

# Dwa

## Hot Summer Humid continental climate

### Location Examples:

- Beijing, China
- Harbin, China
- Seoul, South Korea
- Gyeonggi-do, South Korea

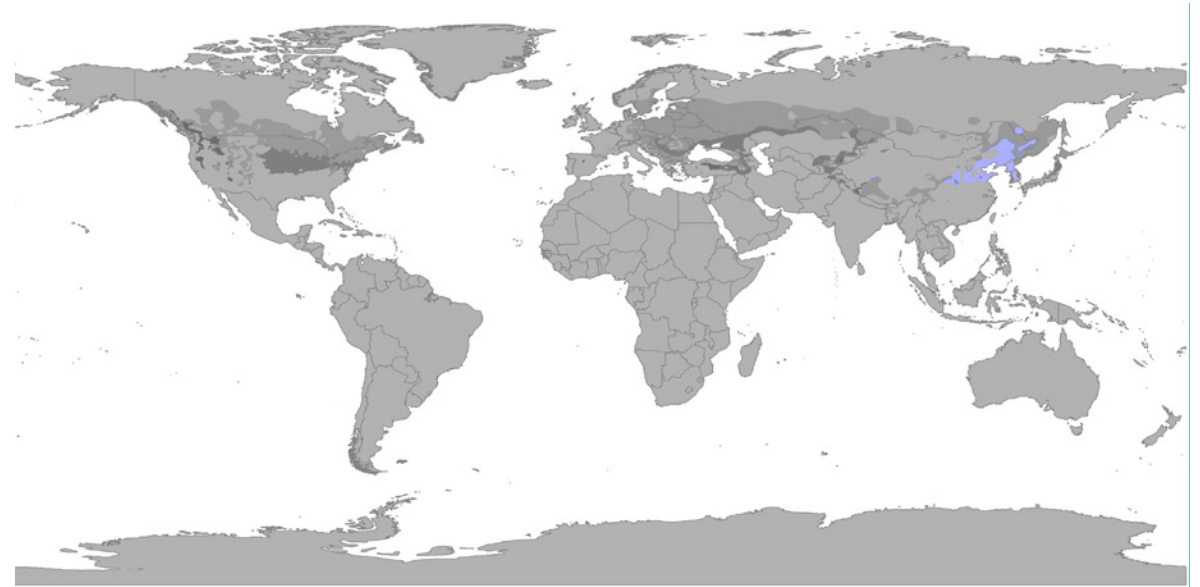
The definition of this climate regarding temperature is as follows: the mean temperature of the coldest month must be below  $-3\text{ }^{\circ}\text{C}$  ( $26.6\text{ }^{\circ}\text{F}$ ) (or  $0\text{ }^{\circ}\text{C}$  ( $32.0\text{ }^{\circ}\text{F}$ )) and there must be at least four months whose mean temperatures are at or above  $10\text{ }^{\circ}\text{C}$  ( $50\text{ }^{\circ}\text{F}$ ).

In addition, the location in question must not be semi-arid or arid. This climate exhibits large seasonal temperature contrasts with hot summers and cold winters. In eastern Asia (Manchuria and Korea), a monsoonal variant of the humid continental climate occurs.

In humid continental regions, materials of buildings requires nice heat insulation and cold proof effect to be waterproof in summer and frostproof in winter.

Sources:

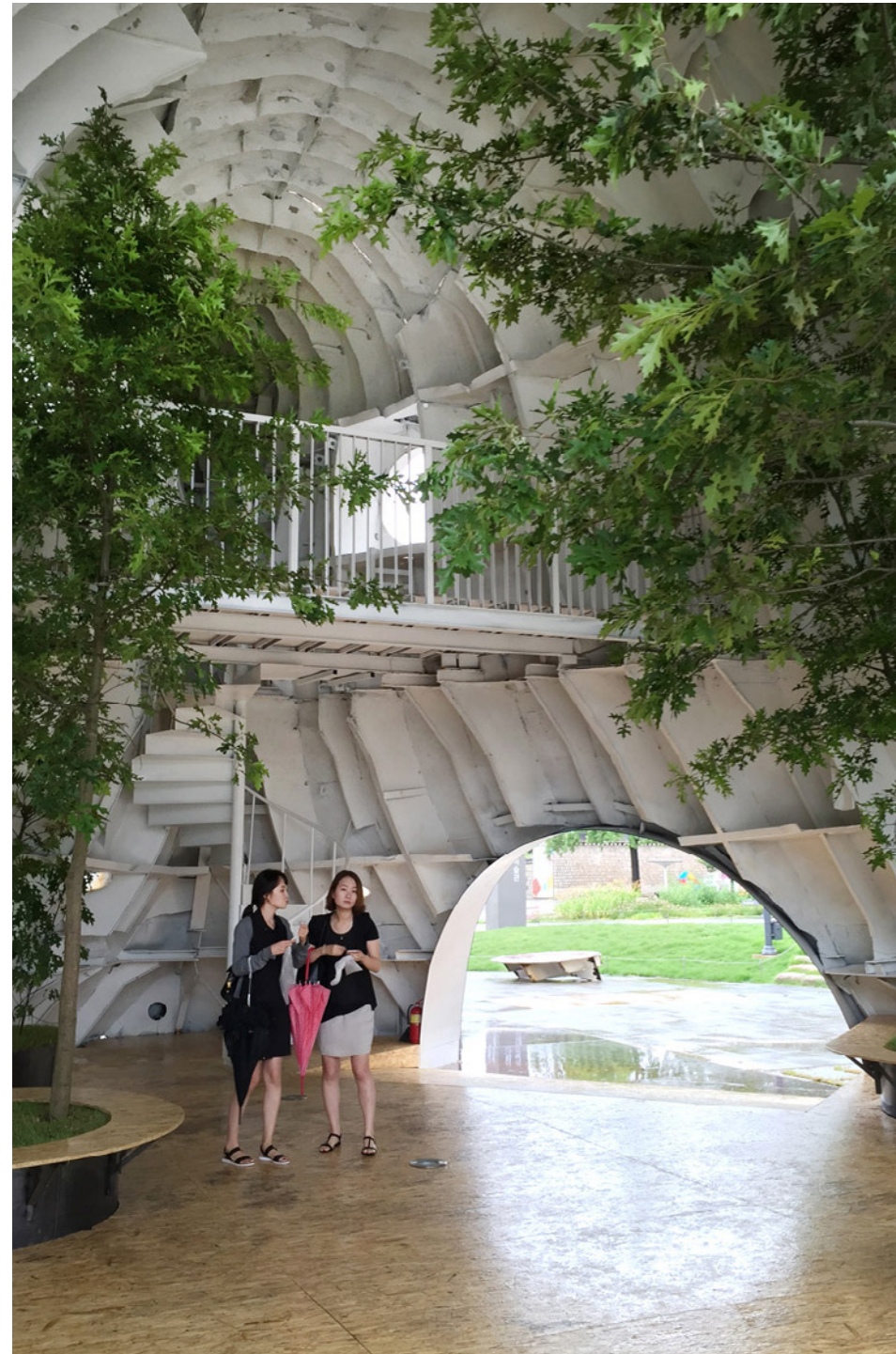
[https://en.wikipedia.org/wiki/Humid\\_continental\\_climate](https://en.wikipedia.org/wiki/Humid_continental_climate)



# YAP Seoul — Temp'L

case study  
By Hua Yinghua

Seoul, South Korea



**Architect:** shinslab architecture

**Owner:** N/A

**Year of completion:** 2016

**Climate:** Hot Summer Continental Climate

**Material of interest:** Recycled material

**Application:** whole structure

**Properties of material:** Temp'L is designed from recycled steel parts from an old ship. It provokes thought about beauty in our time, coming from a recent past. The architectural section of the project is drawn through the process of cutting up the old ship. The section-cut has the necessary force for the sawing action, while opening and thus freeing the space contained in the volume of the ship.

## Sources:

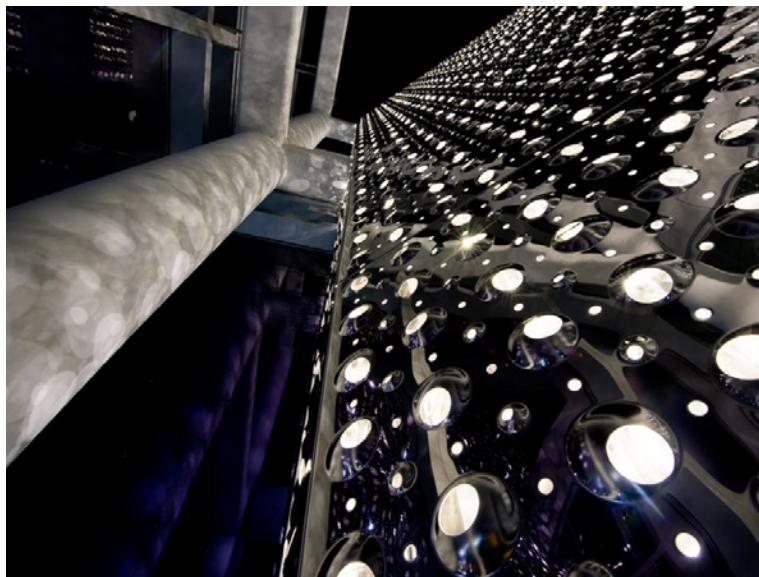
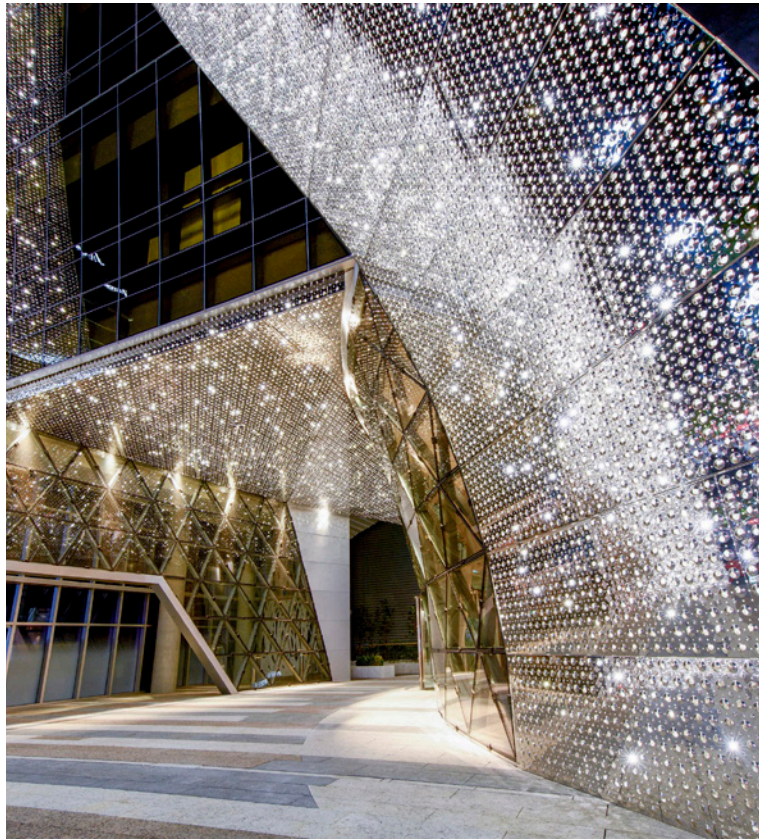
<https://www.archdaily.com/792602/yap-seoul-nil-templ-shinslab-architecture>

<https://www.dezeen.com/2016/07/20/shinslab-architecture-rusty-ship-transformed-cavernous-pavilion-momas-young-architects-program-yap-seoul/>

# Harim Group Headquarters Building

case study  
By Hua Yinghua

Seoul, South Korea



**Architect:** The Beck Group

**Owner:** Harim Group company

**Year of completion:** 2016

**Climate:** Humid continental climate

**Material of interest:** Metal

**Application:** exterior&interior

**Properties of material:** The building features a Zahner engineered cladding system and custom bumped and perforated stainless steel throughout the interior and exterior. The metal system Zahner provided was developed with a deep recess cavity for the lighting system. Plus they're energy efficient.

**Sources:**

<https://www.archdaily.com/877264/harim-group-headquarters-building-the-beck-group>

<https://www.azahner.com/works/harim-tower>

# Cloud Room

case study  
By Hua Yinghua

Beijing, China



**Architect:** One Design Inc.

**Owner:** N/A

**Year of completion:** 2011

**Climate:** Hot Summer Continental Climate

**Material of interest:** Plastic

**Application:** whole structure

**Properties of material:** The outside white polycarbonate panels follow a computer generated cloud-like profile. Each piece revolves according to the wind, casting moving shadows and reflections onto a second layer of translucent polycarbonate.

**Sources:**

<https://www.archdaily.com/124110/cloud-room-bing-bu>

# Concrete Vessel — Pavilion no.1 in China House Vision

case study  
By Tian Lan

Location: Beijing, China



**Architect:** FCJZ & Haier

**Owner:** N/A

**Year of completion:** 2018

**Climate:** Hot Summer Continental Climate

**Material of interest:** Glass Fiber Reinforced Concrete

**Application:** Floors, Wall and Roof

**Properties of material:** The material used on all surfaces inside and outside of the building, including the casings for the appliances as well as furniture, is a 3mm thin Glass Fiber Reinforced Concrete (or GRC), made from recycled construction debris. Its thinness makes this material very lightweight and its porosity creates a living environment that breathes and filters the air while allowing light coming through.

**Sources:**

<https://www.goood.cn/concrete-vessel-pavilion-1-in-china-house-vision-by-fcjz-haier.htm>



# Beijing Vanke Jade Academy Sky Library

case study  
By Tian Lan

Location: Beijing, China



**Architect:** Lacime Architectural Design

**Owner:** N/A

**Year of completion:** 2017

**Climate:** Hot Summer Continental Climate

**Material of interest:** Ultra-white Glass

**Application:** Exterior Façade

**Properties of material:** The glass itself has light-transmitting permeability and reflectivity, and the diffuse reflection of the aluminum plate also forms a reflection effect on the surrounding environment, forming a subjective reflection and integration of the building on the natural environment, reaching a design theme of "Dialogue with nature" on the other hand.

**Sources:**

<https://www.goood.cn/beijing-vanke-jade-academy-sky-library-china-by-lacime-architects.htm>

# The Masonry

case study  
By Sarah Fahey

Location: Yongin, South Korea



Architect: STPMJ

Owner: Private

Year of completion: 2018

Climate: Hot Summer Continental

Material of interest: Brick & Cement Blocks  
(used as if masonry)

Application: Exterior  
2 different kinds of brick: 100mm x 200mm  
and 200mm x 400mm cement blocks are  
diagonally stacked to create a singular,  
visually interesting facade.

Properties of material: Massive- helps in  
thermal barrier, cheap

Sources:

[https://www.architectmagazine.com/project-gallery/the-masonry\\_o](https://www.architectmagazine.com/project-gallery/the-masonry_o)

[https://www.architectmagazine.com/project-gallery/the-masonry\\_o](https://www.architectmagazine.com/project-gallery/the-masonry_o)

# Watercube

case study  
By Yuhui Xiong

Location: Beijing, China



**Architect:** PTW Architects

**Owner:** N/A

**Year of completion:** 2008

**Climate:** Monsoon-influenced hot-summer humid continental climate (Dwa)

**Material of interest:** Plastic

**Application:** Exterior/Interior

**Properties of material:** Mimic the bubble

**Sources:**

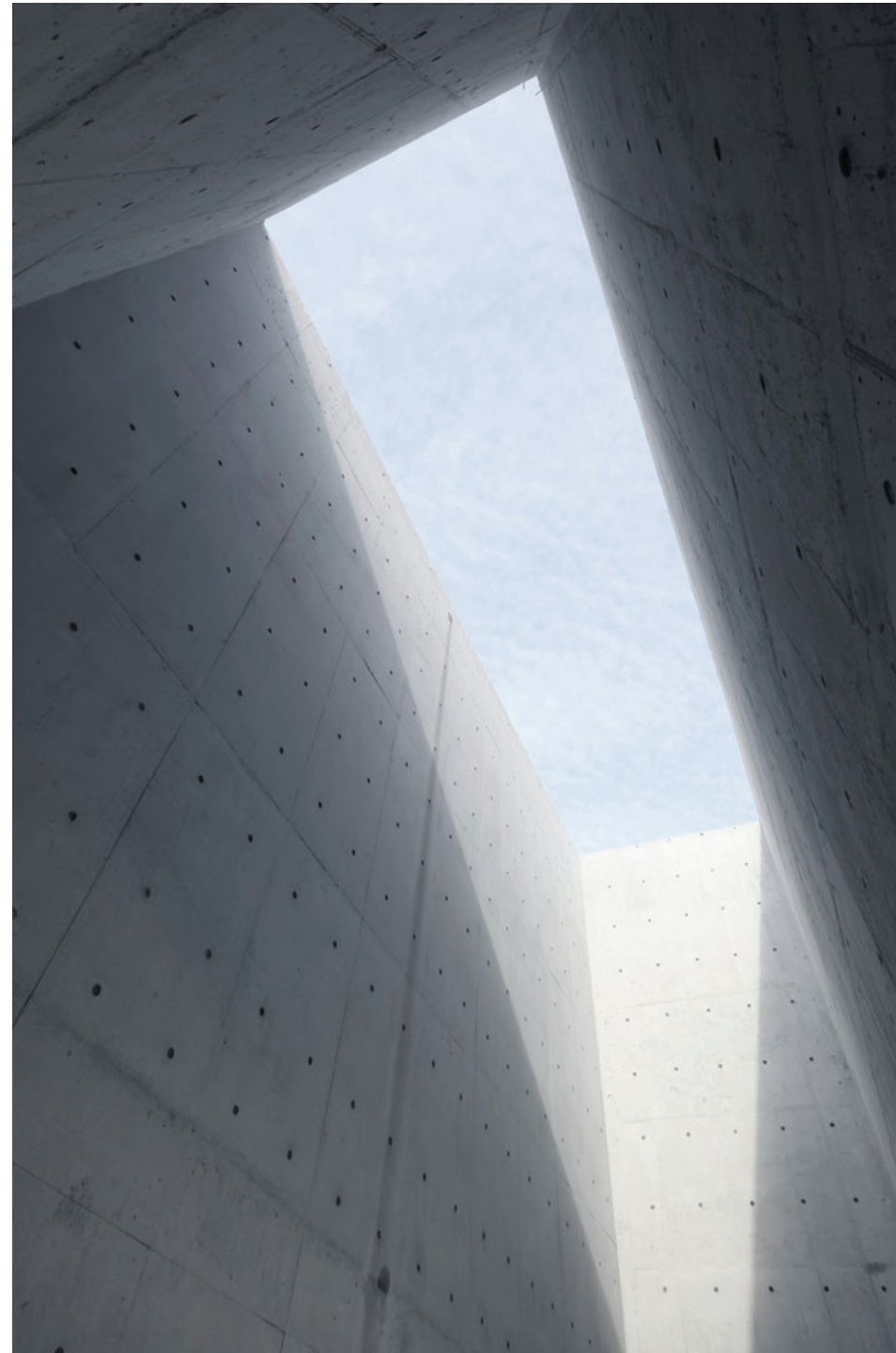
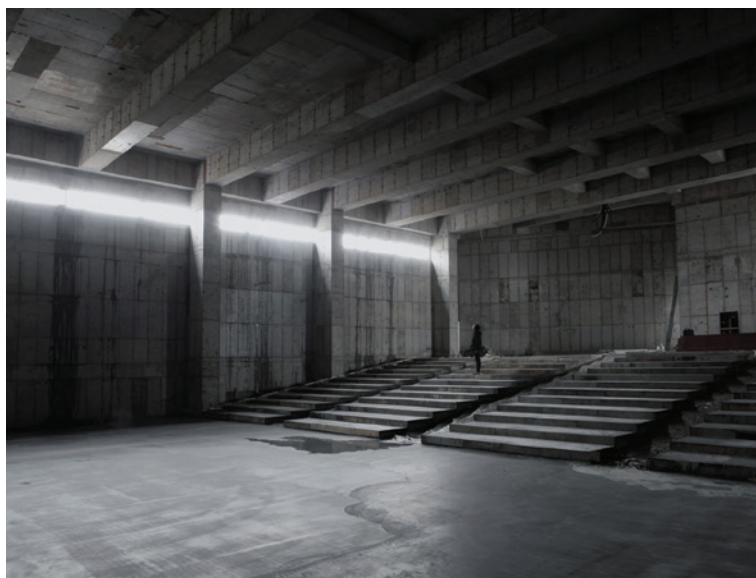
<https://www.dezeen.com/2008/02/06/watercube-by-chris-bosse/>



# RW Concrete Church

case study  
By Yuhui Xiong

Location: Gyeonggi-do, South Korea



**Architect:** NAMELESS Architecture

**Owner:** N/A

**Year of completion:** 2013

**Climate:** Monsoon-influenced hot-summer humid continental climate (Dwa)

**Material of interest:** Concrete

**Application:** Exterior/Interior

**Properties of material:** Concrete, which is a structure as well as a basic finishing material for the building, indicates the simplicity that penetrates the entire church.

**Sources:**

<https://www.archdaily.com/483198/rw-concrete-church-nameless-architecture>