

Peer Zumthor, Thermes de Vals, Switzerland, 1996



earth
stone
wood
vegetation
brick
concrete
glass
metals
plastics

choose impact category

Global Warming Potential (GWP)

choose unit

m³

filter by material group

no filter

filter and sort by "functional unit"

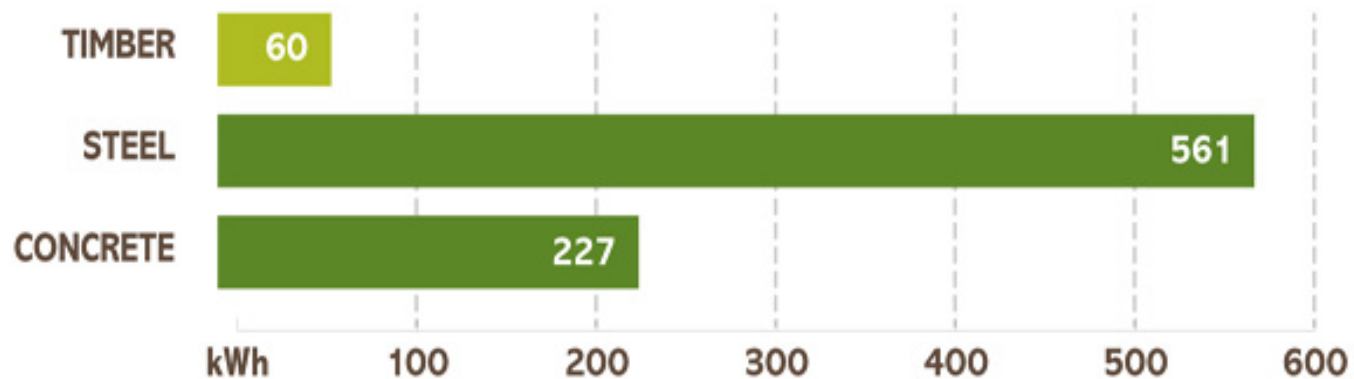
according to declared unit

| GWP [kg CO₂ eq / m³]
| module A1-A3



Energy savings

Energy requirements in kilowatt hours for producing a 3-meter-tall column (equivalent to 9.8 feet) carrying the same load.



Carbon footprint: embodied carbon per m³ in kg

rammed earth	48
softwood timber	110
cross laminated timber	219
stone	237
clay brick wall	345
reinforced concrete	635
glass	3,600
steel section	12,090
aluminum	18,009

source: Pliteq Inc.

Shigeru Ban Architects, Refugee housing, Kalobeyei Settlement, Kenya, 2017











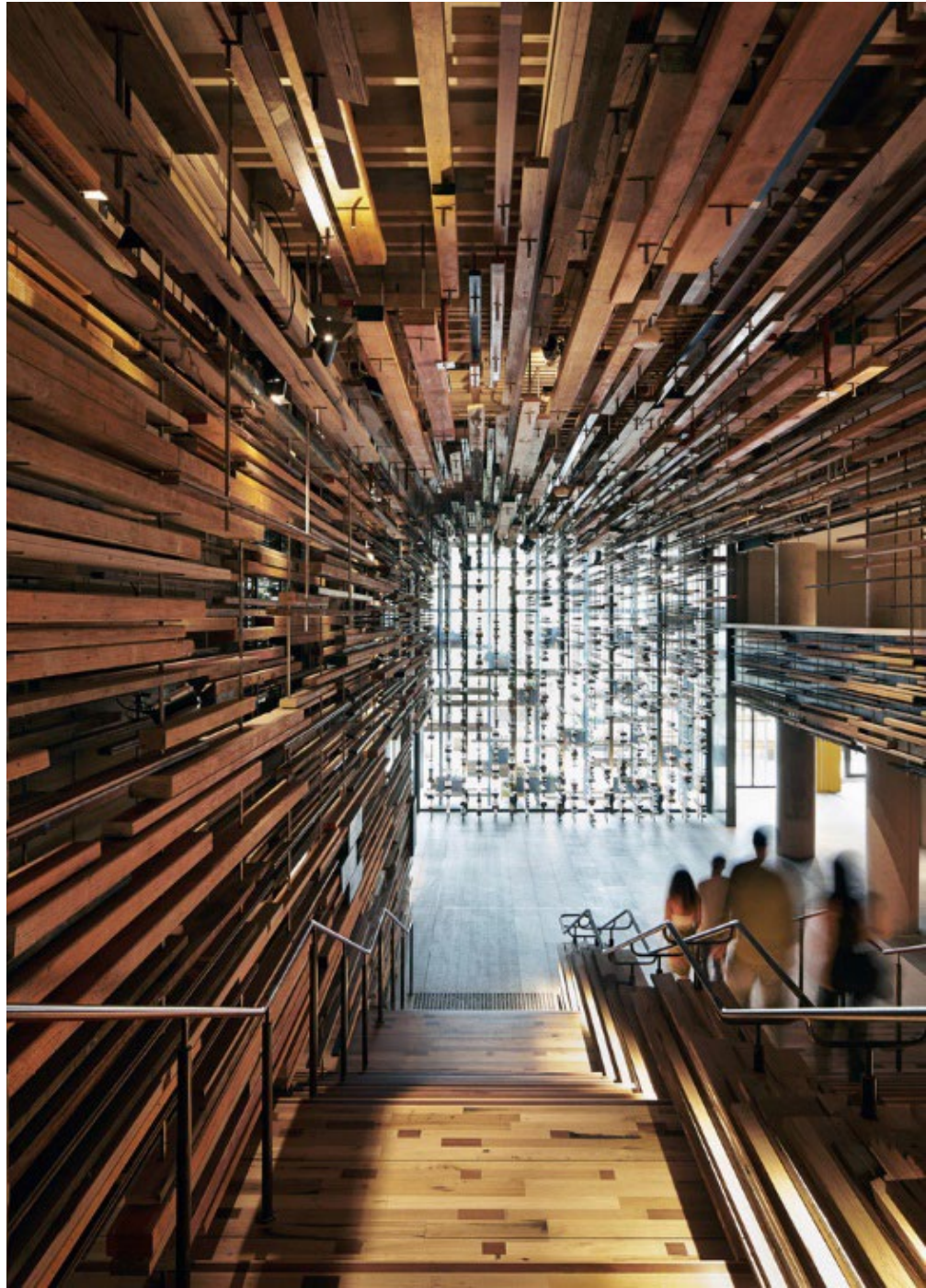
Haz Arquitectura, Community Center, Barcelona, 2021





March Studio, Hotel Hotel, Canberra, 2015



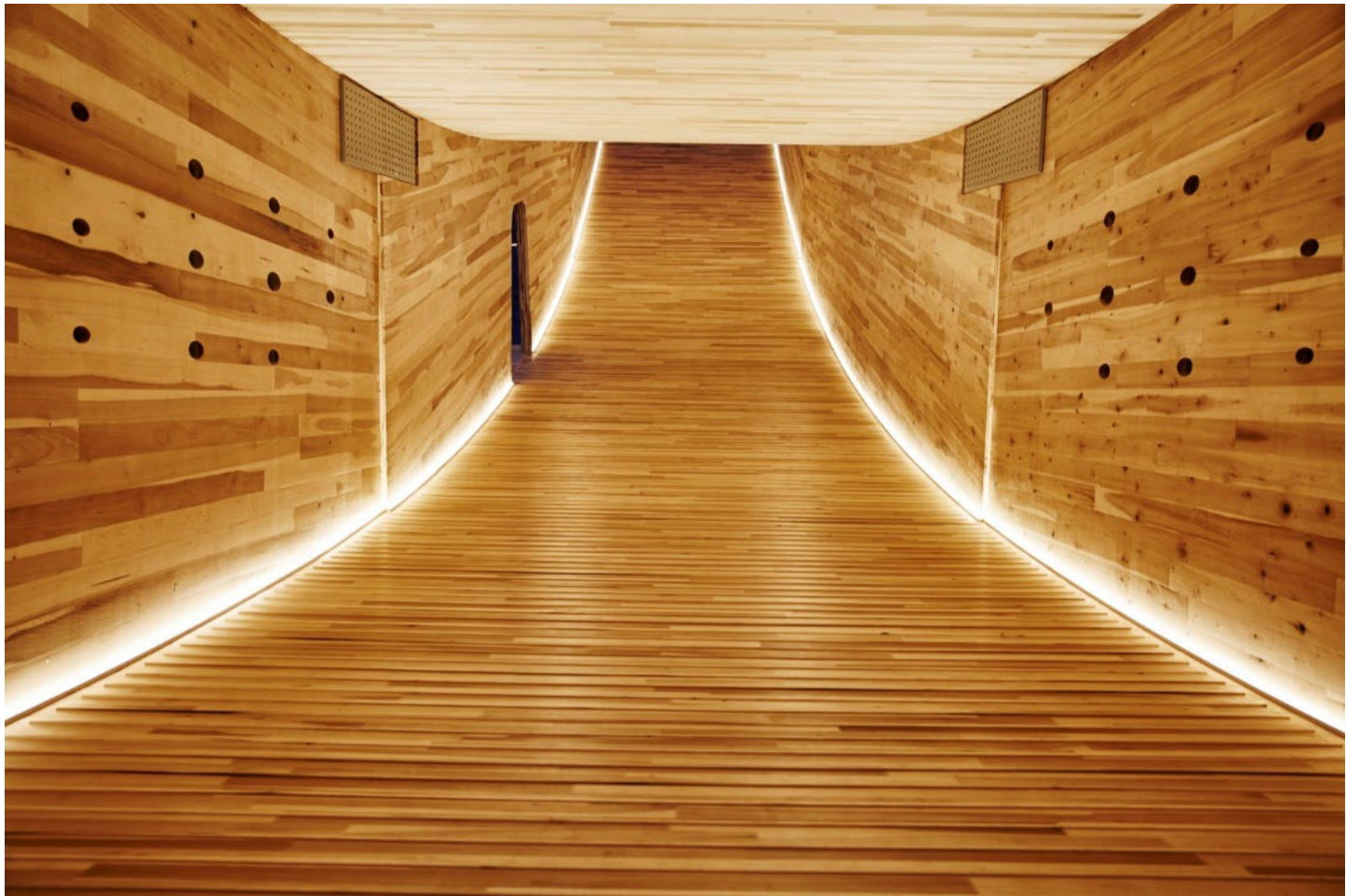


Centerbrook Architects, Lakewood House, Guilford, VT, 2008



Alison Brooks, The Smile, Chelsea, London, 2016







Windgardh Arkitektkontor, Lake Tåkern Visitor Center, Glanas, Sweden, 2008



Thatch roof cottage, Saco, ME, 2015

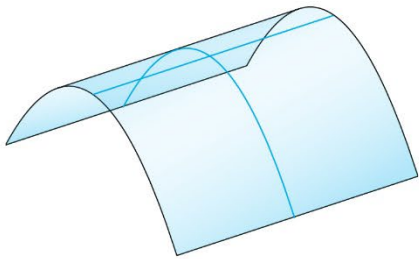




Ibuku, Arc Gymnasium, The Green School, Bali, 2021

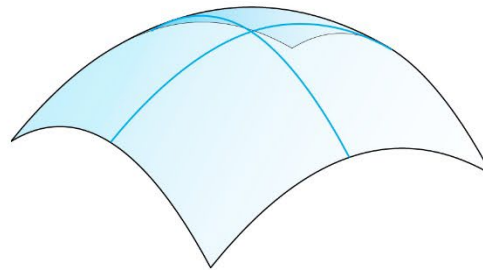
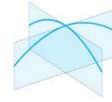


MONOCLASTIC



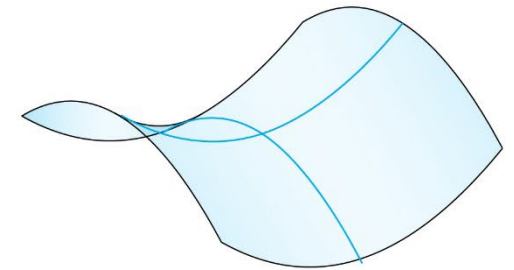
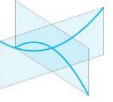
Monoclastic (or uniaxial) surfaces are single curved surfaces, characterised by only bending in one direction at a time.

SYNCLASTIC



Synclastic curvature, that is, principal curvatures of the same sign; i.e the centres of curvature are on the same side of the surface.

ANTICLASTIC



Anticlastic surfaces are those in which the centres of curvature are located on opposing sides of the surface.

Vo Trong Nghia, Phu Quoc Welcome Center, Vietnam, 2021





Not Vital, House to Watch the Sunset, Aladab, Niger, 2005



Djinguereber Mosque, Timbuktu, Mali, 1327



Gui Paoliello Arquiteto, House in Montequeira, Brazil, 2019





Studio Archaos, Rogač House, Vis, Croatia, 2021



Perasti Tower, Vis, 1617





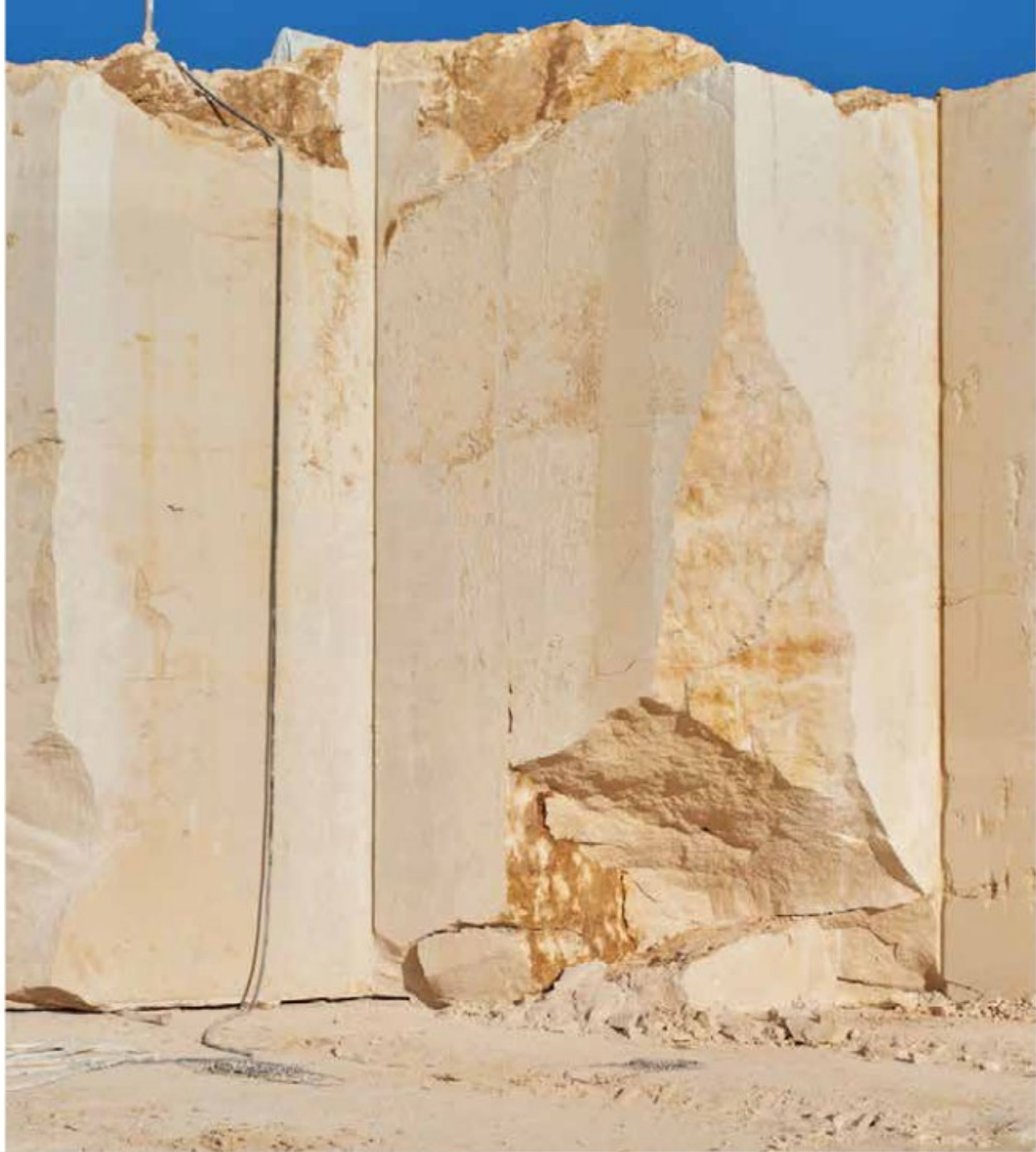
Ginnerup Arkitekter, Summer House, Denmark, 2021





Atelier Archiplein, Solid Stone Apartment Blocks, Plan-les-Ouates, Switzerland, 2021





atelier archiplein





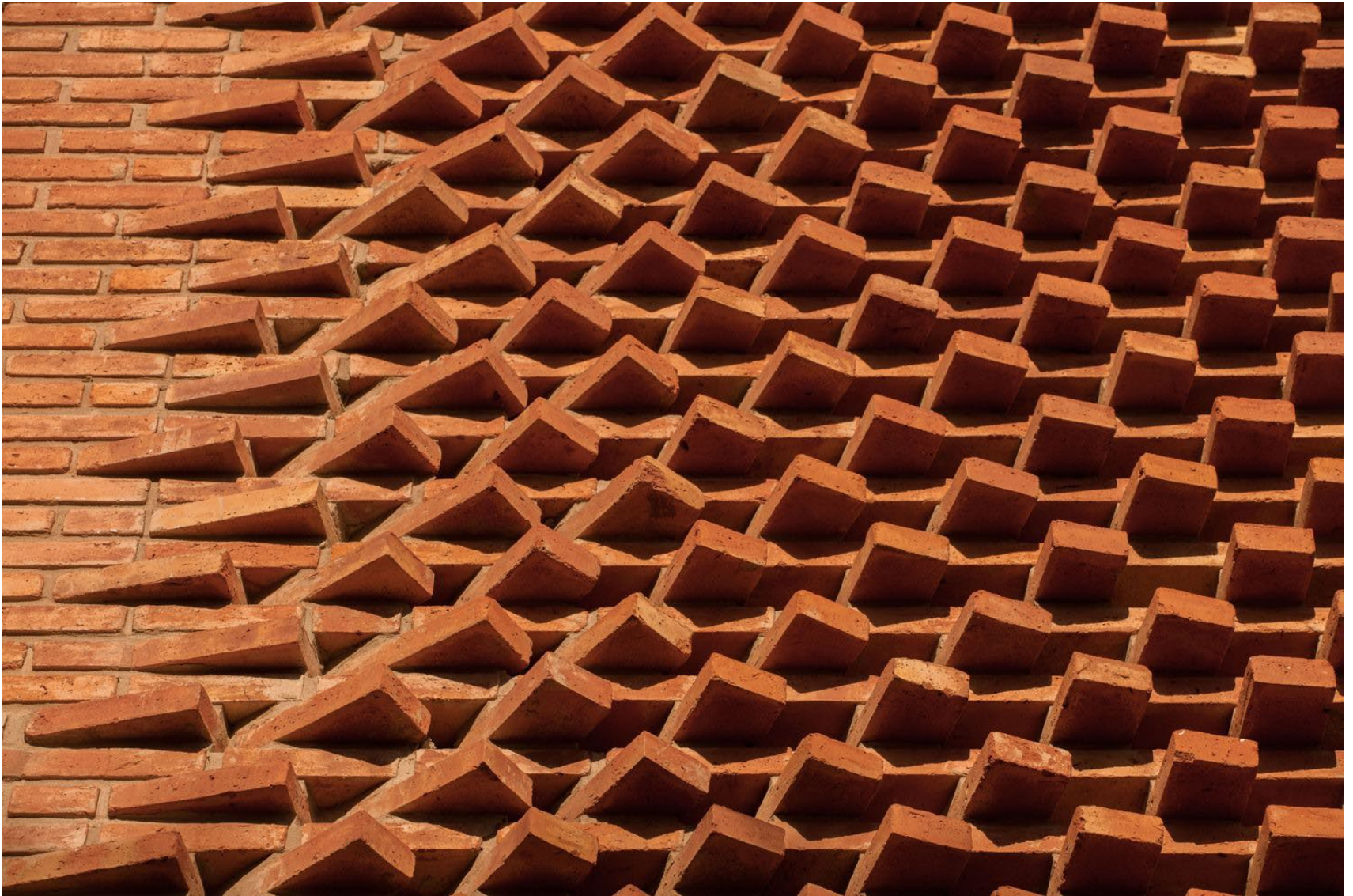


Ziggurat of Ur, Mesopotamia, 21st C. B.C.



Francisco Cadau, Damero Building, Campana, Argentina, 2021





Estudio Bezero Jaros. Urban Refuge Studio House, Cordoba, Argentina, 2016



Marcuzzi Arch, CH House, Cordoba, Argentina, 2018



FLV Arquitectura, LLV House, Cordoba, Argentina, 2019.



Estudio Botteri Connell, Experimental Brick Pavilion, Buenos Aires, 2016



Valeria del Vecchio, AR House, Buenos Aires, 2017



Diego Arraigada Arquitecto, Brick House, Santa Fe, Argentina, 2014.



NOMADA, Carrascal, Cordoba, Argentina, 2018



Pool Leber Architekten, Villa L, Gräfelfing, Germany, 2020







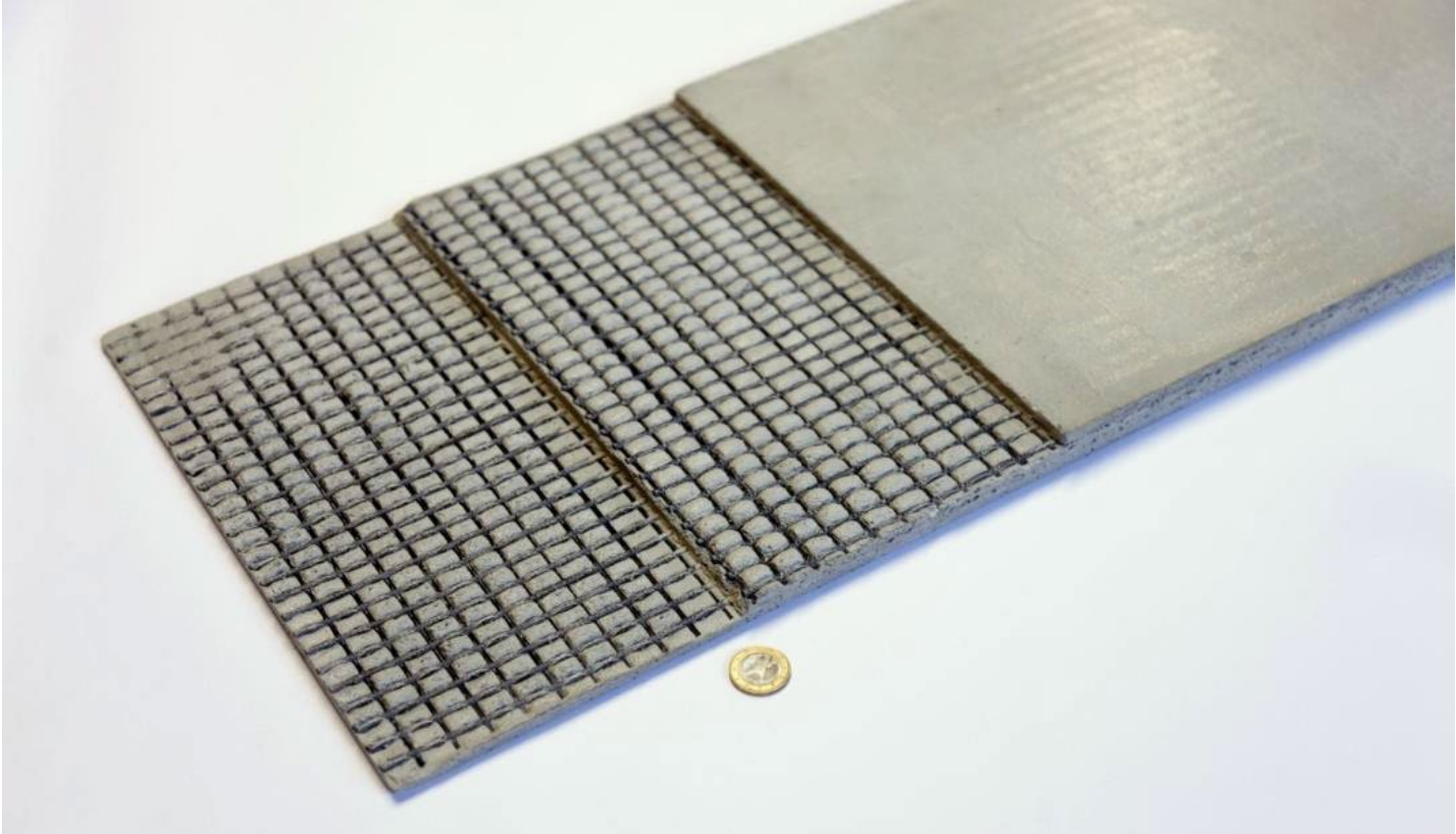
Alvaro Siza and
Carolos Castanheira,
Saya Park,
South Korea, 2021





Carbon concrete «Cube», Dresden University of Technology, 2022





Lake / Flato Architects, House Zero, Austin TX, 2021





PHOTO: REGAN MORTON PHOTOGRAPHY





SANAA, Toledo Museum of Art, Ohio. 2006



Barozzi Veiga, Philharmonic Hall, Szczecin, Poland, 2014



Corrugated metal shed, Carbon County, Utah



Ai Weiwei & HHF Architects, Tsai Residence, Ancram, NY, 2008

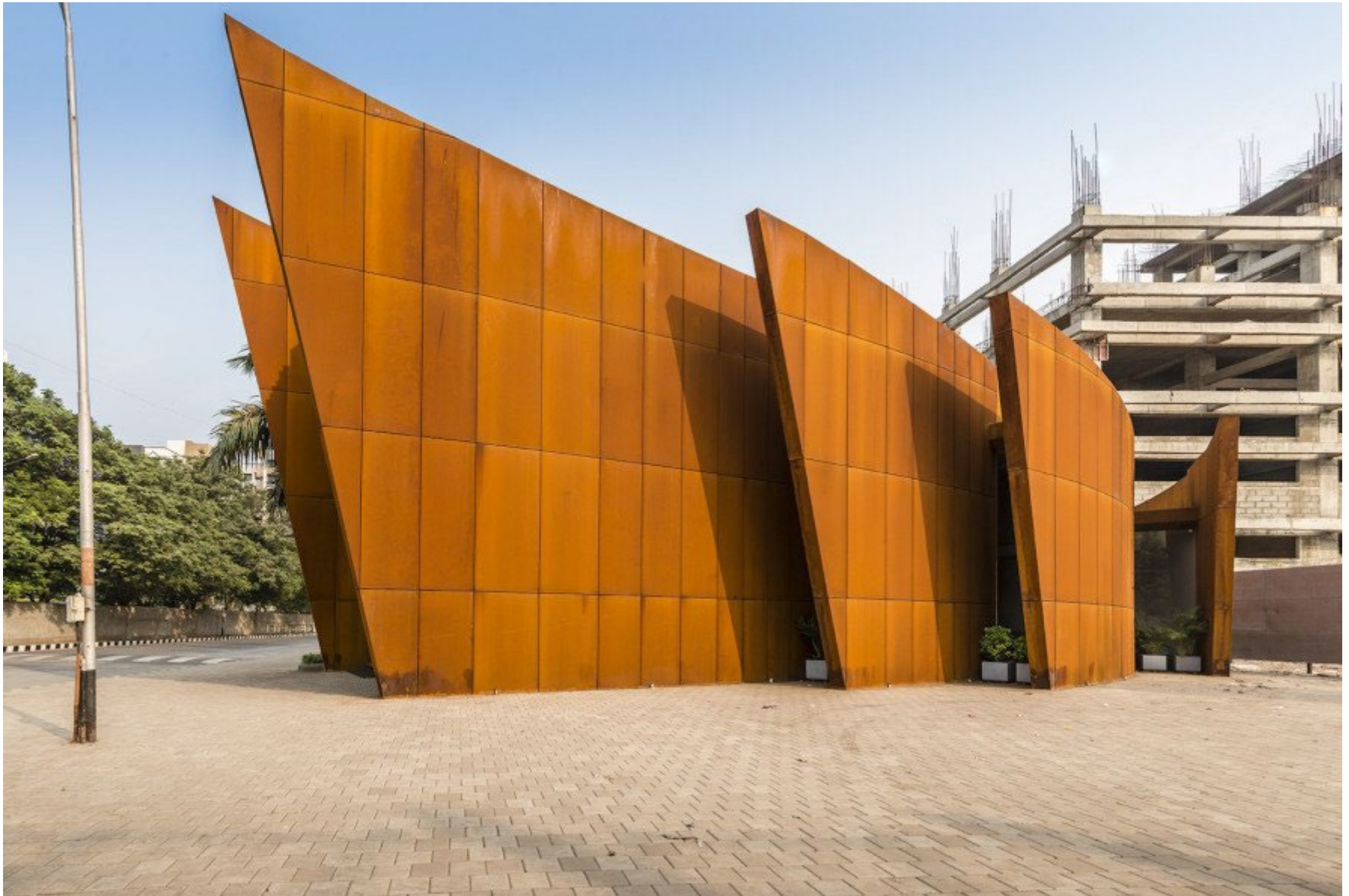




Frank Gehry, Walt Disney Concert Hall, Los Angeles, 2003



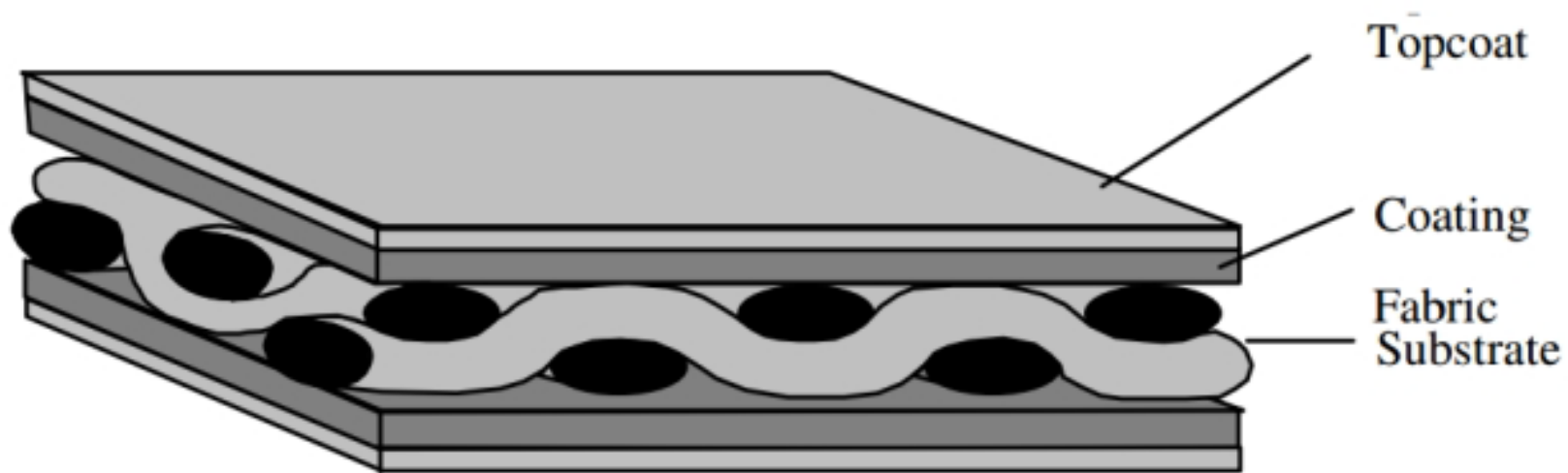
Sanjay Puri Architects, The Crescent, Surat, India, 2015





Zaha Hadid, Serpentine Sackler Gallery, London, 2013





Soundforms, Outdoor performance shell, San Diego, 2021



Moomoo Architects, L House, Lodz, Poland, 2008





Diller and Scofidio, The Shed, New York, 2019



David Coleman, Zig Zag House, Yarrow Point, WA, 2011







Herzog & de Meuron, Ai Weiwei, Serpentine Gallery Pavilion, 2012





Multitude Studio, Cork Haven, South Salem, NY, 2020





White Lake Architects, Soft Corner Pavilion, Nikola-Lenivets, Russia, 2021





Ross-Barney Architects, College of Engineering, University of Minnesota, Duluth, 2010.



Centerbrook architects, Casa Ambar, Cabo San Lucas, Mexico, 2017



Proconcept, Office Building, Sopot, Poland, 2021



HEIMA Architects, Pool House, Vilnius, 2021



WT Architecture, The White House, Isle of Coll, Scotland, 2011





Desypri&Misiaris Architecture, Monolith House, Mani Peninsula, Greece, 2021









EZ Studio, Mid-ridge Villa, Ghahderijan, Iran, 2021







Skull Studio, Wall revitalization, Prague, 2020



ECONcrete, Israel, 2012





YoYo Bureau, Supermetall Offices, Moscow, 2022





Hudson Architects, Coast House, Norfolk, UK, 2022





Benn & Penna, Colo Crossings House, Lower Portland, Australia





Anselm Kiefer, The Seven Heavenly Palaces, Barjac, France, 2012



Gijs Van Vaerenbergh, Waterline Monument, Utrecht, 2022



Ulf Mejergren, Art School, Tulum, Mexico, 2019



Bureau SLA, People's Pavilion, Eindhoven, 2017



John Ronan, Kaplan Institute, IIT, Chicago, 2018



Neumann Monson, Cascade High School, Iowa, 2014



Effekt, Streetmekka Viborg, Denmark, 2018

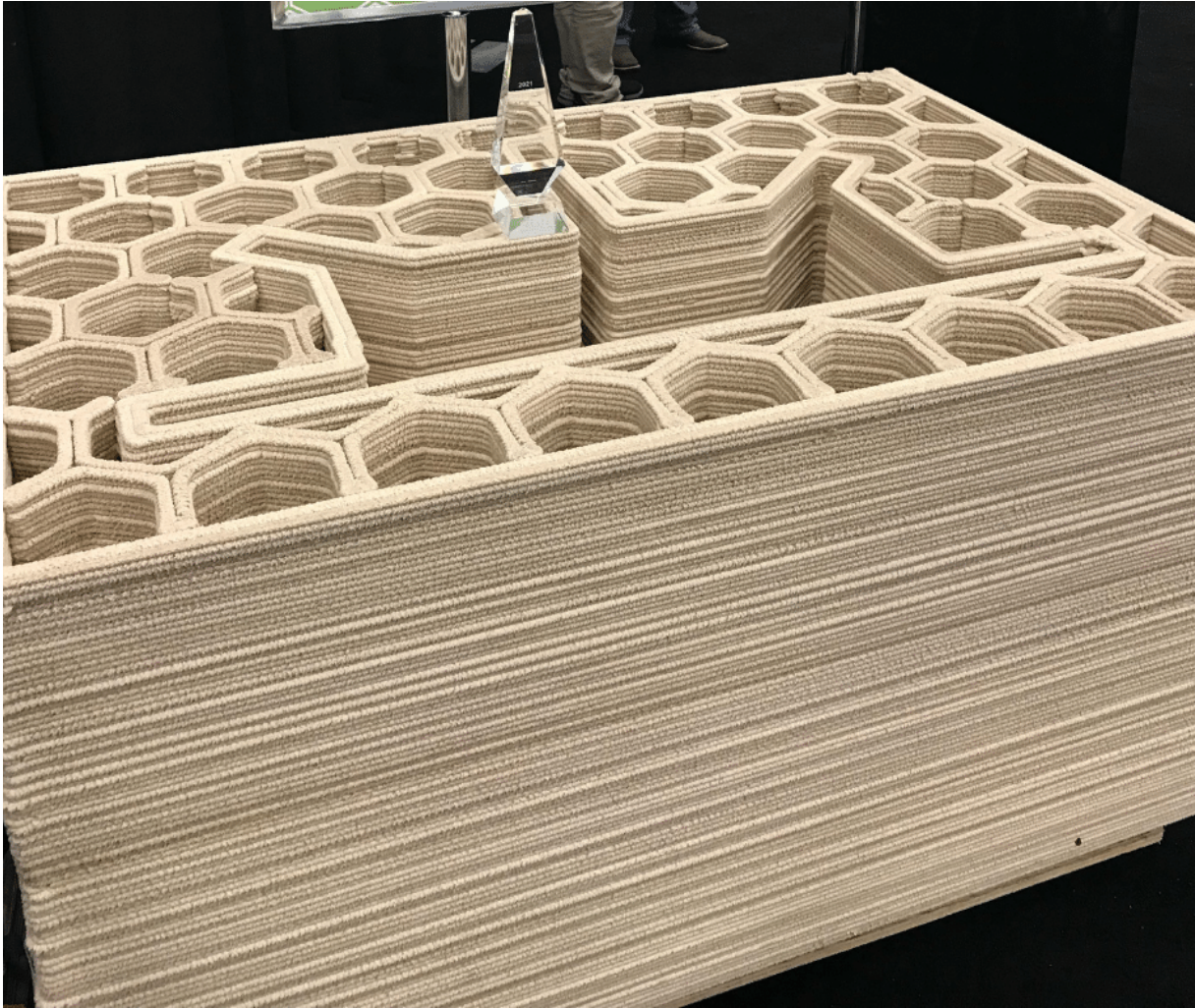


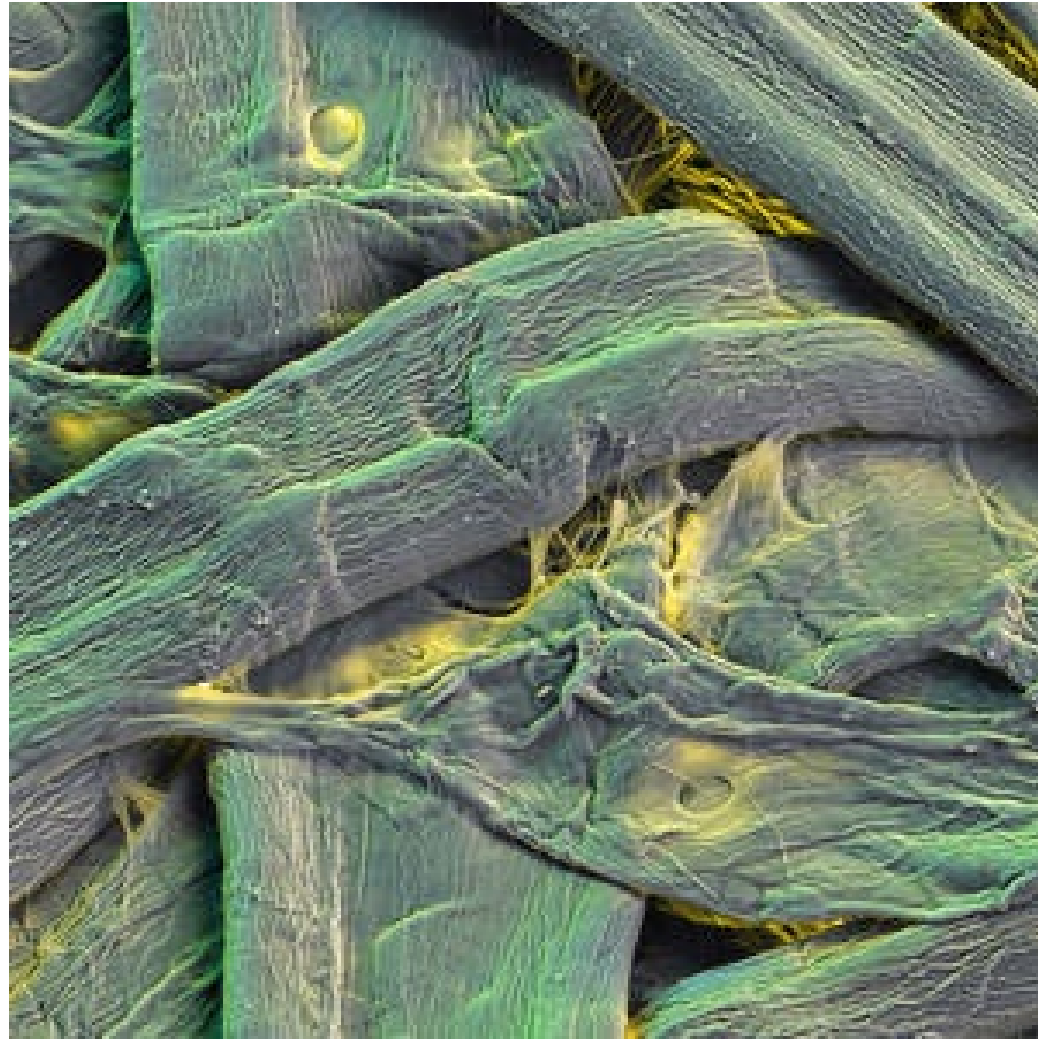
ICON 3D printed houses, Austin TX, 2020





University of Maine 3D printed composite





Waterloo University HIVE Project, 3D printed masonry wall, 2021



Joris Verhoeven Architectuur, Silky Black House, Berkel-Enschot, Netherlands, 2021.



