Report, September 2025

By Beatrice Salazar, MD LS Chair

The Maryland Local Section Attends the ACS 30th Green Chemistry Celebration and award winners in Washington, D.C

1996 marks the beginning of the awards and since then consistently the industry, small businesses and academic researchers demonstrate that the real progress is a team work. In 2025 the winners presented their research on reducing hazards, improving efficiency and delivering economic and environmental benefits. Six awardees presented their research and findings. Enclosed are the links to the slide presentations and videos in YouTube.

Academic category.

Prof. Keary M. Engle - The Scripps Research Institute in La Jolla, California. *Air-Stable Nickel(0) for Catalytic Coupling Reactions* https://youtu.be/MhCtGWADuXs In this video, Prof. Engle describes his research developing a new class of stable nickel catalysts that efficiently convert simple feedstocks into complex molecules. He acknowledges his team's partnership with Bristol-Meyers Squibb.

Focus Area 1: Greener Synthetic Pathways category. Merck & Co., Inc., Rahway, New Jersey. *A landmark process for commercial manufacture of islatravir via a nine-enzyme biocatalytic cascade*
https://youtu.be/AKPSRjRxNBM In this video, Kevin Maloney, Executive Director and Head of Process Chemistry at Merck, summarizes their achievement using an enzymatic cascade for commercial API that significantly reduces chemical waste produced. Merck acknowledges their colleagues at Codexis who worked on the protein engineering aspects.

Focus Area 2: Chemical and Process Design for Circularity category. Pure Lithium Corporation, Charlestown, Massachusetts. *Closed-Loop & Green Manufacture of Lithium-Metal Batteries from Domestic Brines*
https://youtu.be/NKlQMXXJVG0 In this video, Emilie Bodoin, CEO of Pure Lithium, describes their Brine to Battery™ method, which produces 99.9% pure battery-ready lithium-metal anodes in one step using electrodeposition technol from real-world brines.

Focus Area 3: Design of Safer and Degradable Chemicals category**.** Cross Plains Solutions, LLC., Dalton, Georgia. *SoyFoam™: A Farm to Fire Solution*
https://youtu.be/J3vP-KSg8s8 Alan Snipes, CEO of Cross Plains Solutions discusses the innovation road for SoyFoam™ fire-suppression foam consisting of defatted soybean meal and biobased ingredients that can extinguish Class A and Class B fires.

Small Business category.

Novaphos Inc., Fort Meade, Florida. Reprocessing of Phosphogypsum
https://youtu.be/t4m2WfRkHRU In this video, Tim Cotton, CEO of Novaphos discusses their thermal process to recov and reuse sulfur from phosphogypsum, a waste by-product generated during phosphoric acid production.

Climate Change category. Future Origins, San Diego, California. Commercializing deforestation-free, low-Greenhouse Gas *(GHG) drop-in replacements for widely-used ingredients traditionally made from palm kernel oil (PKC*
https://youtu.be/0T5-5arcapE

Video Source: *ACS Green Chem Division* https://communities.acs.org/t5/GCI-Nexus-Blog/bg-p/GCINexusBlog/label-name/awards%20&%20recognitions

THE 30Th GREEN CHEMISTRY CALLENGE AWARDS CELEBRATION 2025

Women in Science, Eng, Math, Tech.

National Academy of Science Building 1924-2024 exhibit.

ACS Representation: LaTrease Garrison, Chief Operating Officer, ACS | Adelina Voutchkova, Director of Sustainable Development, ACS |Edmon Lam, ACS Assistant Director Green Chemistry Institute |Presentations: The Scripps Research Institute, MERCK & Co. Inc., Pure Lithium Corporation, Cross Plains Solutions LLC, NOVAPHOS Inc. and Future Origins.