

TROSIFOL™

# CASE STUDY

SYMPATHETIC, SWEEPING DESIGNS –  
WITH SENTRYGLAS® AT THEIR HEART

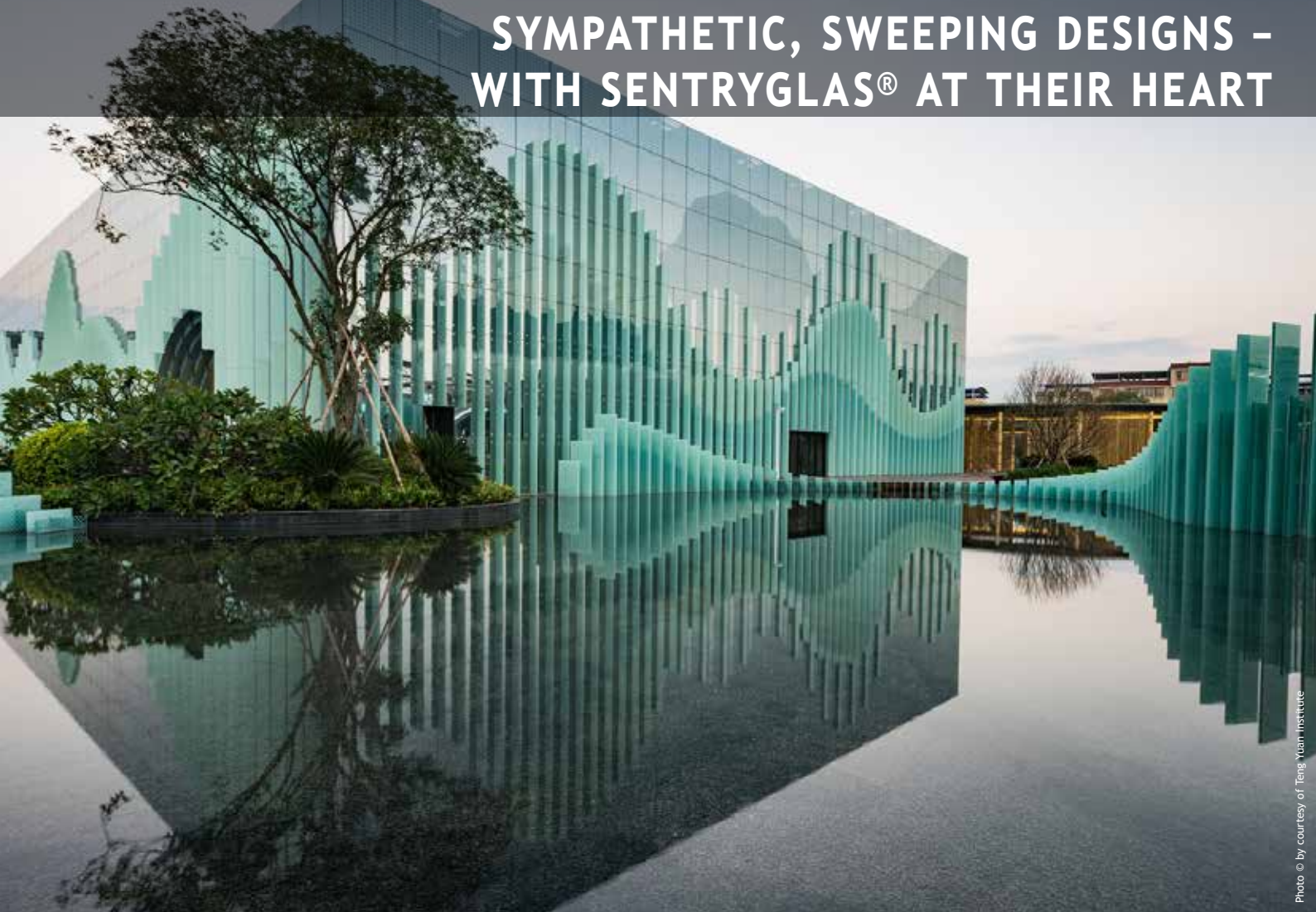


Photo © by courtesy of Teng Yuan Institute



GUILIN / CHINA

The fins completely break up the clean, straight lines of the Center to deliver an array of curves and sweeping shapes.

## **SYMPATHETIC, SWEEPING DESIGNS – WITH SENTRYGLAS® AT THEIR HEART – COMPLEMENT LOCAL REGION PERFECTLY**

Thanks to its amazing scenery, Guilin is one of China's most popular tourist destinations. A prefecture-level city in the northeast of China's Guangxi Zhuang Autonomous Region, its name means "Forest of Sweet Osmanthus", owing to the large number of fragrant sweet Osmanthus trees located in the region.

Located on the west bank of the Lijiang River, the scenery around Guilin has been called the finest under heaven. The mountains, the mirror-like Lijiang River, the many caves and the fantastic rock peaks form what are known as the "Four Wonders of Guilin" – locally described as green mountains, clean water, strange caves and beautiful stones.

For architects who take their cues from nature, the city and the surrounding region present an array of features that inspire multiple opportunities for sympathetic design ideas. Nowhere is this more evident than in the Guilin Wanda Cultural Tourism Exhibition Center, which has leveraged the capabilities and aesthetics of glass to create a truly stunning effect that mirrors



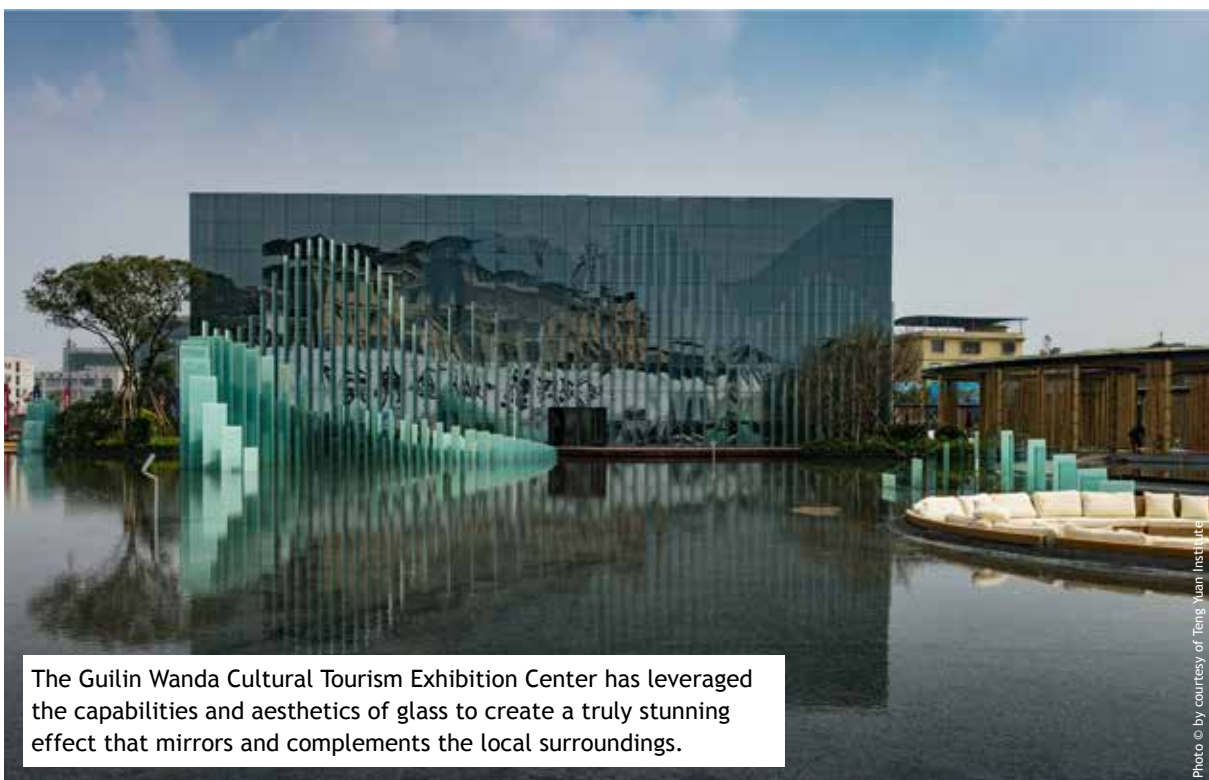
Architects  
Laminators  
Building Owner

Teng Yuan Design Institute, Qingdao  
Guangdong South Bright Glass Technologies Co. Ltd.  
The Wanda Group

and complements the local surroundings, thanks to elegant curves and striking 3D geometry.

Designed by the Teng Yuan Design Institute, Qingdao, the Center itself exhibits a simple cube geometry, with an exterior curtain wall, but the various fins and structures surrounding it – which deploy SentryGlas® Ionoplast interlayers from Trosifol™ – completely break up the clean, straight lines to deliver an array of curves and sweeping shapes that are designed to illustrate the surrounding countryside.

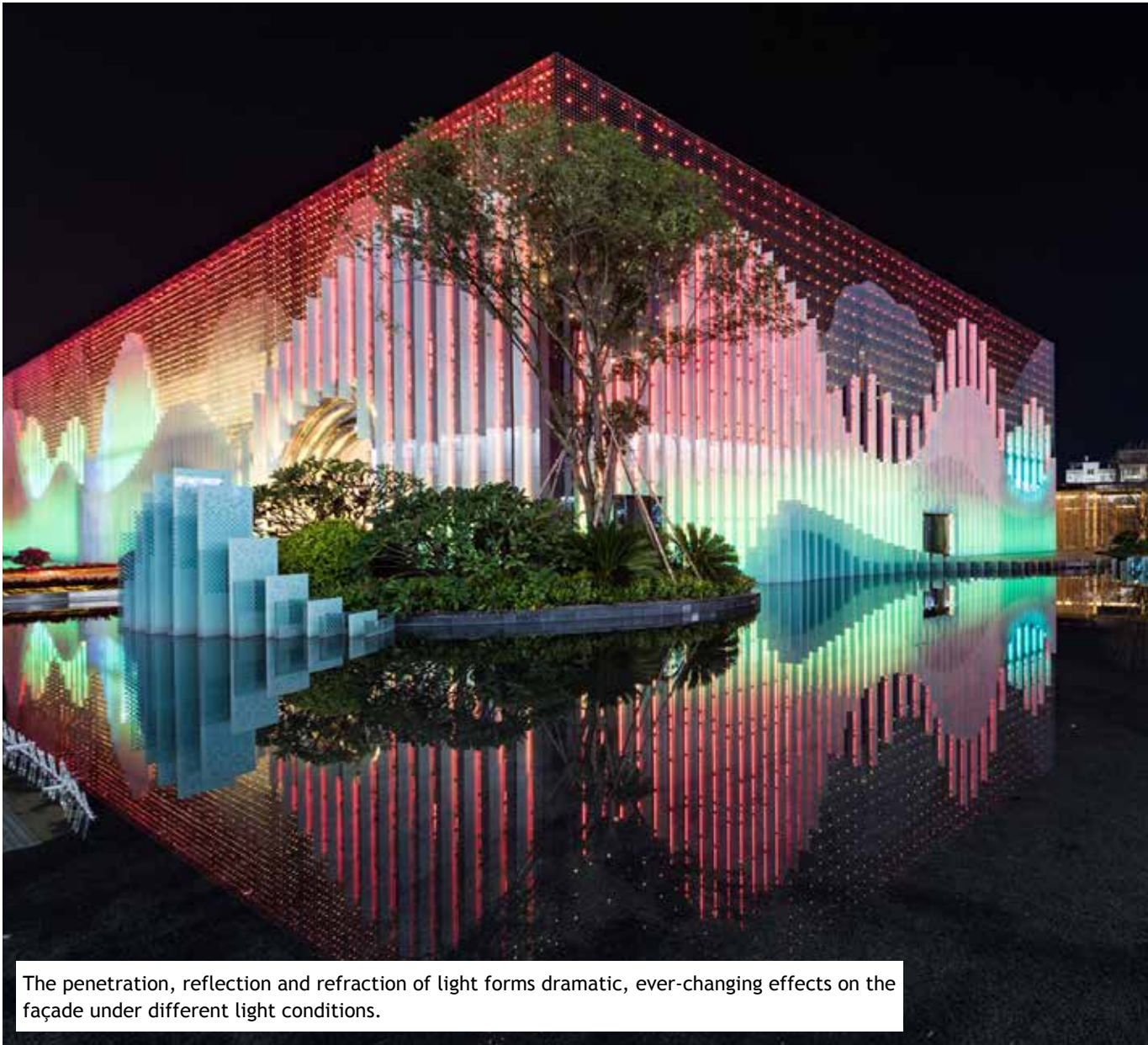
According to Mingbo Chen, General Manager at Guangdong South Bright Glass Technologies Co., Ltd., the laminator for the project: “In the principal architect Wei Peng’s view, the penetration, reflection and refraction of light on the façade, as well as the reflection of the building on the water surface, will contribute to capture the soul of the natural landscape along the Lijiang River.



The Guilin Wanda Cultural Tourism Exhibition Center has leveraged the capabilities and aesthetics of glass to create a truly stunning effect that mirrors and complements the local surroundings.

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Photo © by courtesy of Teng Yuan Institute



The penetration, reflection and refraction of light forms dramatic, ever-changing effects on the façade under different light conditions.

“There were three primary glazed elements in this project,” he explains. “The glass fins, a façade for the main building and a glass wall in the pool. Considering the structural strength, weathering and edge stability required across all three applications, SentryGlas® was deemed the most suitable interlayer for this project. In total the project comprised 353 glass fins, a 134-piece façade and over 86 pieces to make up the glass wall for the pool.”

The glass fins use a multilayer glass laminate construction, comprising 12 mm (0.47 in) low-iron digitally printed toughened glass, 2.28 mm (90 mil) SentryGlas®, 12 mm low-iron silk-screen printed toughened glass, 2.28 mm SentryGlas®, 12 mm low-iron toughened glass, 2.28 mm SentryGlas® and 12 mm low-iron digitally printing toughened glass. The façade uses a simpler construction, comprising 8 mm (0.3 in) low-iron digitally printing toughened glass, 1.52 mm (60 mil) SentryGlas® and 8 mm highly reflective coated toughened glass.

Mingbo Chen continues: “The architecture manifests the mountain shapes up and down through the rising and falling vertical glass fins and the three layers on the façade – through different densities and projections of glass fins – represent a “foreground view”, “medium view” and “distant view”. The penetration, reflection and refraction of light will form dramatic, ever-changing effects on the façade under different light conditions, such as in cloudy, sunny, raining and foggy weather. In the play of light and shadows, the envelope of the structure becomes blurry and flowing. The architectural effect will make visitors feel like they are actually staying in the foggy mountain range.

“SentryGlas® was chosen for this project due to its outstanding edge stability, environmental resistance and strength,” he concludes. “Some of the glass is located directly in water and in the pool some of the panels are one-side supported, so we are using the material to the best of its abilities.”

Trosifol™ is the global leader in PVB and ionoplast interlayers for laminated safety glass in the architectural segment. With the broadest product portfolio Trosifol™ offers outstanding solutions:

- **Structural:** Trosifol® Extra Stiff (ES) PVB and SentryGlas® ionoplast interlayer
- **Acoustic:** Trosifol® SC Monolayer and Multilayer for sound insulation
- **UV Control:** from full UV protection to natural UV transmission
- **UltraClear:** lowest Yellowness Index in industry
- **Decorative & Design:** black & white & colored interlayers

Much like the “Four Wonders of Guilin” – the green mountains, clean water, strange caves and beautiful stones – the architects and glazing engineers in this application have exploited “Four Wonders of SentryGlas®” – strength, environmental resistance, edge stability and clarity – to achieve a quite stunning effect that really does show off the topography of the region to its fullest extent.

The Guilin Wanda Cultural Tourism Exhibition Center is also an award winner, having topped the ‘Aesthetic’ category in the recent SentryGlas® Innovation Award from Trosifol™. With one judge commenting: “The beauty of the glazing shown during the day and the exterior of the building, combined with lighting at night are examples of the artistic value of the glass façade with its structural SentryGlas® interlayer.”

Photo © by courtesy of Teng Yuan Institute



In the play of light and shadows, the envelope of the structure becomes blurry and flowing.

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