Self-cleaning surfaces, phase changing materials and built-in sensors that generate energy from the footsteps of the visitors. The 3XN pavilion 'Learning from Nature' unites the most advanced technologies and intelligent materials in a preview of the innovative architectural design of tomorrow

The Louisiana Museum of Modern Art invited the Danish architecture firm 3XN to design a pavilion demonstrating cutting edge possibilities within sustainable and intelligent materials. The result is a pavilion that is built of bio composites with integrated intelligence that creates a dynamic interaction with its physical surroundings and its users.

Photographs courtesy of 3XN and photographer Adam Mørk

Sustainability does not equal architectural compromise

The pavilion is called 'Learning from Nature' and everything about the pavilion is literally inspired by nature itself: The biological cycle of nature is the fundamental basis for the shape, the materials and the dynamic energy generation. The pavilion is shaped as a Moebius band to symbolize the biological cycle; and the properties of the construction are very like those of nature – for example, the pavilion has a coating of nanoparticles that helps clean the surfaces and clean the air. Additionally, the pavilion is built of biodegradable materials; and as for energy, the pavilion is 100 percent self-sufficient.

[redacted] Museum of Modern Art, Denmark, until [redacted]

More on 3XN and their work