

MACRO Report. Spring 2025

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Overview

We are developing a platform that supports 3 distinct areas. Curriculum, Professional Development, Outreach. We also post scientific resources available to researchers.

Key activities:

The website provides resources on all 3 areas. New content has been added to the website. See below. Additionally live events are being organized as part of MACRO.

Curriculum. We now have resources on the MACRO webpage on general polymer topics, acyl substitution, stereochemistry, alkene chemistry, Defining Polymer Molar Mass: M_N , M_w , and \bar{M} , Methods for Determining Polymer Molecular Weight, Introduction to Polymer Viscoelasticity and Rheology.

Curriculum: New lecture content is planned for the next 12 months.

Modules currently in development:

- Ring-opening polymerization
- Reversible deactivation polymerization
- Introduction to natural polymers/biopolymers (title still in development)

Soliciting ideas for new topics (email: pcostanz@calpoly.edu or esterner@lvc.edu)

- Free radical vs reversible activation deactivation polymerization
- Polymer topics in physical chemistry

Professional development (PD). The goal of MACRO's PD activities is to provide resources (currently) and eventually materials to people interested in polymer science at various stages of their career. We have published resources on the MACRO website for undergraduates seeking further graduate study in polymers. We plan to expand these resources over the next 3-5 year to address all stages of career development including graduate students, industry and early career scientists.

We had a change over in leadership of this initiative. Piril Ertem is now lead and will be developing new panels and content.

Outreach. We have created a depository of outreach materials for individuals to be able to spread their passion and knowledge of science to the general population. MACRO just launched an interface where individuals can share what they are currently utilizing in their communities and receive appropriate recognition for their contributions to the Polymer community.

Provided funds to Sarah Morgan and Claire Clemons for an outreach activity at 2024 Spring ACS in New Orleans. Provide over 50 kits to 50 teachers.

MACRO has repeatedly encountered difficulty in collecting outreach events. As such, we have developed a funding mechanism of the POLY/PMSE student chapters to apply for funding and assist in the development of materials.