Molecular Foundry

Sited on a hillside between the National Center for Electron Microscopy and two multi-program research laboratory buildings, with stunning views of UC Berkeley and San Francisco Bay to the west, the Molecular Foundry is a landmark in sustainable energy design. In 2007 it became the first building in the City of Berkeley to earn the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Gold certification. The Molecular Foundry was also a pioneer as it was one of the first research laboratory buildings in the nation to receive a LEED Gold certification.

The Molecular Foundry’s LEED Gold rating was earned through its use of many green design features, including optimized electrical and HVAC (space heating and cooling) systems, an energy-efficient chiller and boiler plant, and innovative layouts of traditionally energy-intensive areas such as labs, a cleanroom, and a computer server room. The Molecular Foundry’s extensive use of daylighting, operable windows, protection of indoor air quality through low volatile organic carbon emitting materials, and clean-construction practices all contribute to a great work environment.

Designated as a U.S. Department of Energy National User Facility, the six-story, 96,000 square foot laboratory building serves as a hub for researchers around the globe pursuing the emerging science of nanotechnology — the study of the structure and behavior of materials at extraordinarily small scales.

The building was designed to consume 35 percent less energy than the national standard for energy efficient buildings, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1. As designed, it also produces 85 percent less greenhouse gas emissions than a conventional facility that meets that same standard.

A Foundry Full of Green Features

• Extensive use of daylighting in labs, offices, and common spaces
• An electromagnetically cooling tower water treatment system that sanitizes and uses less water
• CO₂ monitoring and control of outside air for ventilation
• Flexible laboratories with large floorspace
• A notable low-water using landscape, designed by PWP Landscape Architecture of Berkeley
• Use of renewable materials, such as bamboo flooring in the lobby
• 85 percent of construction wastes were recycled
• Bike racks and showers for employees