GOALS AND OBJECTIVES

PHOTONASTIC WILL ENGAGE THE BUILDING AND FACADE MARKET WITH A BUILDING INTEGRATED ADAPTIVE TECHNOLOGY.

Designed as an architectural day lighting system the PHOTONASTIC facade will respond to exterior lighting conditions and internal temperature comfortability.

• The system performs as a dynamic shading device to reduce solar gain and enhance interior lighting conditions. This system will effectively reduce operating expenses associated with cooling and lighting demands.

• As a result of lowering heating and cooling loads on the building, this system will allow for reductions in initial cost associated with sizing of mechanical equipment during the design process.

• PHOTONASTIC will attract tenants in a vast array of building markets and typologies, who demand energy efficient buildings through sustainable upgrades along with creating an alternative approach to adapt existing buildings for the 2030 challenge, or other goal oriented future building energy conservation programs.
PHOTONASTIC is a concept addressing the invention, design, production and potential implementation of a multi-functional building integrated system. The system attempts to dramatically address the relationship between energy conservation and architectural facade innovation. The skin affects both the appearance and performance in such a way that these diverse essential features promote new design concepts and stimulate technical developments for the architecture of the future.
A photonastic response in nature.

Potential module positions:
1 2
3 4
5 6

Module mechanics and structure:
- Piston mechanism
- Rib assembly
- Aluminum 'petals'

Module in extreme open condition for max sun protection.

Module in extreme closed condition for min sun protection and max light exposure.

Modular extremes.