

The Center for the Study of Polymeric Systems

Coray Colina

The logo features the letters 'C', 'S', 'P', and 'S' in a bold, white, sans-serif font. The letters are arranged horizontally. A large, light blue circular shape is positioned behind the first 'S', partially overlapping the 'C' and the second 'S'. A thick, light blue diagonal line runs from the bottom left towards the top right, passing through the 'C' and the first 'S'. Another thick, light blue diagonal line runs from the bottom right towards the top left, passing through the 'P' and the second 'S'. These lines intersect at the bottom right corner of the frame.

C S P S

The Center for the Study of Polymeric Systems...

Vision

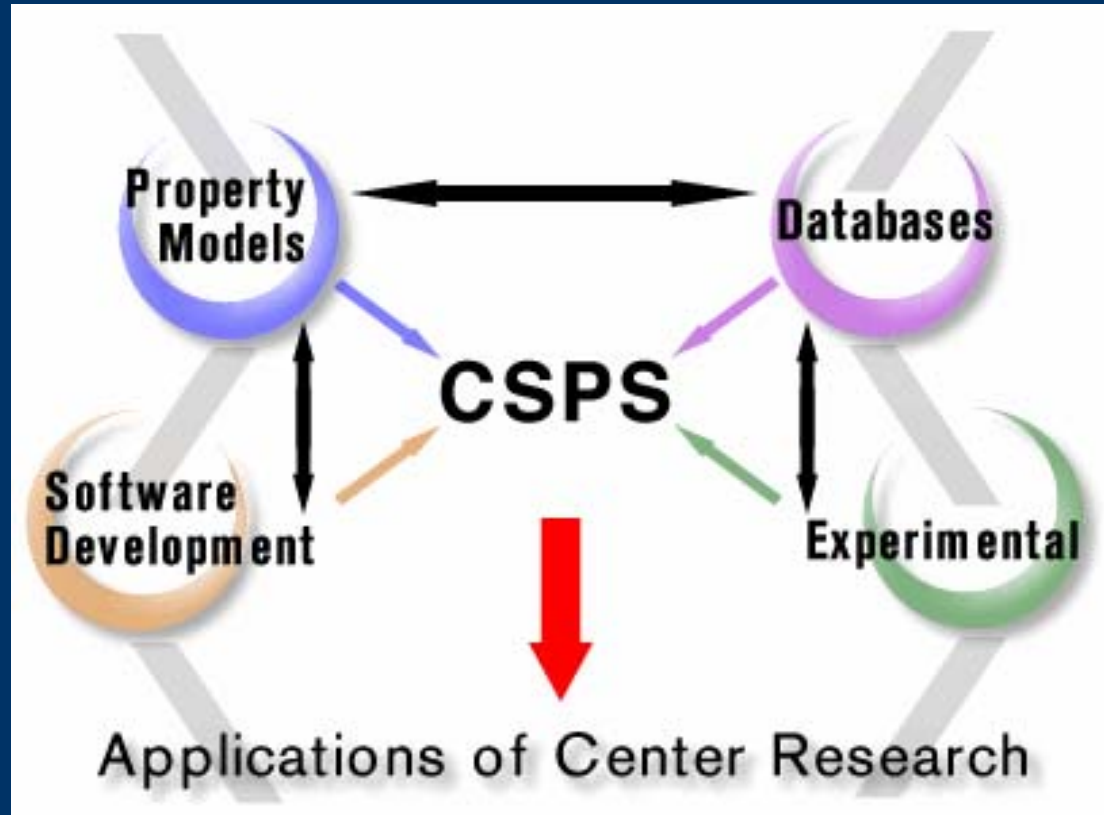
To become the leading research center that responds to the needs of industry, government laboratories and universities for experimental data and models to treat polymeric systems.

Mission

Our mission is to conduct world-class competitive research under industrial and government sponsorship. CSPS fosters research of a cohesive group of faculty within Penn State, where interdisciplinary technologies are developed, and transferred to our Industrial Partners.




The Center for the Study of Polymeric Systems...



The Center for the Study of Polymeric Systems...

- **Personnel**

- at our initial stage:
- > 10 professors
- > 50 graduate and post-doctoral students
- Administrative staff



**Propose and perform research
Researchers and laboratories**

- Today we have representatives from 18 industrial companies



**Approve and guide research projects
Financial support**

Research Programs... Technology areas

CSPS coordinates activities on research, development, and technical service projects. Projects are developed based on Partners' interests, contributing to the current research areas of the CSPS:

Functional polymers

Nanocomposites

Polymer blends and solutions

Polymer electronics and optoelectronics

Polyelectrolytes and ionomers

Copolymers

Networks, gels, and elastomers

Surfactants and colloidal suspensions



Center Capabilities & Resources

- Synthesis and characterization
- Broadband dielectric spectroscopy Laboratory
- Polymer Nanocomposite Laboratory
- Polymer Rheology Laboratory
- Polymer Processing Laboratory
- Neutron and X-ray scattering and diffraction
- FTIR studies of structure
- Mechanical properties

Center Capabilities & Resources

- Electrical properties, dielectric spectroscopy
- Gravimetric Sorption
- Inverse Gas Chromatography
- Pressure Decay at High Temperatures & Pressures
- CO₂ Devolatilization
- Headspace Vapor-Liquid Equilibrium
- Drying Rate Measurement
- High Performance Computing

Partner Benefits

Benefits of joining the CSPS include the following:

- ✓ Participate in setting the research plan
- ✓ Obtain studies on systems of particular interest
- ✓ Provide polymer samples for study
- ✓ Close collaboration with Center researcher
- ✓ Having proprietary data measured on a cost basis
- ✓ Access to professors conducting CSPS research



Partner Benefits

Benefits of joining the CSPS include the following:

- ✓ Recruiting: Access to the next generation of scientist and engineers
- ✓ Technology transfer
- ✓ Access to our secure webpages, which includes databases, calculation programs, and publications.
- ✓ Access to workshops, short courses, e-learning
- ✓ Joint proposals to Government Agencies
- ✓ Annual technical reviews, business meetings, and research reports. Pre-prints of publications and theses.



Return ...

Industry...

- ✓ First access to research results
- ✓ Recruiting
- ✓ Interaction (participation, close collaboration, monitoring)

Academia....

- ✓ Scientific publications
- ✓ Education of next generation of scientist and engineers
- ✓ Interaction

Becoming a Partner ...

Benefits accrue to Partners as part as their general annual membership.

In cases where there is an interest in having a dedicated project, involving the full-time commitment of a center researcher, arrangements can be made to provide the funding required. This can be in the form of an unrestricted grant or a research contract.

Partner status is acquire with an annual contribution of only 10 K.



Organization

**Industrial
Partners**

Academia

Organization

