



Press release
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Cooper Union in New York Meteorite in Manhattan



B1 | The angular facade of the college building thrusts between its historic neighbours like a glowing meteor. In the design sketches by Morphosis Architects, the incisions into the body of the building become organically formed slots.

The new college building of the Cooper Union rises like a metallic monolith above New York's East Village. Pritzker prize winner Thom Mayne's spectacular architecture incorporates an equally exciting lighting design.

It's as though a meteorite had landed in New York. Yet while a real asteroid of this size would have destroyed all of Manhattan on impact, this one

stands peacefully between historical mansard-roofed buildings and the new buildings typical of this part of town. By day, depending on the weather, the monolith gleams white to metallic anthracite grey, its surface angular and convoluted. At night it glows gently from within. Two large slots, which can be interpreted as a cross or calligraphic symbol, provide a view of the inner structure – and of the

students, for whom the building was designed.

Cooper Union houses the college for architecture, art and engineering which was founded 150 years ago. Pritzker prize winner Thom Mayne's architectural meteorite, the new building, has come to earth opposite the main building of the college on Cooper Square. Although this caused no damage to neighbouring



buildings, it did cause vibrations: the Californian architect's design polarises New Yorkers - it breaks with accepted conventions and is ahead of its time, just like the college's founder Peter Cooper, an inventor and railway magnate, who had a lift shaft installed in the main building back in the 19th century, even though the lift to fit it didn't exist until the 1970s.

What was regarded as revolutionary in the past is today, transformed into its opposite, a symbol of provocation: in Thom Mayne's new building the lift only stops on three of the nine floors. If they had not already been drawn there by its breathtaking architecture, this fact alone leads students and visitors to the stairwell. Like a gigantic vortex, the expansive spatial structure bores into the body of the comet. Accented by a giant sculptural lattice-work, the architecture is additionally dramatised through light and shade as well as by the milkily glowing balustrades on the upper floors. The spiral runs upwards to the ceiling where it opens to the sky. Natural lighting floods down to the ground floor level through a large window in the roof. This mix of natural and electric lighting is characteristic of the building, says Teal Brogden, Senior Principal of the Los Angeles office of Horton Lees Brogden Lighting Design, and the lighting designer

responsible for the project. "The wonderful thing about natural lighting is that it continually changes in colour and intensity, depending on the weather, the time of day and year. Electric lighting, on the other hand, tends to be constant and in the warmer end of the spectral range. This worked well for us to support the concept that as you approached the heart of the building, the light became warmer and more intense - like the center of a meteor" Thus, visitors in the stairwell experience varying moods: bluish natural lighting predominates on the upper storeys, whereas lower down this is mixed with increasingly warm electric lighting. The lighting designers were able to implement their striking concept using only one type of spotlight, the Vivo spotlight system.

Where there is light, there is also shadow: this dialectic has been quite deliberately dramatised in the architecture of the Cooper Union. The New York Times speculated on Tom Mayne's architectural design in the following terms: "Like other radical architects of his age, he is more interested in the dark, hidden corners where people can loiter, get into mischief, escape from authority." Teal Brogden laughs at this criticism of the new college building and explains: "In the atrium, we intentionally left a few corners,

behind the stairs for example, somewhat darker. When we finished, the client asked whether we had forgotten something there. We explained that, in the entrance area in particular, we wanted to achieve a sense of drama. That's why only parts of the space are brightly lit and illuminated like a stage. The rest is shadow."

In other areas of the building, the freedom to play with light and shadow was limited by specific functional considerations. In the laboratories, around twice as many luminaires are used as in the classrooms, in order to allow fine differences in colour in liquids and other details to be recognised more easily. In the classrooms and also many of the laboratories, a different technical challenge had to be overcome: the lighting panels which are set into the ceilings had to be integrated into the heating and cooling elements, which are also recessed. A tricky task which was readily accepted in the interests of the general environmental compatibility of the building. Thom Mayne's design is not just setting new standards aesthetically - the new Cooper Union building is on a trajectory to becoming one of the first LEED Platinum academic buildings in the United States. That would surely have pleased Peter Cooper too.

Fact box:

Client:	The Cooper Union for the Advancement of Science and Art, New York/USA
Architecture:	Morphosis Architects, Los Angeles, New York/USA, Design Director: Thom Mayne
Partner architect:	Gruzen Samton
Lighting design:	Horton Lees Brogden Lighting Design, Los Angeles/USA
Lighting solution:	Atrium and stairwell: spotlights VIVO, spotlights SPIRIT, Classrooms, laboratories, artists' studios, conference rooms: downlights (1 and 2-lamp, integrated into the heating and cooling panels in the ceiling), Offices: SPHEROS, Laboratories: continuous row lighting system RTX, WCs: special solution downlights Art gallery: trackhead and track



B2 | By day, the building is sheathed in metallic anthracite-grey convolutions.



B3 | The central stairwell spirals skywards like a light sculpture and is lit from above by natural light.

B4 | The interplay of light and shadow unfolds its dramatic effect in the stairwell. The gigantic vortex is further emphasised by the sculptural latticework. The spacious stairs are also a central meeting place for the Cooper Union students.





B5 | The complex spatial structures are dramatised using individual spotlights. According to the concept of Horton Lees Brogden Lighting Design, art and natural lighting, warm and cool colour temperatures alternate to create varied lighting moods.

More information:



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