



UHPC

Ultra High—Performance Concrete

Ningbo Boyang Urban Operation Management Service Co., Ltd

Contents

Material Advantages	3-4
Material composition	5
Material Properties	6-7
Material Color	8
Surface Texture	9
Installation Method	10
Corner Connection Method	11
Material Specifications	12
Application Case Studies	13-40



材料优势 SUPERORITY

What is UHPC?

UHPC is the abbreviation for Ultra-High Performance Concrete.

Internationally, it refers to a type of cement-based composite material with compressive strength exceeding 100 MPa, as well as exceptional toughness and durability.

UHPC materials do not contain coarse aggregates, and their particle sizes are generally less than 1 mm. Due to its high density, it possesses ultra-high strength and excellent durability.

Unlike traditional curtain wall panels, UHPC is ideal for use in large-scale panels, hollow panels, and structural elements that combine functionality with decorative purposes.

材料优势 SUPERORITY



Ultra-large format original plate
4300×2000mm



Easy and quick
construction



Overestimating
one's own abilities
(meet 14km/sqm)



High bending
strength



Energy
saving



Strong resistance
to temperature
changes



High sound insulation
performance



High integrity

K

Impact-
resistant \not
afraid of
collisions



Salt spray
resistance



Multiple
installatio
n methods
available



High fire resistance



Customizable



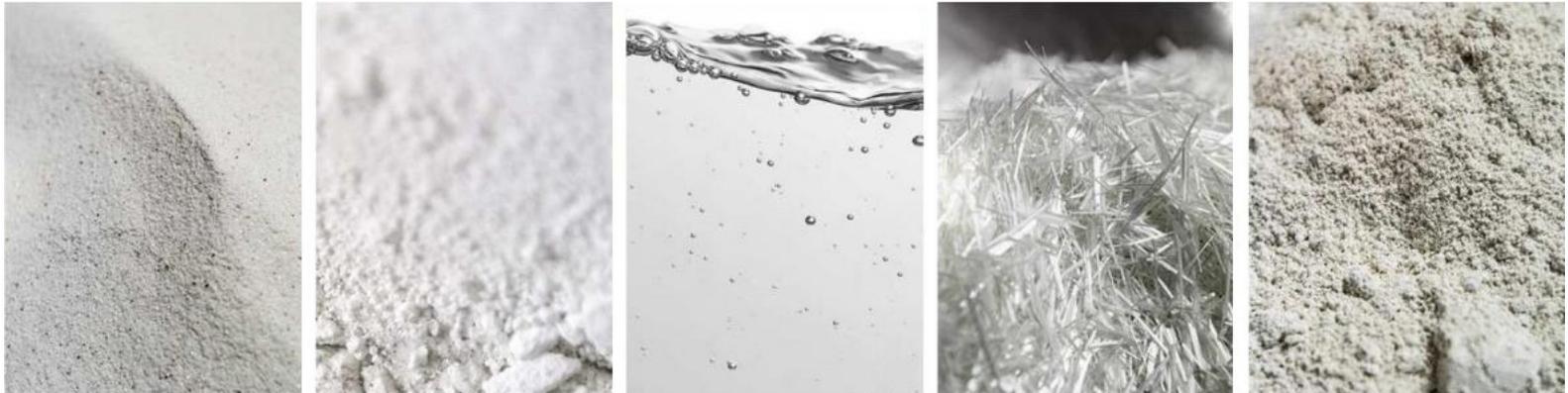
High tensile strength

Corrosion
resistance



Environmental-friendly materials

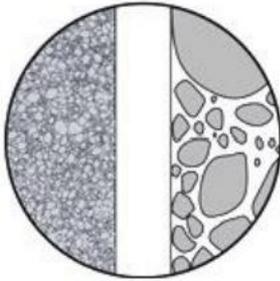
材料成分 COMPOSITION



UHPC material composition: high-grade white cement, graded quartz powder, filled nanomaterials, organic fibers, three-dimensional mesh fabric, admixtures

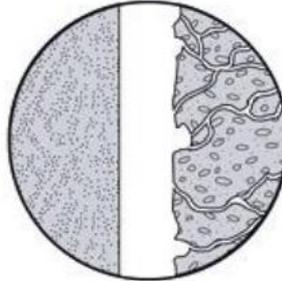
材料性能 PROPERTY

Matrix Density



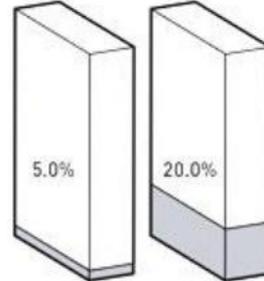
Concrete is loose.

Surface Layer Density



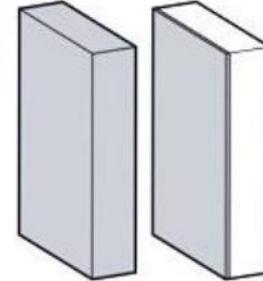
Concrete

Water Absorption Rate



Concrete height

Color Distribution



Concrete

材料性能 PROPERTY

Comparison of Product Parameters in the Concrete Family				
	Ordinary concrete (NC)	High-performance concrete (HPC)	Fiber-reinforced concrete (GRC)	Ultra-high-performance concrete (UHPC)
Compressive strength (MPa)	20-50	60-100	30-60	≥ 100
Flexural strength (MPa)	2-5	6-10	14-20	12-20
Elastic modulus (GPa)	15-40	30-50	20-30	40-60
Porosity (%)	20-25	10-15	16-25	2-5
Water absorption rate (%)	<10	<6	<16	<5

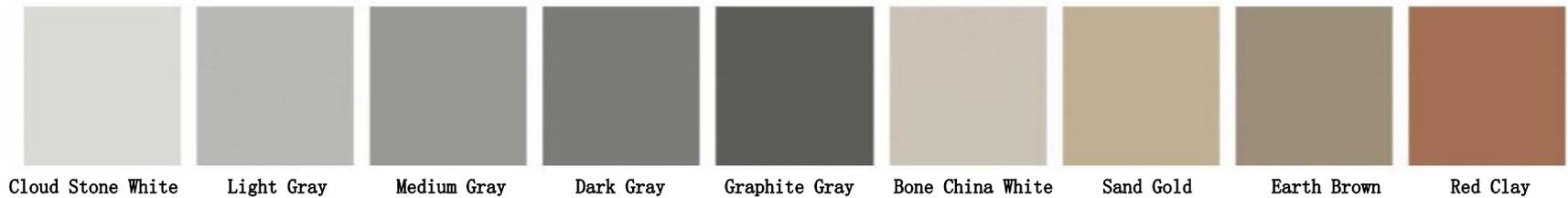
 UHPC Product Parameters	
Compressive strength	$\geq 100\text{MPa}$
Flexural strength	$\geq 12\text{MPa}$
Water absorption rate	$\leq 3\%$
density	$\geq 2.2\text{g/cm}^3$
Impact resistance	$\geq 13\text{kJ/m}^2$

材料颜色 COLOR

Basic Colors

The following standard colors are available for use in projects. These colors are derived from the natural hues of minerals. After years of research, experimentation, and extensive data analysis, they have been developed as optimal choices. They possess UV resistance, do not fade over time, and maintain high consistency.

Customized color options are also available upon request.



TIPS: UHPC uses a technique where mineral pigments are thoroughly mixed with the matrix, resulting in both the surface layer and the base layer being the same color.

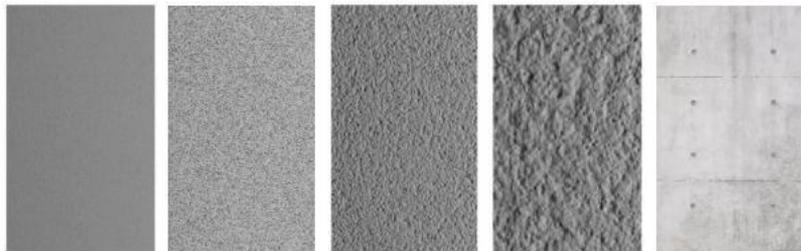
面层纹理 TEXTURE

Basic Mechanism

The following standard surface textures are provided for project use.

Customized texture services are also available.

flat pattern



smooth

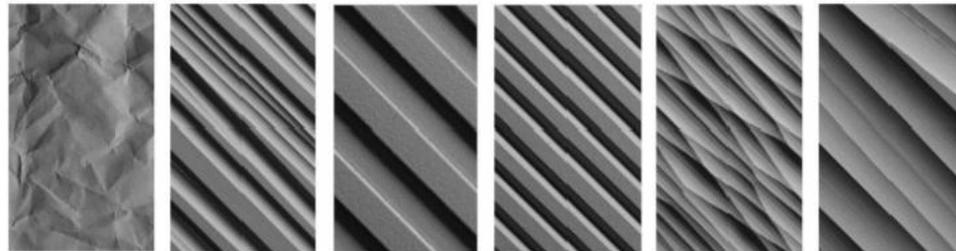
Exposed sand

Sandblasting

Orange peel

Clear water

Relief pattern



Folds

reeds

corrugation

Fine Shadow

interleaved

Wood grain



Common Installation Methods

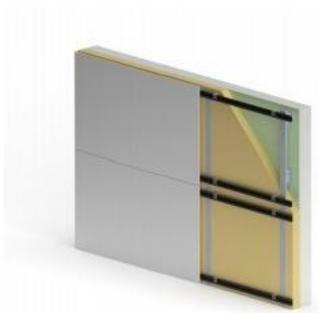
UHPC primarily uses two types of concealed fixing methods and one exposed fixing method.

The appropriate installation scheme is selected based on the project's structure and the type of material used.

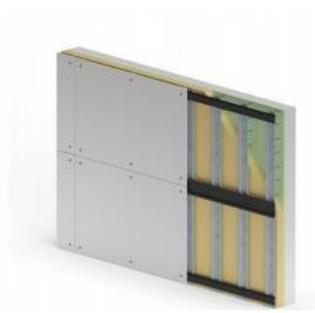
Customized installation solutions can also be provided according to the designer's requirements.



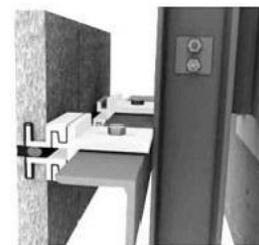
Back-anchored dry hanging



Backed frame



Surface exposed nails



Grooved dry hanging

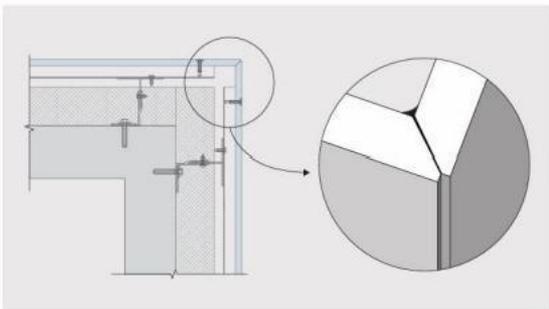
转角连接方式 JOINT

Corner Universal Connection Solution

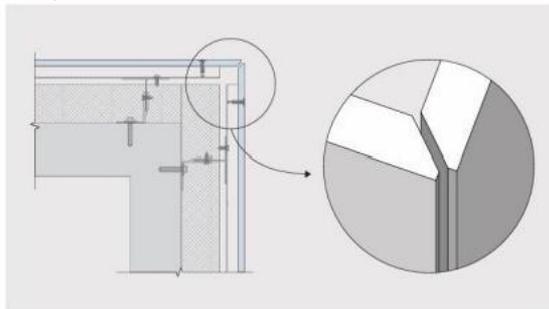
Provides the following standard expert-designed connection solutions.

Customized installation solutions can also be provided according to the designer's requirements.

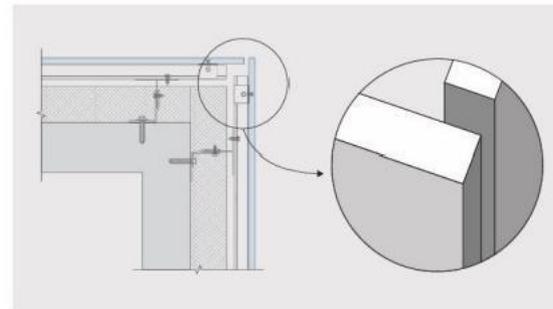
Bevel seal connection



Diagonal slit connection



Right-angled slit connection



Sheet dimensions:

It is possible to produce super-large sheets measuring 4300mm × 2000mm. These sheets can be used for the exterior facades of office buildings, schools, hotels, and other structures, creating a seamless and stunning appearance across entire floors.

The sheet thicknesses available are 20/25/30/35/40mm, allowing customers to choose the option that best suits their needs. [4300mm](#)

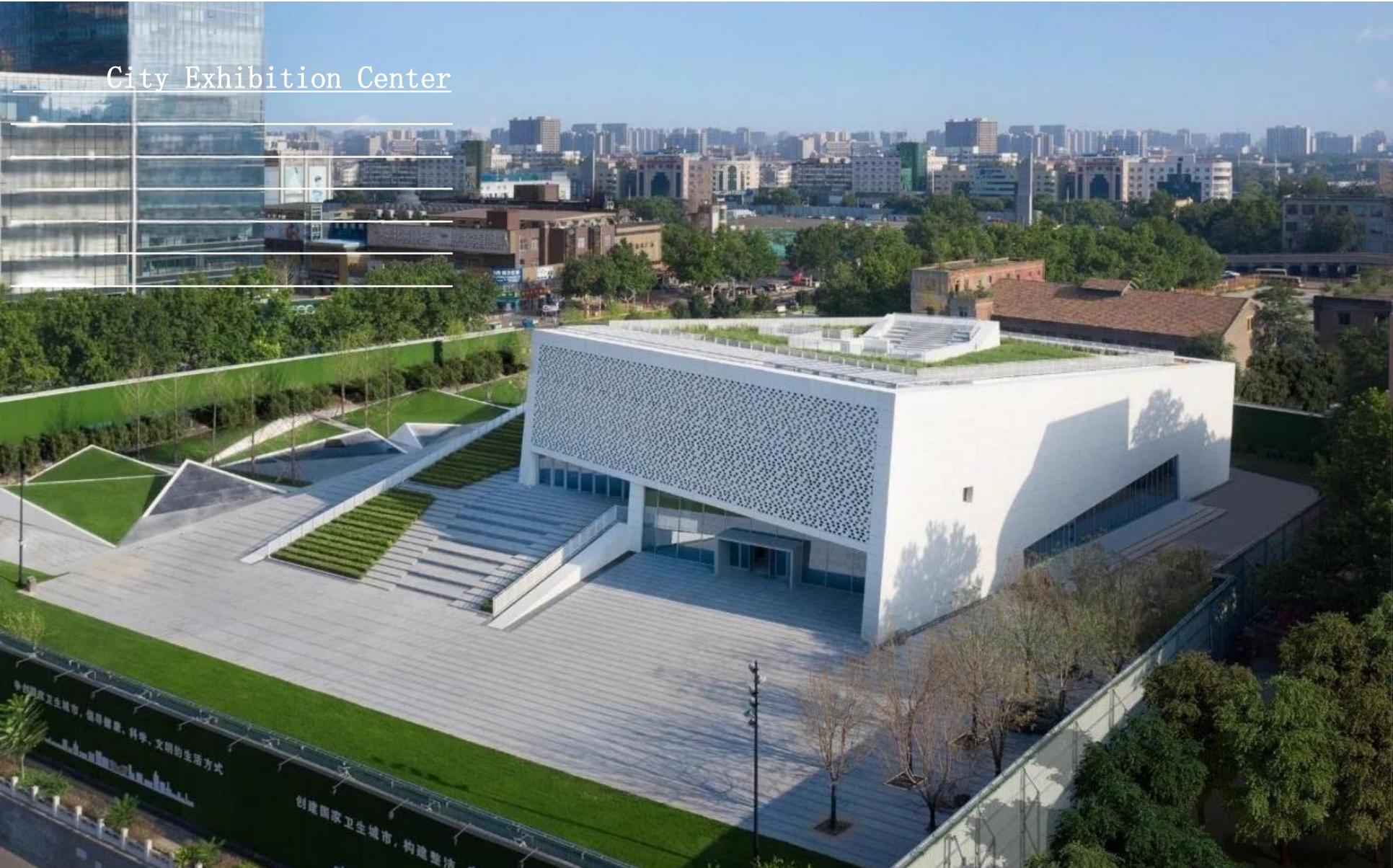




项目案例 PROJECTS

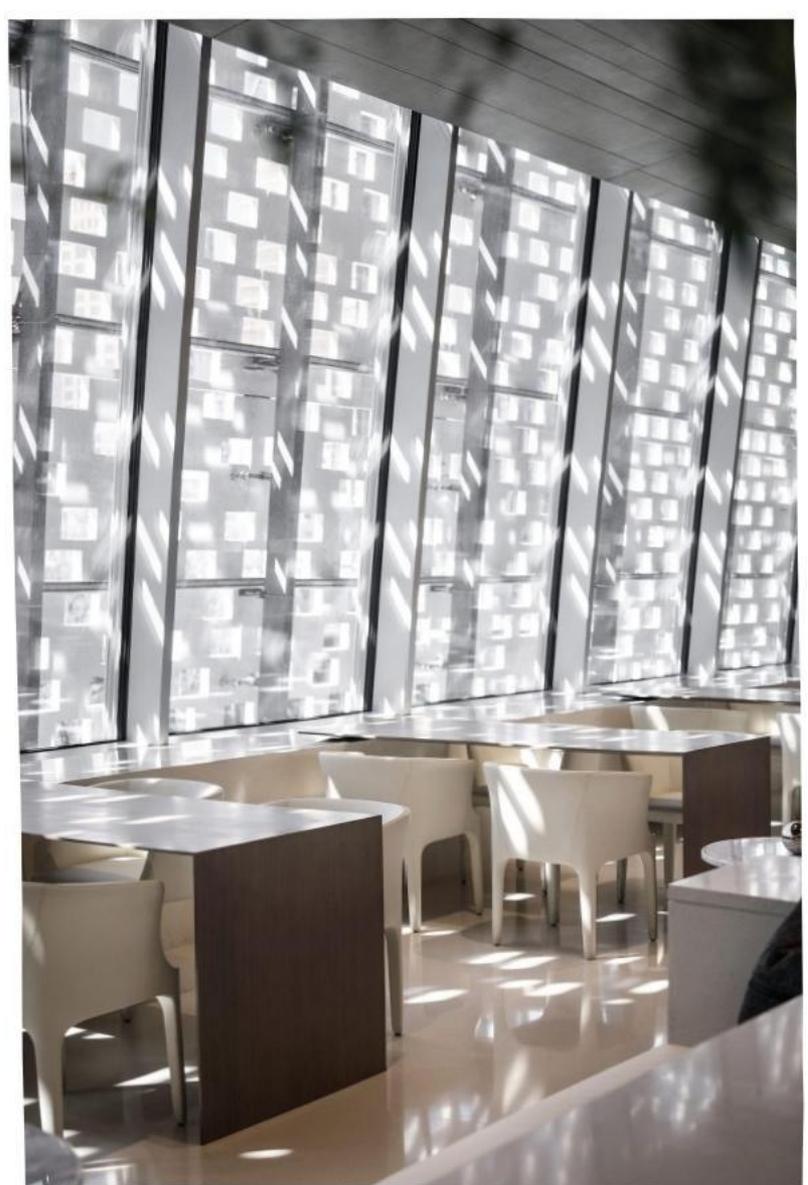
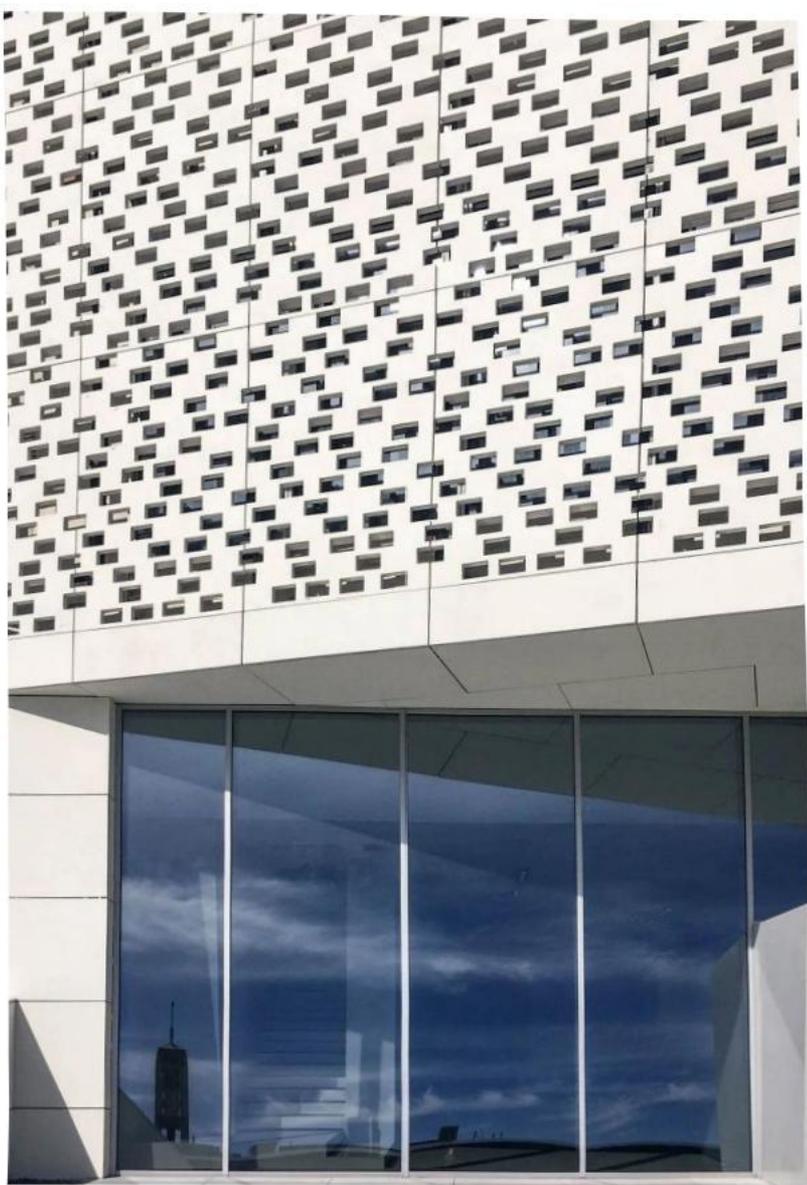
- * Cultural Buildings
- * Office Buildings
- * Commercial Buildings
- * TOD
- * Residential Apartments
- * Hotel Buildings
- * Educational Buildings

City Exhibition Center



争创国家卫生城市，倡导健康、科学、文明的生活方式

创建国家卫生城市，构建整洁

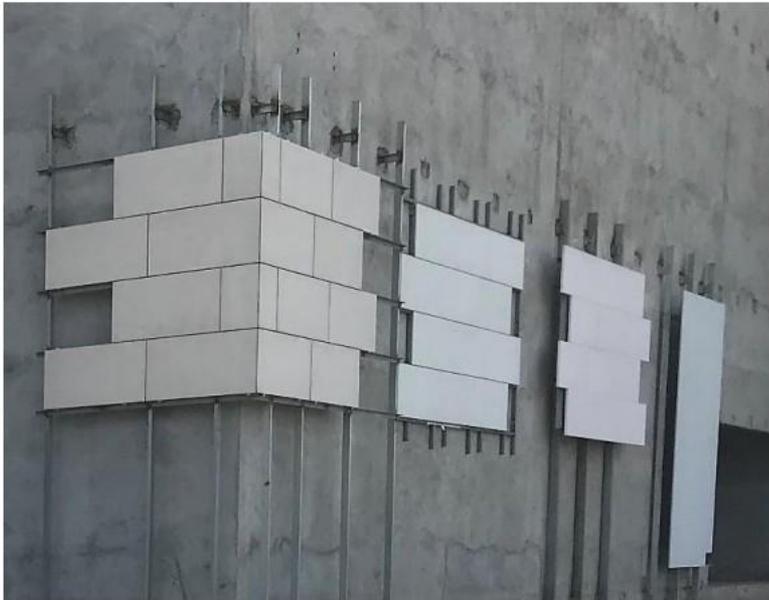






Art Center





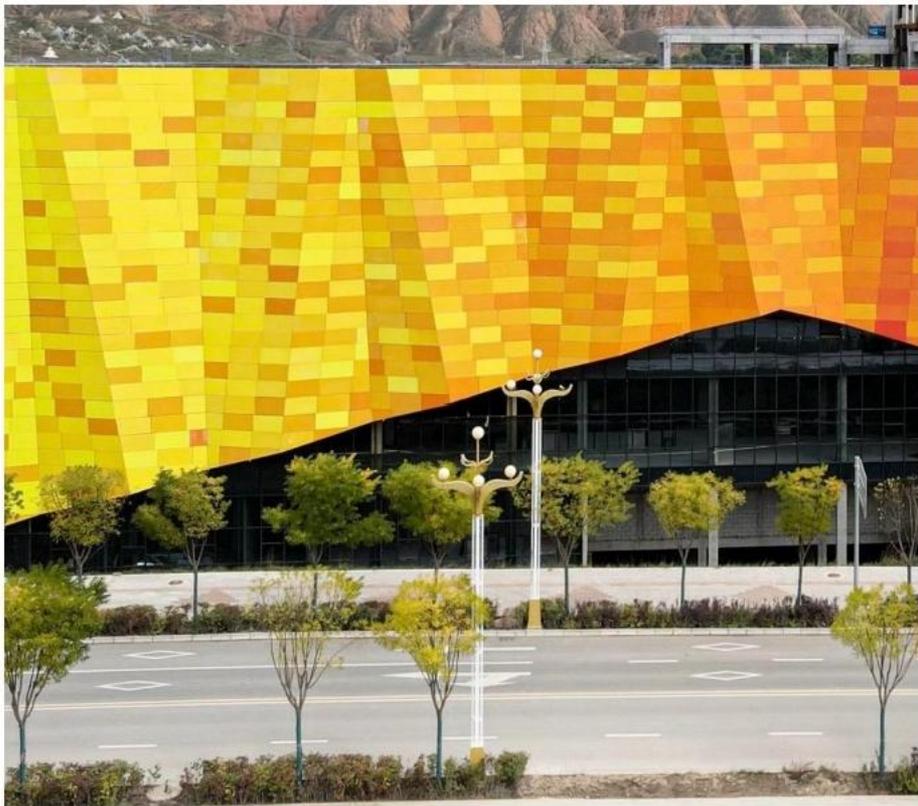
Modern Service Plaza







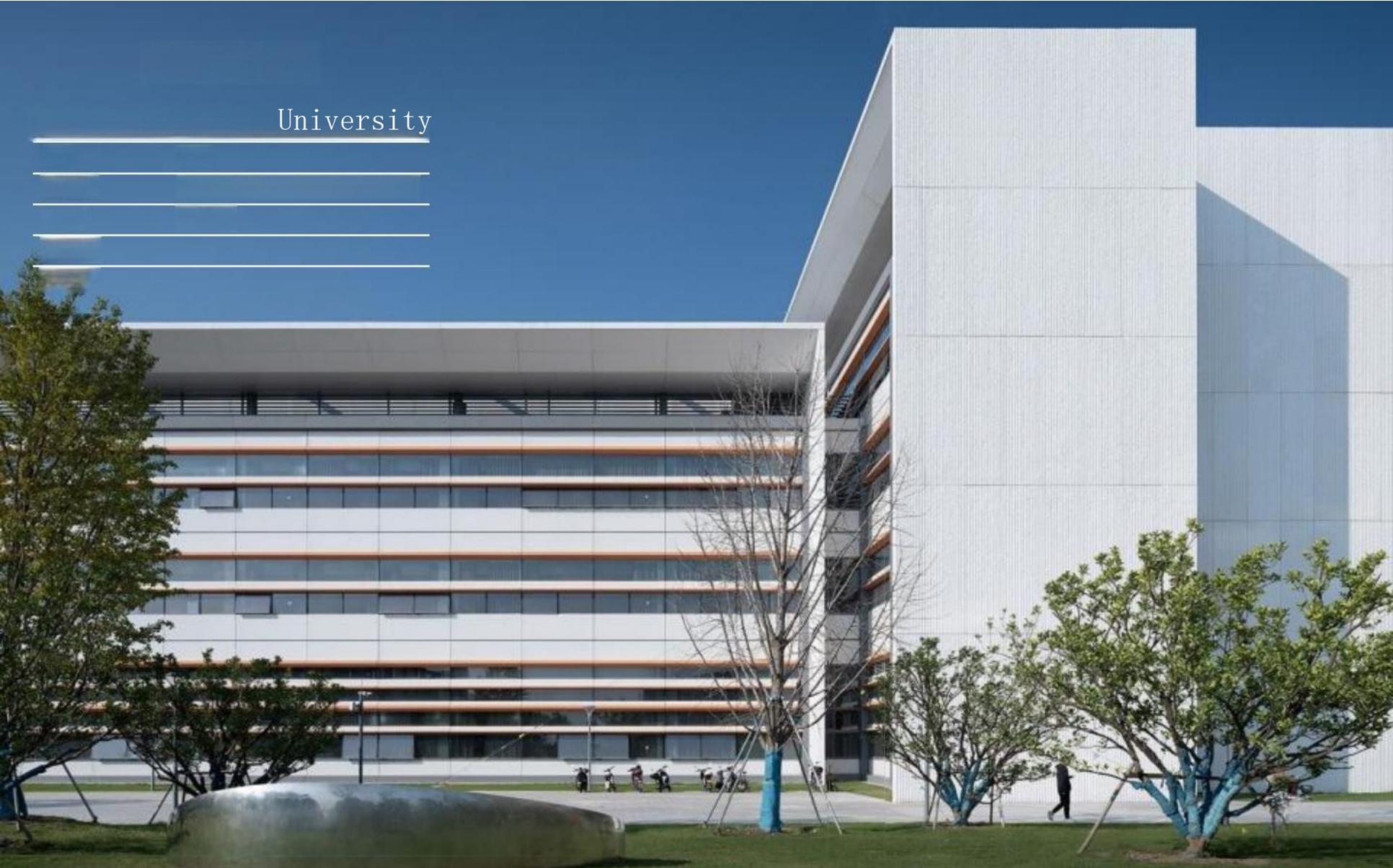




University



University





Shangyi Opera House



上音歌剧院

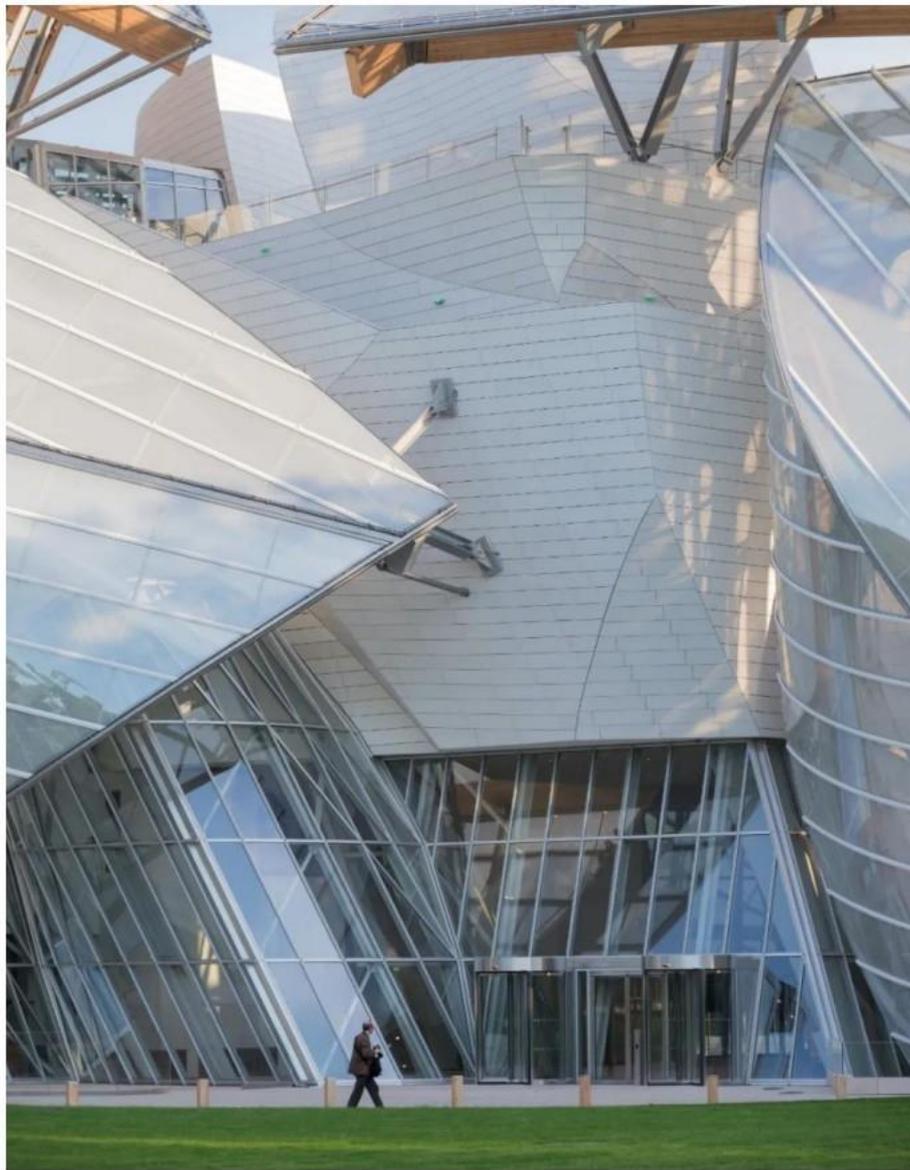




LOUIS VUITTON

AVENTURA MALL





La Part-Dieu Shopping mall





Apartment facade renovation





Apartment facade renovation







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