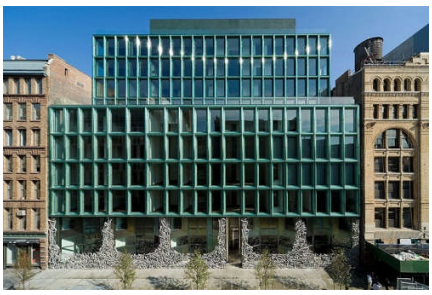
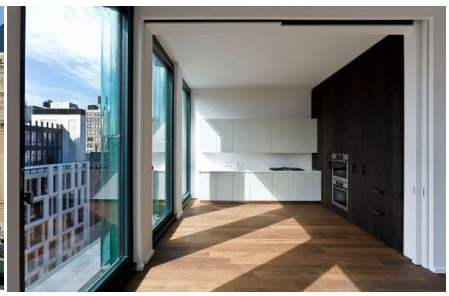
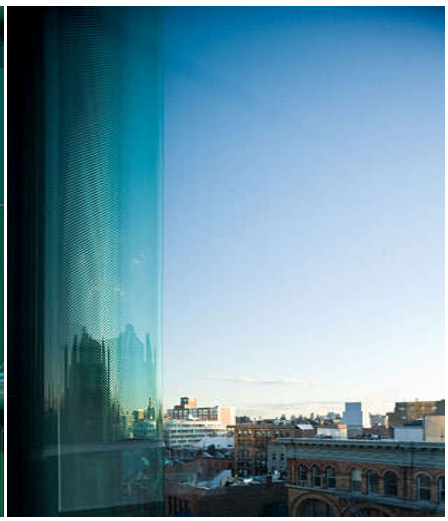
THURSDAY, MARCH 12, 2009

40 Bond Street, New York

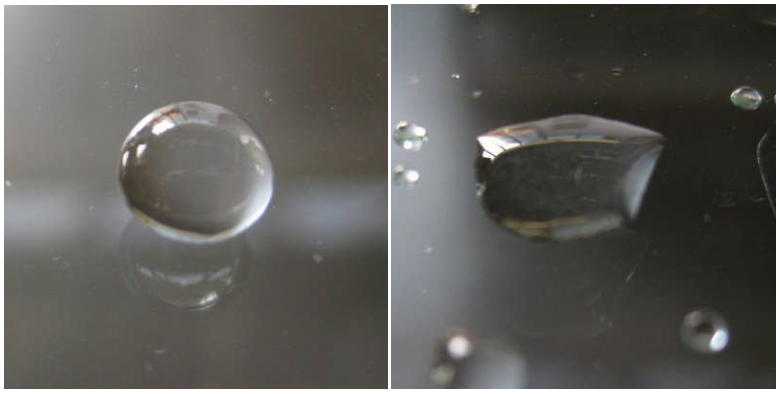
Distinguished by a dark blue-green— "coke bottle green"— glass facade with extruded round tubes that reference the 19th century cast-iron facades of many low-rise buildings in Manhattan's SoHo & NoHo neighborhoods, 40 Bond Street presents yet another set of unconventional material explorations for architects Herzog & de Meuron. Designed for Ian Schrager & Aby Rosen, 40 Bond is H&deM's first residential job in the US. Located on a former parking lot, this mid-block 10-story development has fostered much controversy for its unconventional materiality.



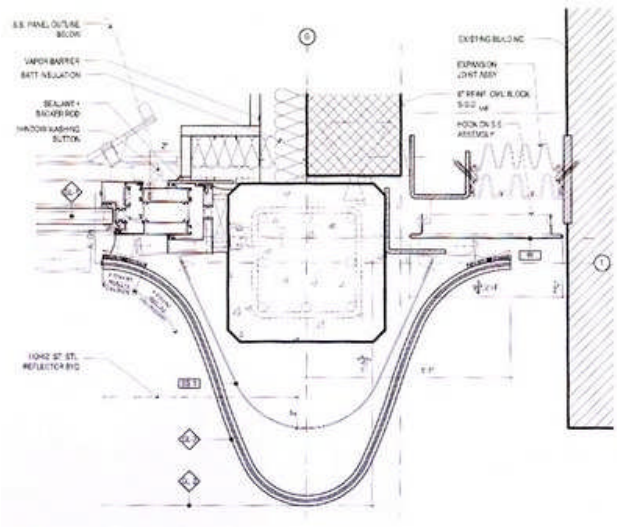
The green glass features a self-cleaning hydrophobic nano-coating that repels water and dirt. The material, developed by Diamon-Fusion International Nanotechnology, involves a two-stage manufacturing process. First, the coarse surface of glass is smoothed. Then a hydrophobic layer is deposited to repel dirt and water. The non-structural coating keeps the surface clean, effectively reducing long-term maintenance costs.

The entire façade is an aggregate of curved glass panels, manufactured in Barcelona by DFI Licensee, and highly specialized architectural glass producer, CRICURSA. The specific coating chosen by the architects to protect the curved glass surface is the CRICURSA SHIELD (DFI) nano-coating. Joan Tarrus, Marketing Director of CRICURSA, stated that this glass treatment can be applied on "any glass built-up (laminated, IGU, tempered, flat and curved, up to almost 20'x9')." A special advantage this material offers is that it is not incompatible with silicones, unlike the so-called 'self-cleaning' coated glass. Tarrus explained that the DFI treatment not only filled in the micro-flaws of the glass, making the surface water repellant, but it also makes the glass much easier and faster to clean when required. The treatment might also have given the glass the slick surface effect.



Glass sample with DFI Nanocoating (left) and without (right).

Clad with unconventional materials and fabricated with unconventional methods, this façade is essentially a conventional window wall system. By slumping the glass sections over a bell-shaped mold, the desired effect of reflecting light off the façade's stainless-steel ribs is achieved. The glass was laminated with a ceramic frit to control translucency. This fritting grows denser as it curves toward the window wall to obscure the joints of its sections.



40 Bond also features a facade-long stretch of sand-cast aluminum fencing that separates the entry courts of the building's units from the street. The metal fence features an abstract and intricate lace-like design derived from graffiti letterforms with no two sections alike. This functional ornament is also intended to serve as a work of public art.

The fence measures 22 ft high and 140 ft long. It is created using a two-dimensional, non-repeating algorithm. The fence is self-supporting by having heights and thicknesses adjusted by structural engineers. 20-foot sections of the aluminum fence are cast off-site, and welded together on-site. The fences' gates, which open to the entries of the townhouses, are mounted on pivot hinges to create a seamless-looking barrier.

Other projects that employ nanotechnology include the Iberian Nanotechnology Laboratory in Braga, Portugal, the Misericordia Church in Rome, by Richard Meier, and the pavings in the streets of Segrate, near Milan.

-- Clara Wong

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