

2016 MARM Chemagination

Have you ever speculated about the future outcome of an emerging or proposed technology? Will that great new idea turn out to be a dead end, or will it become a successful reality 25 years from now?

Recently, high school chemistry students in the ACS Mid-Atlantic Region were challenged to do just that. They had to imagine that they were living in the year 2041 and write an article on a recent innovation in chemistry that had improved the quality of people's lives.

The students presented their visions of the future at the 2016 MARM Chemagination competition on Saturday, June 11 during the 44th ACS MARM at the College of Mount Saint Vincent, Riverdale, New York.

Students from the New York, North Jersey, Princeton, Trenton and Philadelphia ACS Local Sections participated. Alison Hyslop, Diane Krone, Barbara Ameer and William Smith, respectively, coordinated their local section's Chemagination efforts and sent the top entries to the MARM competition.

The teams were evaluated based on the quality of their article, the poster presentation of the innovation, and knowledge of and soundness of the science as demonstrated in interviews with judges Dr. Daniel Amarante, Dr. Deborah Cook, Mr. Frank Romano, Dr. Steve Samuel, Dr. David Sarno and Dr. Joseph Serafin.

Following the interviews, Dr. Alfredo Mellace, professor of Chemistry at Nassau County Community College fascinated students and guests with his presentation on ancient science and technology and how it was used by ancient Romans for their military panoplies. The subject came to life as he described the technology using actual armor and weapons - either historic items or in some cases accurate reproductions he had fabricated himself! Students eagerly examined the artifacts following the presentation.

The day culminated in the presentation of First and Second Place prizes in each of four categories.

And the winners were:

New Materials Category

First Place: *"Cephaid: The Groundbreaking Bandage"*, Casey Chan, Yerin Kim and Yena Woo, Bergen County Academies

Second Place: *"Spider Silk: The Fiber of the Future"*, Gautam Kalluri and Tharun Karipireddy, Hillsborough High School

Medicine/Health Category

First Place: *"Illuminations: Shedding Light on Pancreatic Cancer"*, Karen Wilson, Andre Papisavas and Shafali Pradhan, Passaic Valley High School

Second Place: *"Supercharged Photosynthesis"*, Alexander Valenti, and Preston Rakovsky, South Side High School

Alternative Energy Category

First Place: *"Revving to Recharge"*, Eileen Hu, Nithilam Subbaian and Priyanka Tiwari, West Windsor -Plainsboro High School South

Second Place: *"Bioluminescent Trees"*, Min Ji Angela Hong and Kevin Hyun Seok Lee, River Dell High School

Environment Category

First Place: *"Quitting the Plastic Habit"*, Joyce Lu, Konstantin Rezchikov and Vivek Verghese, Hillsborough High School

Second Place: *"Obtaining Methanol: Ridding the Air of CO₂"*, Nahyeon Kim and Lauren Szeto, Bergen County Academies

Congratulations to the winners and thank you to all the students, organizers, judges and parents who helped to make the MARM Chemagination possible.

Special thank you to the teachers who supported the students throughout this process: Dr. Steven Gordon, Garden City High School; Dr. Susanne lobst, Passaic Valley Regional High School; Mrs. Cindy Jaworsky, West-Windsor Plainsboro High School; Dr. Deok-Yang Kim, Bergen County Academies; Mrs Carmel Meyer, Hillsborough High School; Dr. William Smith, Bristol High School and Mr. Herb Weiss, South Side High School.

Barbara Hillery and Louise Lawter
2016 MARM Chemagination Co-Chairs