The definition of this climate regarding temperature is as follows: the mean temperature of the coldest month must be below -3 °C (26.6 °F) (or 0 °C (32.0 °F)) and there must be at least four months whose mean temperatures are at or above 10 °C (50 °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
YAP Seoul — Temp’L

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-temp-l-shinslab-architecture
Harim Group Headquarters Building

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

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

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.gooood.cn/concrete-vessel-pavilion-1-in-china-house-vision-by-fcjz-haier.htm
Beijing Vanke Jade Academy Sky Library

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:
The Masonry

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
Watercube

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

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