



FROM TOP: The curving exterior of Zaha Hadid's Guangzhou Opera House; detail of the Ningbo Museum designed by Wang Shu.

# CHINA'S GLASS & STEEL

CHINESE ARCHITECTS HAVE HISTORICALLY STRUGGLED TO COMPETE ON THEIR HOME TURF. BUT CHANGE IS COMING; HOME-GROWN DESIGNS ARE SQUARING UP TO INTERNATIONAL ARCHITECTURE ON THE MODERN CHINESE SKYLINE

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The 2008 Beijing Olympics saw a spate of spectacular buildings rise across China. Designed by a host of international architecture firms, these buildings lifted contemporary Chinese architecture to the world stage. But they weren't really Chinese. They were international designs, by international architects, designed for

international cities. Today, Chinese architects are exploring what Chinese modern architecture really means.

Chinese architecture is as old as Chinese civilisation. It is a continuous living practice, with many of the principal characteristics, such as feng shui, lingering and subtly finding outlets in modern design. In a country where

spending on residential and commercial building construction is growing more than seven percent annually, architectural styles are starting to mingle.

Beijing and Shanghai in particular attracted large-name architectural firms such as Herzog & de Meuron, Paul Andreu and Gensler, who have influenced the architectural landscape.



The harder part has been finding Chinese architects to contribute. For some time Western-trained Chinese architects have been attempting to combine traditional Chinese designs into modern architecture, with limited success. China-based architects such as Aedas International take an alternate route, focusing on diversity.

"Diversity makes the world more interesting," begins Ken Wai, member of the board at Aedas International. "We want to understand the local culture before we start work. The best way to expand is to bring local and international minds together to make better architects who are more sympathetic to the local environment." So for international architects, it's time to share the stage because China's home-grown architects are pushing for a starring role.

In February 2012, architect Wang Shu was named the 2012 Pritzker Architecture Prize laureate, marking the first time a Chinese architect has received the coveted award. Shu builds with traditional Chinese forms and materials, incorporating them into stunning modern designs. In *The Architect Newspaper* he said: "For Chinese architects, the question is: how can we make a Chinese modern architecture? Not just a modern architecture, but China's modern architecture?"

Whether Chinese or internationally-designed, China's aggressive growth plans have opened the floodgates on architectural innovation. Major investments in infrastructure have led to an array of building styles, ranging from the fabulous to the bizarre. The 2008 Olympics pushed the Chinese architectural revolution into overdrive generating wonders

are being initiated. But what has really caused the increase in large scale projects is not the Beijing Olympics. It is high speed rail."

"Many places have become accessible so cities are merging and the smaller stops on the rail line are primed for development," he continues. "This has led to a lot of projects in new cities and towns." Increasingly, these centres such as Dalian, Fuzhou and Chongqing boast structures you would expect to be part of the architectural landscape of Singapore or the UAE rather than a second or third tier Chinese city.

Based in Hangzhou, Shu's practice, Amateur Architect Studio, works largely on projects outside Beijing and Shanghai. Arguably his best known work is the Ningbo Museum, a history museum in the port city of Ningbo, Zhejiang Province. When the building was commissioned in 2003, Ningbo had been through a phase of extensive development. A number of villages had been razed to make way, leaving acres of broken tiles and bricks.

Shu collected the shards and incorporated the twenty shades of grey and red bricks and tiles into the museum's design, creating an archaeological layer that borrows from traditional Chinese *wapan* construction. *Wapan* techniques are used in a practice that evolved as a method for building walls rapidly using whatever materials are available in regions subject to typhoons.

The building fits perfectly in the space it occupies, from the outside resembling a fort carved out of the local landscape. Elements derived from the local environment feature heavily in Shu's work, resulting in a unique style, undeniably Chinese yet contemporary.

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such as the Water Cube (the National Swimming Center), the Eggshell (the National Grand Theater), the Bird's Nest (the National Stadium), and the new CCTV Headquarters, unflatteringly nicknamed the "big underpants".

It hasn't stopped there. Development is reaching fever pitch, extending outside the city limits of Beijing and Shanghai and into the smaller cities. "The Chinese market is large and they are spending," says Wai. "The business environment has improved dramatically and a lot of large-scale projects

Wai is a fan of Shu's architecture. "Good architects always question so that they can learn and develop new ideas," he says. "Wang Shu's buildings are not high tech, which helps his architecture to be so pure and fresh. International design revolves around technology now, but it doesn't have to be devoid of local influence."

While mountains and water provided the basis for the Ningbo Museum, the OCT Design Museum in Shenzhen, designed by Beijing-based Studio Pei-Zhu, was inspired by ⇒



FROM TOP: THR350 Residential Development, Hong Kong designed by Ken Yeang of Aedas; the National Aquatics Center in Beijing.

both the smooth stones of the beachfront and the shape of a water droplet. Located by the shore, the structure's reflective surfaces give it an other-worldly air. A cantilevered overhang allows people to pass underneath the building to appreciate the project from all directions.

Architect Pei Zhu saw the complex as "a platform for researching the relationship between Chinese philosophy and contemporary architecture." The museum hosts a range of activities from fashion shows to automotive exhibitions, requiring a flexible interior space. The designer's response was an unbroken, white, curving interior; a blank canvas that acts as a backdrop, casting no shadows and offering no depth. Triangulated windows and skylights allow dappled light to enter, mimicking watery reflections.

Across the country, the Guangzhou Opera House, the creation of Iraqi-British architect Zaha Hadid from Zaha Hadid Architects, could be a relative of the OCT Design Museum. The curving exterior has a similarly smooth organic flow, the freestanding concrete auditoriums set within an exposed granite and glass-clad steel frame.

This focus on organic shapes and modern lines highlights the advances Chinese architects have made with contemporary design. Composed of twin boulder-like structures connected underground, the Opera House is fronted by a lake. Reflections ripple through the structure and across the foyers.

Again, white features heavily inside, although with the extensive use of glass it is open to natural light. Far from being a blank slate, the interplay of light and shadow creates a mesh of curves and angles. There are few



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right angles in the freeform building, which flows and drips like lava.

Steel is the material of choice for a large number of the architects. The enormous ring emerging in Fushun city is a prime example, utilising 3,000 tons of the metal. Entertainment designer Gary Goddard of The Gary Goddard Group is responsible for this one, showing that in China you no longer need to be an architect to design interesting architecture.

Due for completion early this year, the 157m diameter metal ring, illuminated by 12,000 LED lights, has polarised public opinion. Concern has been voiced over the value-to-use ratio. The Ring of Life is simply a sight-seeing monument, reminiscent of the Gateway Arch in St Louis, costing the Fushun Municipal Government some US\$16 million.

Opponents lambast the project for being a waste of money and having no social value. These antagonists may need an education on

the value of tourism – the Gateway Arch attracts over 4 million visitors annually. Even a quarter of this number would benefit Fushun's economy immensely.

Staying with glass and steel, the award-winning University Town Library in Shenzhen exhibits a less organic shape. International architects RMJM gained a foothold with the China National Convention Centre in Beijing, before moving on to the library, designed to house 1.5 million books, 3,000 seats, 1,700 data ports and 8,000 daily visitors.

The library acts as a bridge, linking four university campuses spread out on either side of a canal. "Its 480m long undulating form mirrors the topography of the landscape while its dragon-like shape, contemporary materials

and function aim to reflect the erudite language of education," say the architects. The dragon element is hard to see. The library's location on ramps over water makes it look more like a space-aged roller coaster.

As China continues to grow economically, the prevalent architectural style is bound to be influenced. While international architects have dominated the construction landscape, this is starting to change. Wai sees architecture in China entering a period of experimentation. "If you have the chance to build, you improve," he says. "New technology helps push the boundaries and architecture makes mistakes that we learn from. Strong experimentation will lead to something interesting."

As China's architects reclaim the market, melding glass and steel with local materials and techniques, we may see a modern Chinese architecture arise. The question still needs to be asked of other countries. ☺