.



Pic. 1. Group photo of Co-Chairs of the 42nd International Pyrotechnics Society Seminar., and the President of IPSUSA Seminars, Inc. [L to R: **Prof. Lori Groven** (Co-Chair), **Dr. Gregory Knowlton** (President of IPSUSA Seminars, Inc.), and **Dr. Anthony Shaw** (Co-Chair)] (photo by **Shingo Date**).



Pic. 2. Group photo of board members of the International Pyrotechnics Society after the IPS Business Meeting [L to R: **Dr. Gregory Knowlton** (Treasurer), **Dr. Jesse Sabatini** (Vice President), **Dr. Trevor Griffiths** (President), **Dr. Joost van Lingen** (Vice President), **Dr. Anthony Shaw** (Archivist), and **Shingo Date** (Secretary)] (photo by **Rutger Webb**).



Pic. 3. Group photo of the attendees of the 42nd International Pyrotechnics Society Seminar (photo by Willow Pond Photography).