



PENNSTATE



Center for **HIGH PERFORMANCE BUILDING SYSTEMS** (CHiPBS)

About: The Penn State Architectural Engineering Department High Performance Building Systems Center (CHiPBS) is the technical leader and coordinating organization in a partnership among private firms, academia and government agencies in establishing processes, tools and component innovations necessary for standard practice realization of High Performance Building Systems.

Goal: To position members, particularly Pennsylvania companies, as the leading global providers of high performance building system design processes, design tools, innovative building materials, components, subsystems, and dynamic control technologies.

Research: Research within the center is driven by members of the center advisory board as well as participating Penn State faculty. Key research thrust areas include:

- the establishment of high performance building design process and tool development
- the establishment of quantitative metrics for high performance buildings
- the identification of key building thermal loads and energy utilization characteristics
- the identification and development of low energy utilization illumination
- ventilation and heating/cooling technologies
- identification and development of innovative building material and structural technologies
- the development of on-site energy efficiency technologies
- the design of advanced visualization tools and collaborative design processes.

Membership: The CHiPBS is seeking members from all professionals involved in the design, construction and management of buildings as well as those who are engaged in research and development of new materials and technologies that can be utilized in energy-efficient buildings.

- **Full membership \$10,000:** Entitles the member to a vote on the center advisory board, as well as a 50% discount on workshops, conferences and training seminars.
- **Associate membership \$3,000:** Available to small businesses only (less than 500 employees). Entitles the member to a 30% discount on workshops, conferences and training seminars.
- Both memberships provide access to proprietary software being developed as well as reports and updates on research conducted by the center.

www.research.psu.edu/CHiPBS

Resources and Facilities:

- Advanced Coatings Lab
- Applied Research Laboratory (ARL)
- Building Enclosure Test Laboratory (BeTL)
- Building Envelope Research Laboratory (BERL)
- Building Environment Simulation and Testing (BEST) Facility
- Center for Computational Materials Design (CCMD)
- Center for Dielectric Studies (CDS)
- Center for Innovative Sintered Products (CISP)
- Center for Nanoscale Science (CNS)
- Center for Supply Chain Research (CSCR)
- Center for the Study of Polymer Systems (CSPS)
- Digital Addressable Lighting Interface (DALI) Lighting Laboratory
- Floor Vibration Research laboratory
- Immersive Construction (Icon) Lab
- Indoor Environment Center (IEC)
- International Center for Actuators & Transducers (ICAT)
- Keck Smart Materials Integration Lab (Keck SMIL)
- Materials Characterization Lab (MCL)
- Materials Simulation Center (MSC)
- Mechanical Testing laboratory (MTL)
- Microwave Processing & Engineering Center (MPEC)
- Nanofabrication Laboratory (Nanofab)
- Networking & Security Research Center (NRSC)
- Nuclear Magnetic Resonance (NMR)
- Particulate Materials Center (PMC)