



Society of Plastics Engineers, Inc.

Promoting the Scientific and Engineering Knowledge of Plastics

SPE Plastics Environmental Division

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Society of Plastics Engineers, Environmental Division: February 2003 Electronic Newsletter



GPEC 2003 Committee:

Dennis Denton, Michelle Mikulec, Tim Kettering, Mike Montpetit, Pallatheri (Subu) Subramanian, Larry Koester, Klementina Khait, and Norman Lee. (left to right)

The GPEC 2003 Committee thanks all of the sponsors, exhibitors, moderators, speakers, attendees and other participants for making this a conference for which we are proud.

The Global Plastic Environmental Conference (GPEC) sponsored by this Division held in Detroit, Michigan on February 26 & 27 was yet another tremendous success. Registration this year was 257 compared to 249 from GPEC 2002 with 44 papers presented and 14 exhibitors. Participants from around the world from countries including China, Australia, Brazil, and throughout Europe made this conference truly a global one.

Opening the conference on the first day was this years GPEC 2003 Chairman, Dennis Denton. Following this, the Editor of Resource Magazine, Jerry Powell, got the conference off to a good start with his "Industry Report Card on Environmental Stewardship" talk. Topic areas for the papers presented on the first day included Innovative Recycling Processes and Automotive before lunch followed by Economics and Update on Plastics Recycling, Biodegradable Materials and Life Cycle Analysis and Innovative Recycling Processes and Recycled Material for the rest of the day. Frank R. Hurd from The Carpet & Rug Institute gave an energetic presentation at lunch regarding Carpet Stewardship that left the audience knowing that "Green carpet is more than just a color". Lunch also provided the Plastics Environmental Division an opportunity to hold its Annual Division Meeting facilitated by Norman Lee. Finishing up the day was the Connections Reception where the Student Poster Display Winners were announced.



Colin Austin,
Managing Director,
Intelligent Irrigation
Systems, on "A Little
Plastics Saves a lot of
Water"



Mary E. Blair,
Commodity Manager
General Motors, on
"Recycling in the
Automotive Future"



Michael Cappelletti,
Executive Director of SPE,
on "SPE and the
Environment"



Frank R. Hurd,
VP & COO of Carpet &
Rug Institute, on "Carpet
Stewardship the Next
Steps"

The second day began with an insightful presentation on "Recycling in the Automotive Industry" by Mary E. Blair from General Motors World Wide Purchasing. Following this, Colin Austin with Intelligent Irrigation Systems spoke to us about how "A Little Plastic Saves a lot of Water". Topic areas for the papers presented on the second day included Use of Recycled Materials, Renewable Energies I and Renewable Energies II. Lunch was very eventful beginning with a discussion on "SPE and the Environment" by Michael Cappelletti, Executive Director of SPE, followed by the Annual Environmental Award presentations facilitated by our Awards Chairman, Dr. P. Subramian. Congratulations, again, to all the GPEC 2003 Environmental Award recipients. The Super Session Panel Discussion brought us to the end of our day and close of our GPEC 2003 adventure.



The conference ended with a lively Super Session Panel Discussion on "State of Environmental Stewardship in Plastics."

Super Session Panelists included: *R. Byron Pipes*, Representative of Dual System Deutschland; *Rod Lowman*, President of American Plastics Council (APC); *Claudius Feger*, President of Society of Plastics Engineers (SPE); *Donald Duncan*, President of Society of Plastics Industry (SPI);



The Super Session Panel Discussion was moderated by *Michael D. Powers*, Executive Director of General Motors Account, Dow Automotive

Like previous conferences, the Global Plastics Environmental Conference (GPEC) is organized, coordinated, and led by a dedicated group of SPE Environmental Division members including Conference Chair Dennis Denton of Denton Plastics and enthusiastic industrial/corporate volunteers.

While previous years have had excellent plenary speakers, GPEC 2003 boasts an especially illustrious group of informative industry and corporate leaders:

- *Colin Austin*, Managing Director, Intelligent Irrigation Systems, on "A Little Plastics Saves a lot of Water"
- *Mary E. Blair*, Commodity Manager GM, on "Recycling in the Automotive Future"
- *Michael Cappelletti*, Executive Director of SPE, on "SPE and the Environment"
- *Frank R. Hurd*, VP & COO of Carpet & Rug Institute, on "Carpet Stewardship the Next Steps"
- *Jerry Powell*, Editor of Resource Recycling Magazine and Plastic Recycling Update, on "Industry Report Card on Environmental Stewardship"

From automotive to renewable energies to various types and methods of recycling, there will be numerous, informative technical papers on a wide-range of topics, categories, industries, and issue of interest.

"State of Environmental Stewardship in Plastics"

The conference ended with a lively Super Session Panel Discussion moderated by *Michael D. Powers*, Executive Director of General Motors Account, Dow Automotive, on "State of Environmental Stewardship in Plastics."

Panelists included:

- *Donald Duncan*, President of Society of Plastics Industry (SPI)
- *Claudius Feger*, President of Society of Plastics Engineers (SPE)
- *R. Byron Pipes*, Representative of Dual System Deutschland
- *Colin Austin*, Managing Director, Intelligent Irrigation Systems
- *Rod Lowman*, President of American Plastics Council (APC)

Prof. Klementina Khait presents cash awards to winners of student poster contest.



Jan Rybnicek of Czech Tech. University of Prague: "Recycling of Polycarbonate Car Headlight Lenses"



Arief Wibowo of Michigan State University: "Eco-friendly Biocomposites from Plant Derived Fiber and Plant Derived Plastic For Automotive Applications"



Geeta Metha of Michigan State University: "Novel Bio-Composite Sheet Molding Compounds From *Engineered* Biofibers and Biobased Resins for Housing Panel Application"



Sunder Balakrishnan of Michigan State University: "Kinetic & Thermodynamics of Three-Arm Poly (epsilon-caprolactum) Polymer"

Four of the speakers making presentations at GPEC 2003:



James Paschal,
Bodycote Broutman



Robert Malloy,
Univ. of Massachusetts



Nick Strikland,
E.I. DuPont



Larry Koester,
Lavergne Group

The Marriott Hotel provided our conference with excellent food and service.



The Exhibit Area and the Connections Reception was a way to meet old friends, make new friends, and to learn about the Exhibitors.



Ted Jacobs and Tim Kettering



Bruce Cundiff, Tony Kingsbury, Mike Fisher, and Larry Koester



Prof. John Muzzy, Michelle Mikulec, and Jan Rybnicek



Subu and Gwen Mathis

Dr. P. (Subu) Subramanian presents the Environmental Stewardship Awards:



Alan Robbins of the Plastics Lumber Trade Association (PLTA) accepts the 1st place award in the area of "Enabling Technology in Process and Procedures."

PLTA has been an advocate for the use of recycled plastics, promotion of quality standards, initiation of demonstration projects for plastic lumber products. The PLTA has worked to standardize ASTM testing for polyolefin based plastic lumber decking boards, and has added eight (8) tests to the ASTM test methods since 1993. Plastic lumber has evolved into a major business and has contributed to the recovery of 100's of millions of pounds of waste plastics.

www.plasticlumber.com



Dr. Peter Frenkel of Crompton Vinyl Additives accepts the 2nd place award in the area of "Enabling Technology in Process and Procedures."

For decades, lead-based heat stabilizers have been used in PVC compounds, which violate European environmental regulations. Crompton Corporation's OBS™ organic-based stabilizer technology is an alternative to lead-based systems for rigid PVC pipe applications. These additives are solid multi-component blends, based on a patented organic molecule with unique properties. In combination with synergistically acting co-stabilizers, they contribute a very good initial color and long-term heat stability.

www.cromptoncorp.com



Michael Malin of Spartech Plastics and Al Arellanes of Geocell Systems accept the 1st place award for "New Technologies in Materials and Processes."

The Rapid Deployment Flood Wall (RDFW) developed by Geocell and manufactured by Spartech Plastics is a lightweight modular wall made of clear copolyester plastic that can be filled with sand or local material for flood wall protection. RDFW provides communities at risk to flooding with a cost-effective, efficient, and potent flood-fighting weapon that can better protect property and most importantly, save lives.

www.spartech.com



Jean Bina of Phoenix Technologies LP accepts the 2nd place award for "New Technologies in Materials and Processes."

Phoenix Technologies, L.P. and its managing partner, Plastic Technologies, Inc. developed the technology to decontaminate recycled polyethylene (RPET) that allows it to be used in the manufacturing of food and beverage containers. The Australia/New Zealand Food Authority approved the "Phoenix Process for Food" contact application, and the U.S. Food and Drug Administration has issued a letter of "no objection" for use of deposit and curbside grade recycled PET for direct blend in food contact packaging applications.

www.plastictechnologies.net

Environmental Stewardship Awards (continued):



Tony Kingsbury of Cargill Dow LLC accepts the 1st place award for "Emerging Technologies."

Cargill Dow opened the world's first global-scale manufacturing facility capable of making commercial-grade plastic resins, NatureWorks™ PLA, from annually renewable resources such as ordinary field corn. From the field to the retail counter, PLA has a lifecycle that can reduce fossil fuel consumption by up to 50 percent and the process to make it can generate 15 percent to 60 percent less greenhouse gases (GHG) than the material it replaces. The physical properties of the PLA to the point where it is now actively competing with traditional materials in packaging and fiber applications throughout the world. www.cargilldow.com



Bob Villwock of Mobius Technologies accepts the 2nd place award for "Emerging Technologies."

Mobius Technologies has developed and commercialized a proprietary system for reducing the environmental impact and the cost of manufacturing polyurethane foam. Mobius technology allows foam manufacturers to reuse polyurethane scrap by grinding it into a fine powder, mixing it back into liquid raw materials, and producing new foam containing the powder at levels up to 20% by weight. Cost savings to the foam manufacturer that is significant enough to provide a rapid payback and improved profit margin while complementing existing rebonded carpet cushion business. www.mobiustechnologies.com



Colin Austin of Intelligent Irrigation Systems accepts the award for "Environmental Stewardship."

Micro flood is a process that transforms flood irrigation into a highly efficient dual cycle irrigation system. This new irrigation technology uses thin wall blown film to transport and deliver water under gravity, replacing the traditional open channels, in which major losses of water occur by evaporation and leakage. A key element of the systems is a simple sequencing valve, which squeezes the flexible plastic pipe to control the water distribution and allow precise application of water. They are now working towards the manufacture of the blown film pipe in Ethiopia from recycled plastic bags. www.waterright.com.au



Mark Lieberman of American Commodities accepts the award for "Environmental Stewardship."

ACI has developed and commercialized a process for recovering multi layer laminated plastic and foam assemblies. These assemblies may include a number of plastic and foam materials, such as, SMA, polyurethane foam, polypropylene foam, PVC, TPO, polycarbonate ABS alloy, polycarbonate, and glass reinforced polypropylene. This advanced system, separates each of the laminated plastic and foam materials, into separate autonomous streams of very high purity exceeding 99.92%. This enables the re-use of each of the products back within their original intended applications or into similar high value applications. www.aciplastics.com

Environmental Stewardship Awards (continued):



Rod Garcia of Phoenix Plastics accepts the award for "Environmental Stewardship."

Phoenix Plastics has developed a process to incorporate high levels of essential oils into plastic resins. Phoenix Plastics™ essential oil additives provide the industry naturally created essential oils as an attractive and environmental alternative to traditional insecticides. (The traditional insecticides contain the active ingredient Clorpyrifos and are sold under trade names: Dursban, Lorsban, and Reldan.) The Phoenix Plastics™ essential oil additives are currently marketed in the banana growing regions and other food industries as a repellent to combat insect infestation.
www.phoenixplastics.com



Skip Glatt of G.A.I.M. Engineering accepts the award for "Environmental Design."

G.A.I.M. Engineering has designed and is manufacturing unique and comfortable hand-held devices to ease the burden when carrying multiple bags or items with handles or straps (shopping bags, paint cans, dry cleaning clothes hangers.) The brand names are TotASak and HANDLR. They are made of light-weight, durable 100% post-industrial plastic scrap and have a long reusable life span. The TotASak product is capable of holding up to 1,400 pounds of weight like cartons, bundles of newspapers for recycling, firewood, etc.
www.gaimengineering.com

YW Generation 2 Plastics (G2P) received the "Chairman's Award for Community Service." G2P is a YWCA of Greater Milwaukee-owned and operated plastics processing company that specializes in supplying injection molding and compounding products and services to the plastics industry while serving as a workplace skills training center for W-2 and Welfare to Work participants. G2P serves the industry by training workers for injection molding machine operator jobs, in addition to other skilled positions. A majority of the trainees at G2P are women and men participating in the YW Works program.
www.ywcamilw.org



GPEC 2004 Committee:

Dennis Denton, Suzanne Riney, Mike Montpetit, Norman Lee, Ewa Lebert, Larry Koester, Michelle Mikulec, Tim Kettering, and Jay Celorie (left to right); Not shown: Pallatheri (Subu) Subramanian, Jim Paschal, Deavron Farmer, and Klementina Khait;

The GPEC 2004 Committee looks forward to putting together another outstanding program.

Tim Kettering, GPEC 2004 chairperson said " The planning for GPEC 2004 is off to a running start, and we have a great group of enthusiastic volunteers ready to put forward another fine conference for next year." The theme for GPEC 2004 is **"PLASTICS - HELPING GROW A GREENER ENVIRONMENT"**. GPEC 2004 will be held on February 18 & 19th, 2004 at the Marriott Hotel in Detroit, Michigan. We look forward to another exciting event.

GPEC 2003 SPONSORS



GPEC and SPE's Environmental Division could not continue without the assistance, support, and leadership volunteered from our past and present sponsors. With each new conference, new companies join old, loyal companies in support of the Global Plastics Environmental Conference.

Potential sponsors are encouraged to contact Deavron Farmer (tel. 812-421-3605, dfarmer@matrixxgroup.com) or James Paschal (tel. 734-340-4045, jpaschal@bodycoteusa.com) for information on sponsorship.

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S.P.M. Technologies (SPM)	<i>Pallatheri (Subu) Subramanian</i>
Sundance/Enviro Specialty Materials	<i>Mike Montpetit</i>

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