

IMRP – IRaP Awards

For the first time, the International Irradiation Association (iiA) collaborated with the organizers of the Ionizing Radiation and Polymer (IRaP) symposium held at the University of Maryland, 25-29 October 2010, and invited two outstanding scientific presentations of commercial interest in advanced materials to present their research and progress at IMRP Montreal 2011.

DR. WALTER VOIT is being recognized for the development of smart materials - shape-memory polymers (SMPs) - which possess the ability to remember and recover distinct shapes. The Mnemosynation process is the controlled imparting of memory on an amorphous thermoplastic material using radiation-induced covalent crosslinking. Dr. Voit has combined advances in radiation grafting using both electron beam and gamma radiation to simultaneously tune the mechanical properties of acrylic SMPs and enable traditional plastics processing (e.g. blow molding, injection molding) to produce a new generation of cost-effective, mass producible plastic products. Dr. Walter Voit is with Materials Science and Engineering, University of Texas at Dallas, Dallas, TX, USA.

MS. DHRITI KHANDAL is an outstanding graduate student working on the 'Radiation Processing of Thermoplastic Starch: Assessing Aromatic Additives for Counteracting Chain-Scission'. While Thermoplastic Starch (TPS) has been researched for many decades, the use of electron beam technology has not been extensively pursued in this field due to undesired degradation. This research proposes a novel and promising method of modifying TPS by using aromatic compounds to counteract chain scission induced degradation. Ms. Khandal (MSc Chemistry) is with the Institut de Chimie Moléculaire de Reims, CNRS UMR 6229, Université de Reims Champagne-Ardenne, Reims, France.

Since 1994 every two years the Ionizing Radiation and Polymer (IRaP) symposium brings together experts from academia, national laboratories and industry to discuss applications of ionizing radiation in polymer chemistry and physics, nanotechnology, biopolymers and radiation processing. Approximately 150 experts from over 20 countries attend this international meeting.

Special thanks to Paul R. Minbiole, Chair of the Selection Committee.