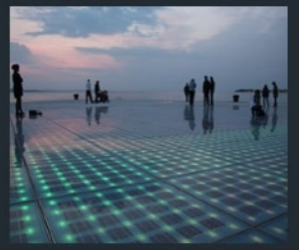


THE ULTIMATE LEVEL OF CUSTOM-MADE SOLAR PANELS

Master Energy

GREECE - CYPRUS

The Building Façade of the Future: Energy-Generating and Aesthetic

A VINCI GROUP COMPANY

ERTEX SOLAR

AUSTRIA

THE PIONEER & WORLD LEADER IN BUILDING INTEGRATED PHOTOVOLTAICS (BIPV) SINCE 2004

VINCI GROUP

FRANCE

294,000 EMPLOYEES WORLDWIDE

373,100 WORKSITES

7,000 LOCATIONS

€7 BILLION IN FREE CASH FLOW

€74.6 BILLION IN REVENUE

+120 COUNTRIES

A WORLD LEADER IN CONCESSIONS, ENERGY AND CONSTRUCTION SINCE 1899

Roofing

Balconies

Sky Lights

Spandrels

Brises Soleil

Ventilated Facades

Sound Walls

Curtain Walls

Active Building Skins

Walkable Floor

Canopies & Shade House

Ventilated Facades Systems address the challenge of heat loss by integrating external insulation and a ventilated air gap

Energy efficiency meets the design

Experience the perfect symbiosis of functionality and aesthetics. By integrating photovoltaics into an insulating façade, you make a building more energy–independent and also transform it into an outstanding design object.

Facade with future

Solar cells in the building envelope allow the building to generate its electricity and at the same time save heating costs through insulation. In addition by protecting the environment, façades of this type are an important step towards a sustainable energy supply and an investment in the future. With our wide–ranging expertise in the fields of insulating glass and photovoltaics, we are constantly realising exceptional solar projects with insulating façades.

The global building integrated photovoltaics (BIPV) facade market is anticipated to grow significantly from 2024 to 2028, driven by a heightened focus on sustainability, renewable energy, energy efficiency, and cost savings.

BIPV facades, which incorporate solar panels directly into building exteriors, represent an innovative technology that has the potential to change how energy is generated and used in urban settings.

Colour design options

Our solutions consist of laminated safety glass into which photovoltaic elements are integrated. They fulfil the same standards as laminated safety glass in the construction industry and can, therefore, be integrated into any surface of the building envelope. The realisation of coloured variants is achieved by using coloured cells, coloured films, coloured or printed glass.

By integrating Solar Modules, the Façade is used not only for Protection, but also for Energy Generation

the world's only handmade solar panels

More than **70** years in the Glass Industry

More than **22** years of creating Unique Solar Panels

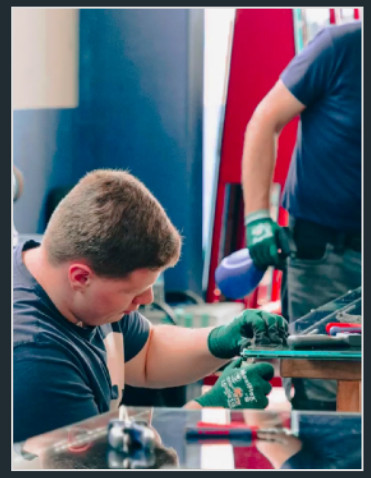
More than **3.000** Unique Projects Worldwide

5,100 x 2,440 mm

is a World Record in the Solar Module Sector

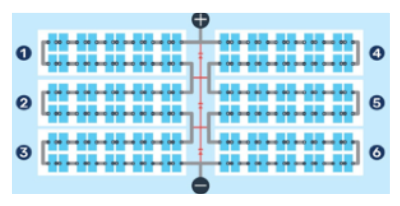
a new custom–made
lamination production line
for manufacturing the world's only
handcrafted solar panels

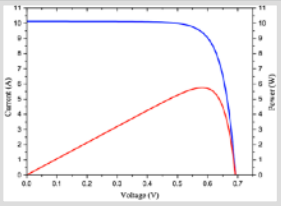
MADE IN AUSTRIA

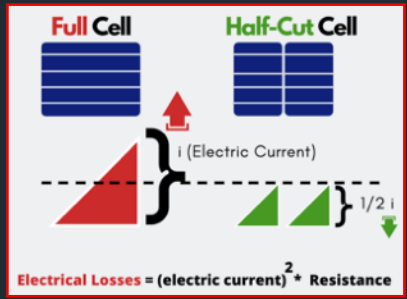


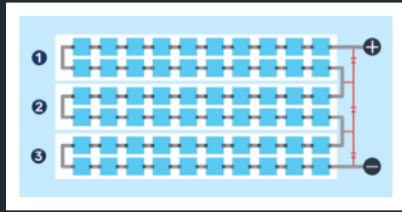
Quality & Innovation Awards

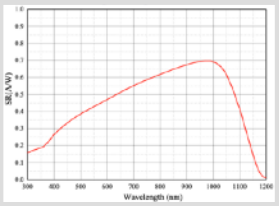
MADE IN AUSTRIA











Efficiency(%)	Pmpp(Wp)	Umpp(V)	Impp(A)	Uoc(V)	Isc(A)	FF(%)
24.90-25.00	6.87	0.606	11.331	0.709	11.832	81.85

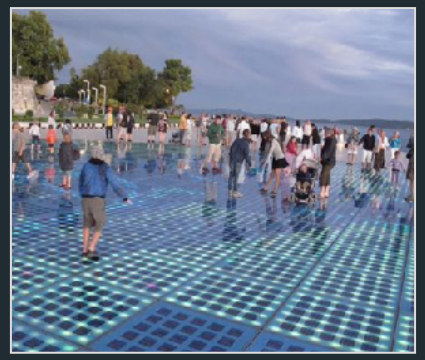
Voc.Temp.Coef.	-0.268%/K
Isc.Temp.Coef.	+0.042%/K
Pm.Temp.Coef.	-0.3%/K

Half-Cut new tech Monocrystalline Cells with ultimate performance, up to 20 busbars

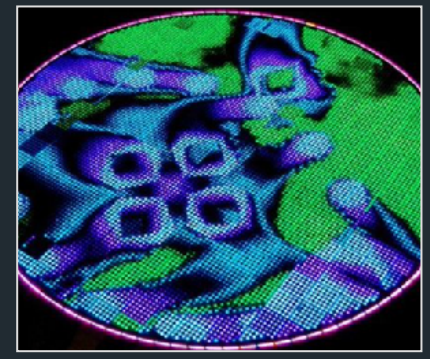
- Reduced Resistance: By halving the current flowing through each cell, resistive power losses are significantly reduced, as the power loss is proportional to the square of the current ($P = I^2R$).
- Increased Efficiency: Less resistance leads to less energy wasted as heat, allowing more electricity to be captured and utilized, thus boosting the panel's overall efficiency.
- Improved Shading Tolerance: The panel's wiring is divided into two separate halves, connected in parallel. This design allows the other half to continue generating power even if one half is shaded, preventing a complete drop in output.
- Enhanced Durability: The reduced mechanical stress on smaller, half-cut cells can decrease the likelihood of micro-cracks developing, which can damage the panel over time.

Excellent power generation performance Ultimate conversion efficiency and reliability

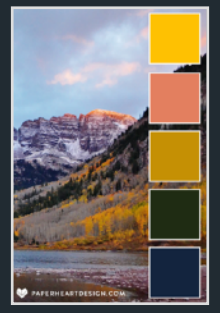
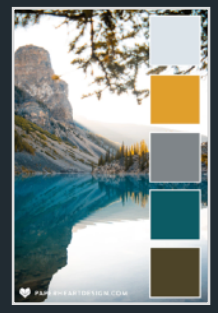
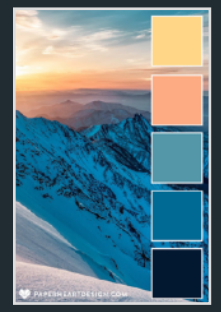
art & technology



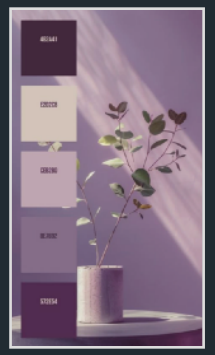
art & technology

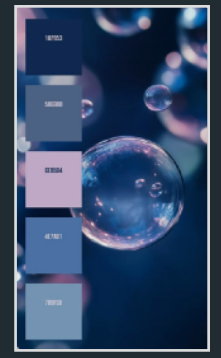




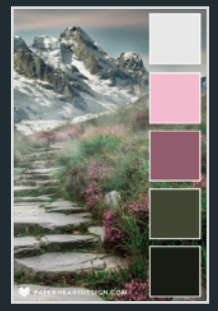
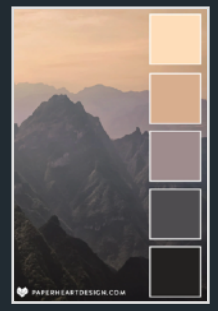
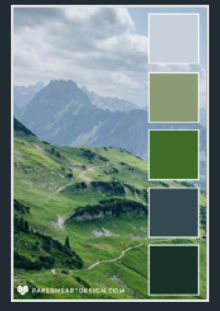




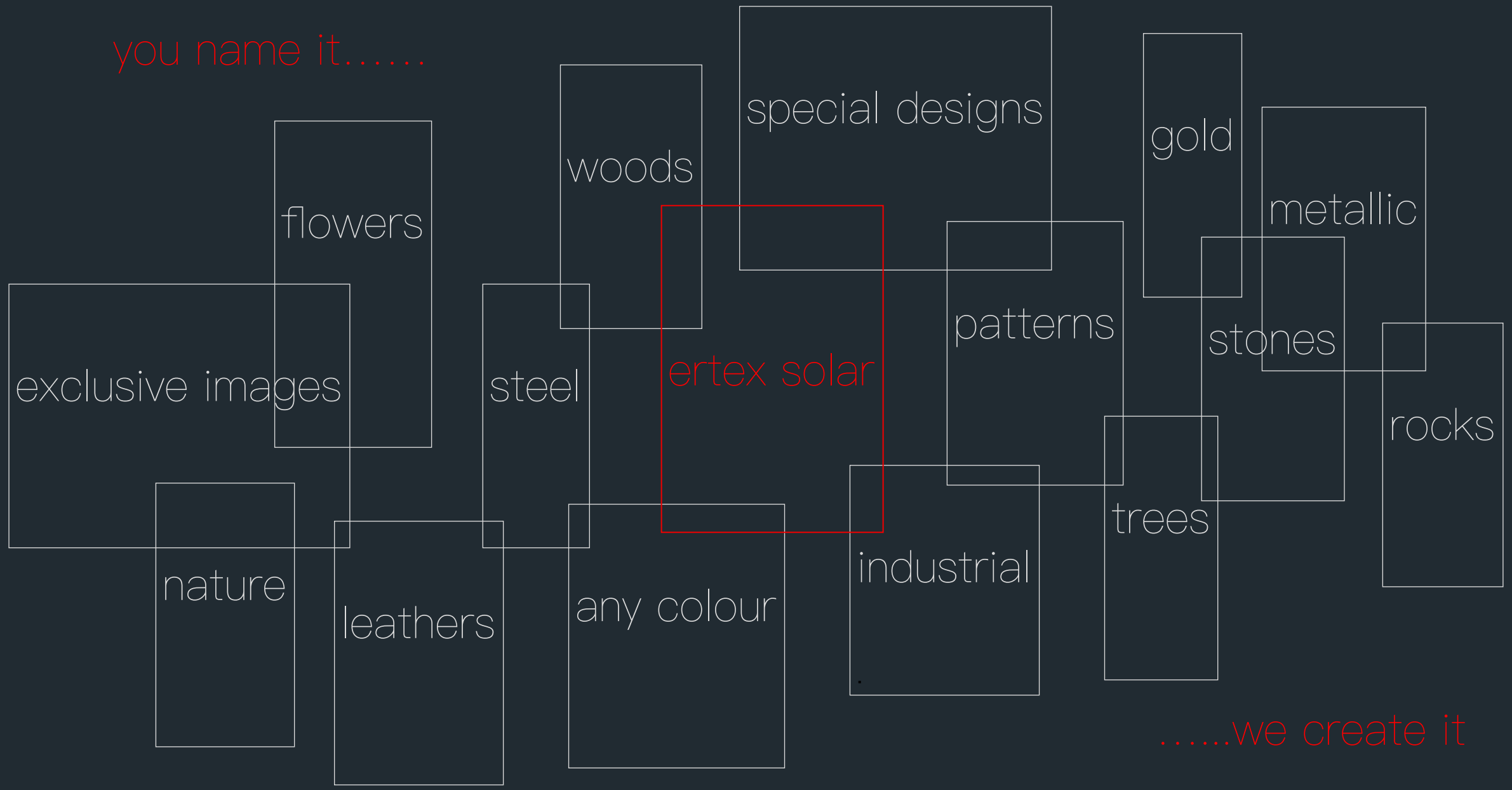
unique range of sizes, surface finishes and different colours



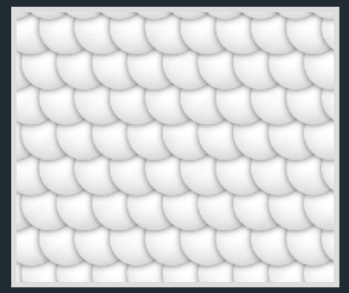
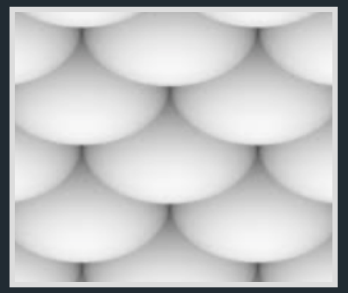
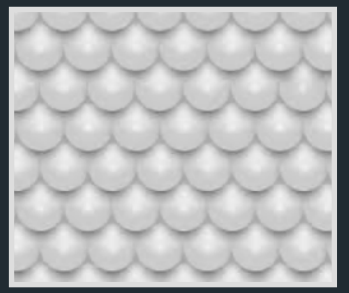
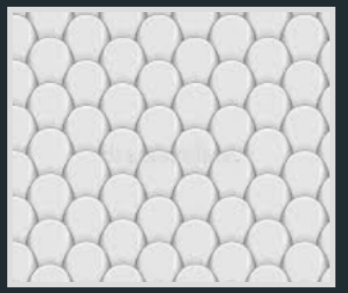



unique colour palettes to meet your architectural challenges

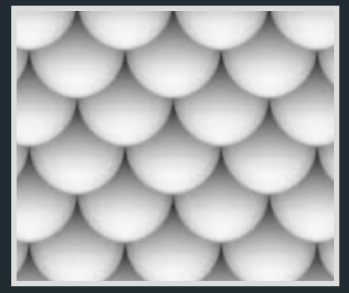
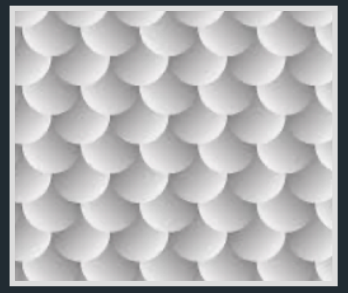
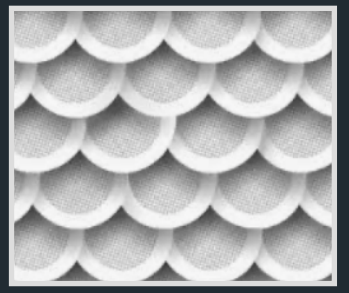
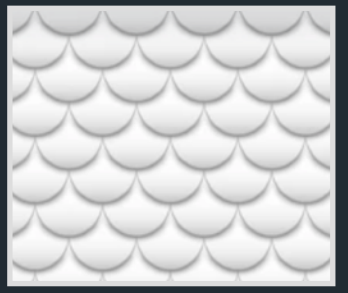




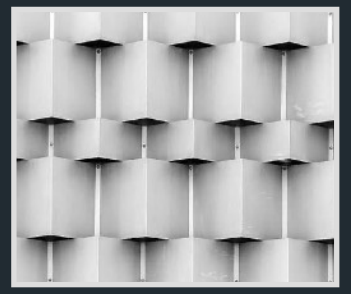
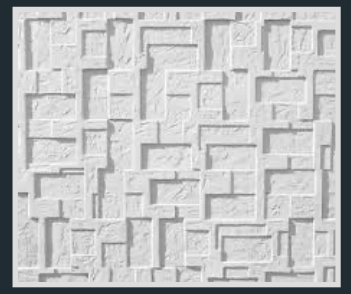
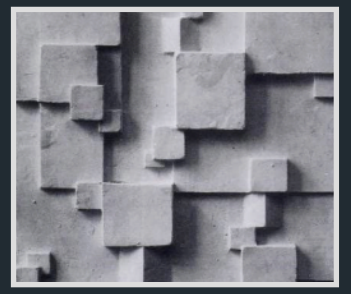

you name it.....
special designs
woods
flowers
gold
metallic
exclusive images
steel
ertex solar
patterns
stones
rocks
nature
leathers
any colour
industrial
trees
.....we create it

here are just a few from our huge range of products and projects worldwide

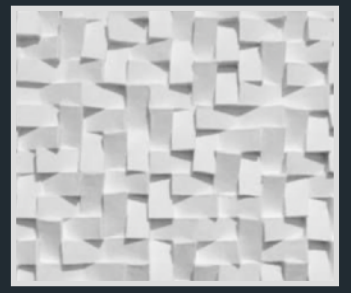
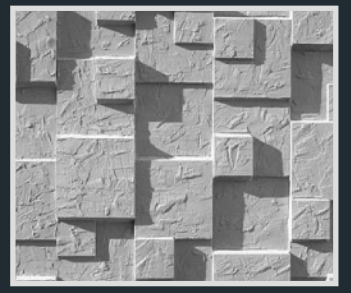
Modern Art Look

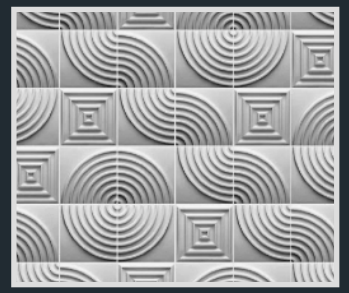
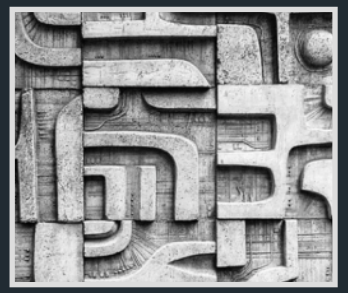
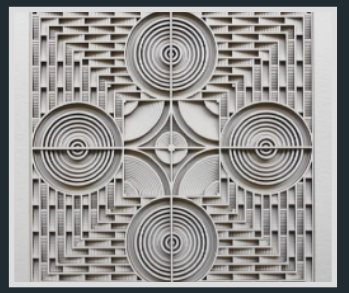
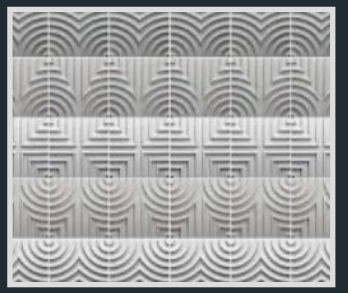





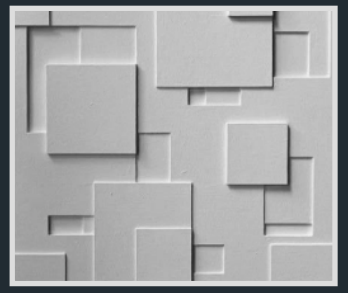

Classic Art Look

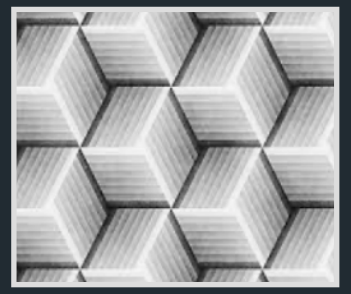
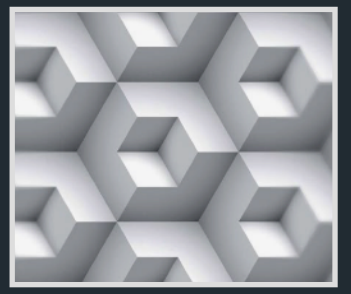
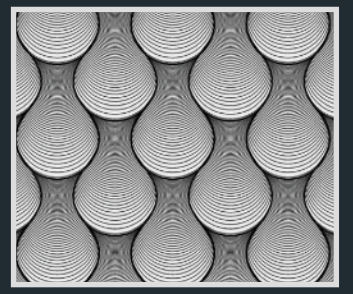
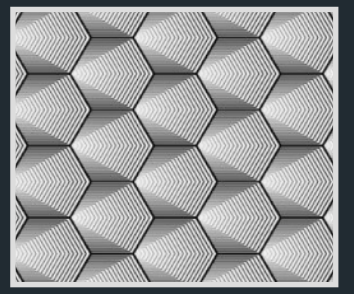


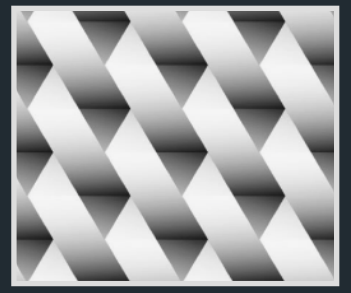
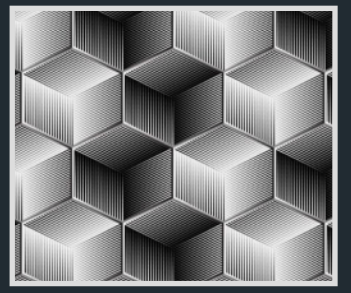
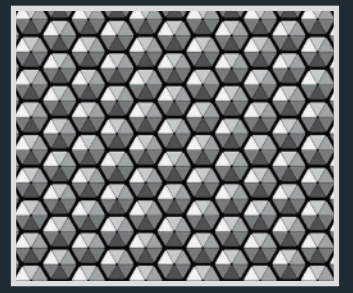
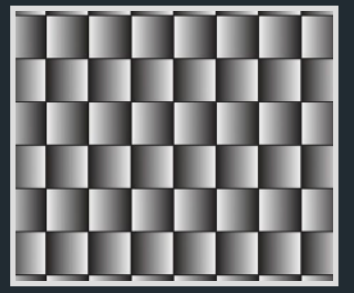





Unique Art Look

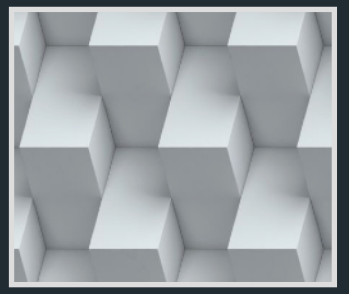



Modern Art Look

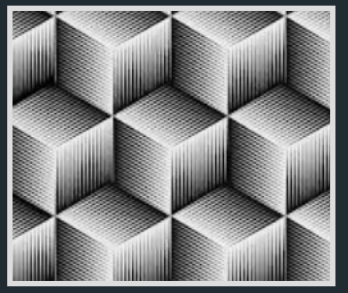





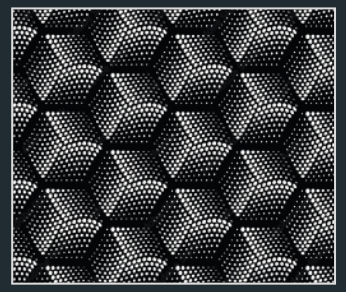
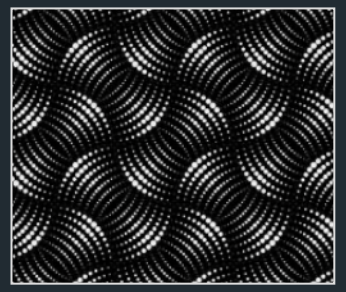
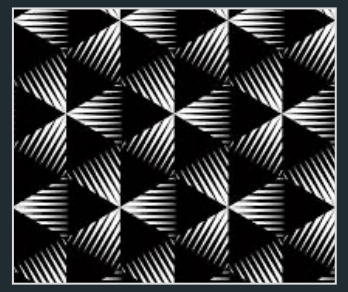
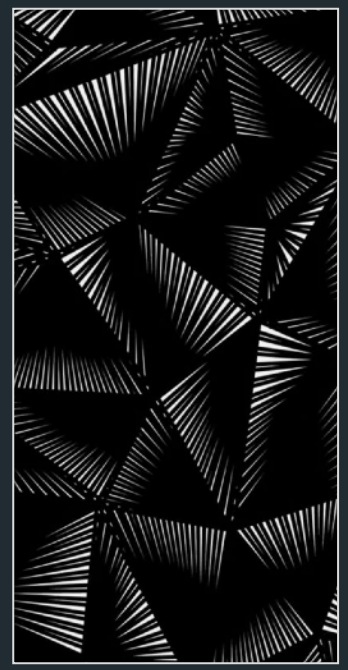




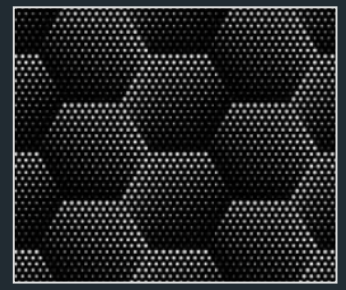
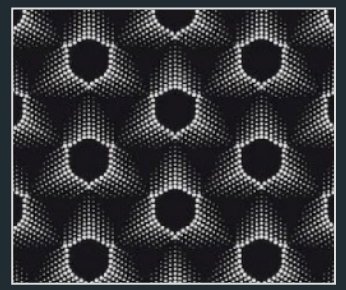
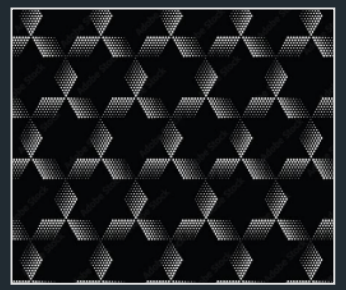

Modern Art Look



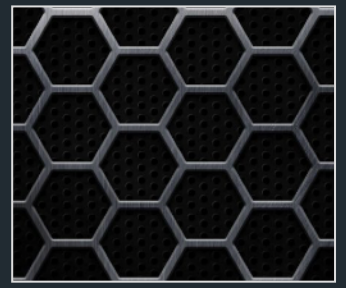



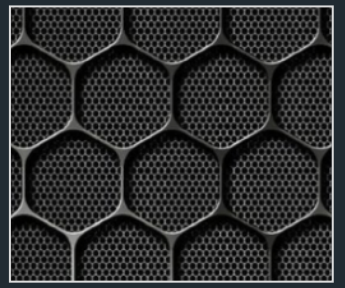
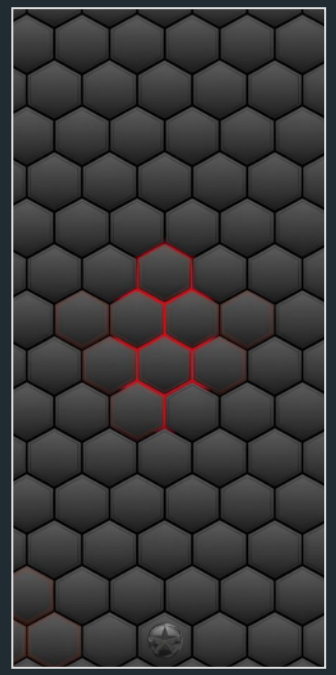






Unique Industrial Look

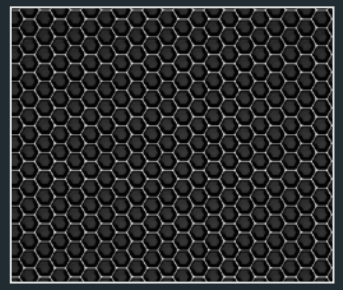




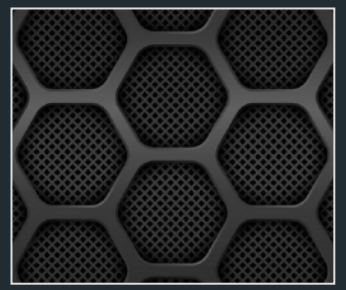
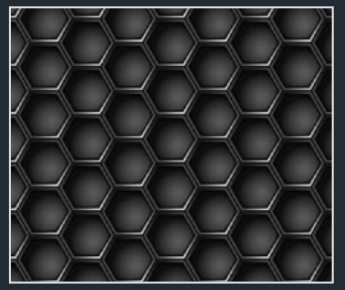


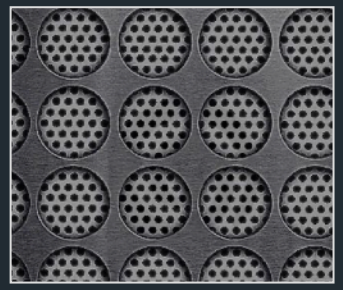
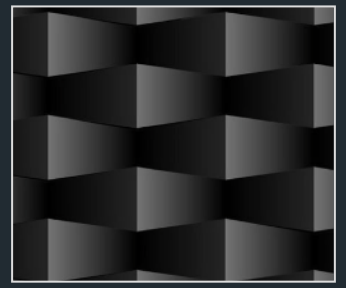
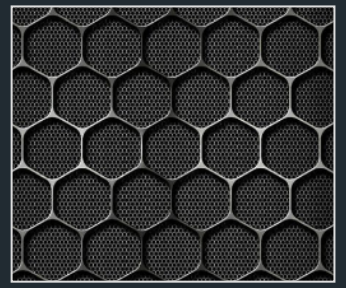
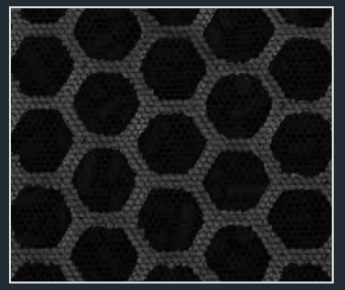
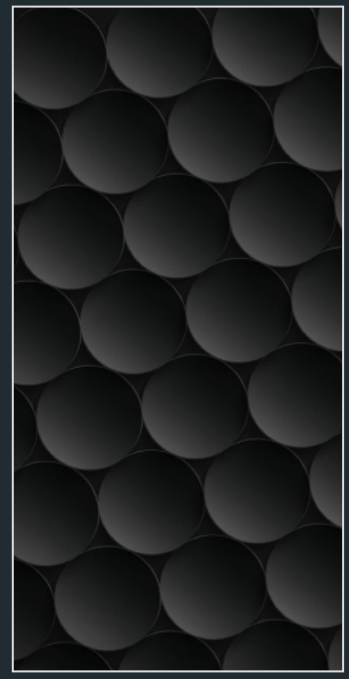


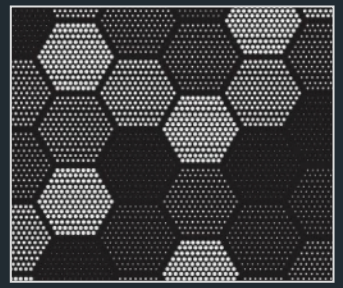
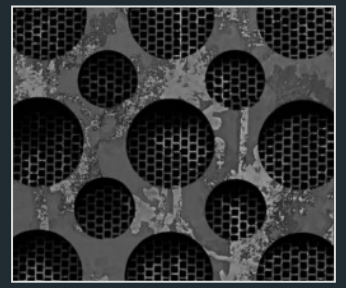
Unique Industrial Look



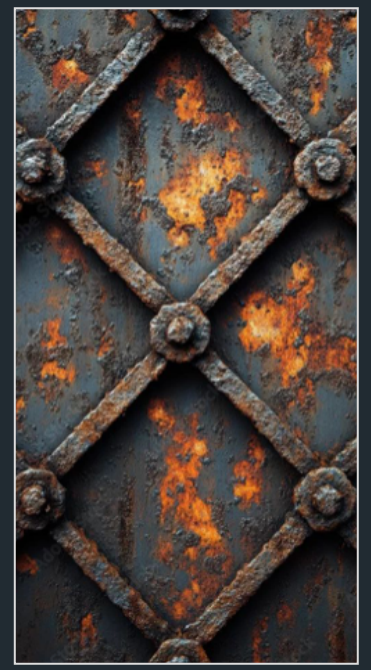






Unique Industrial Look

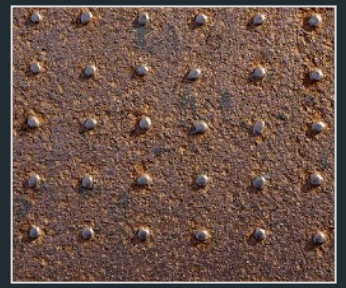







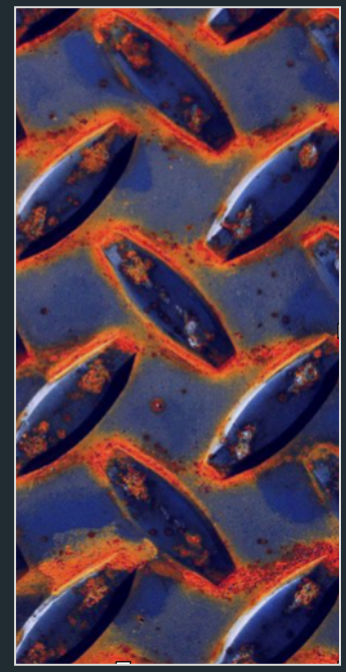


Unique Industrial Art Look

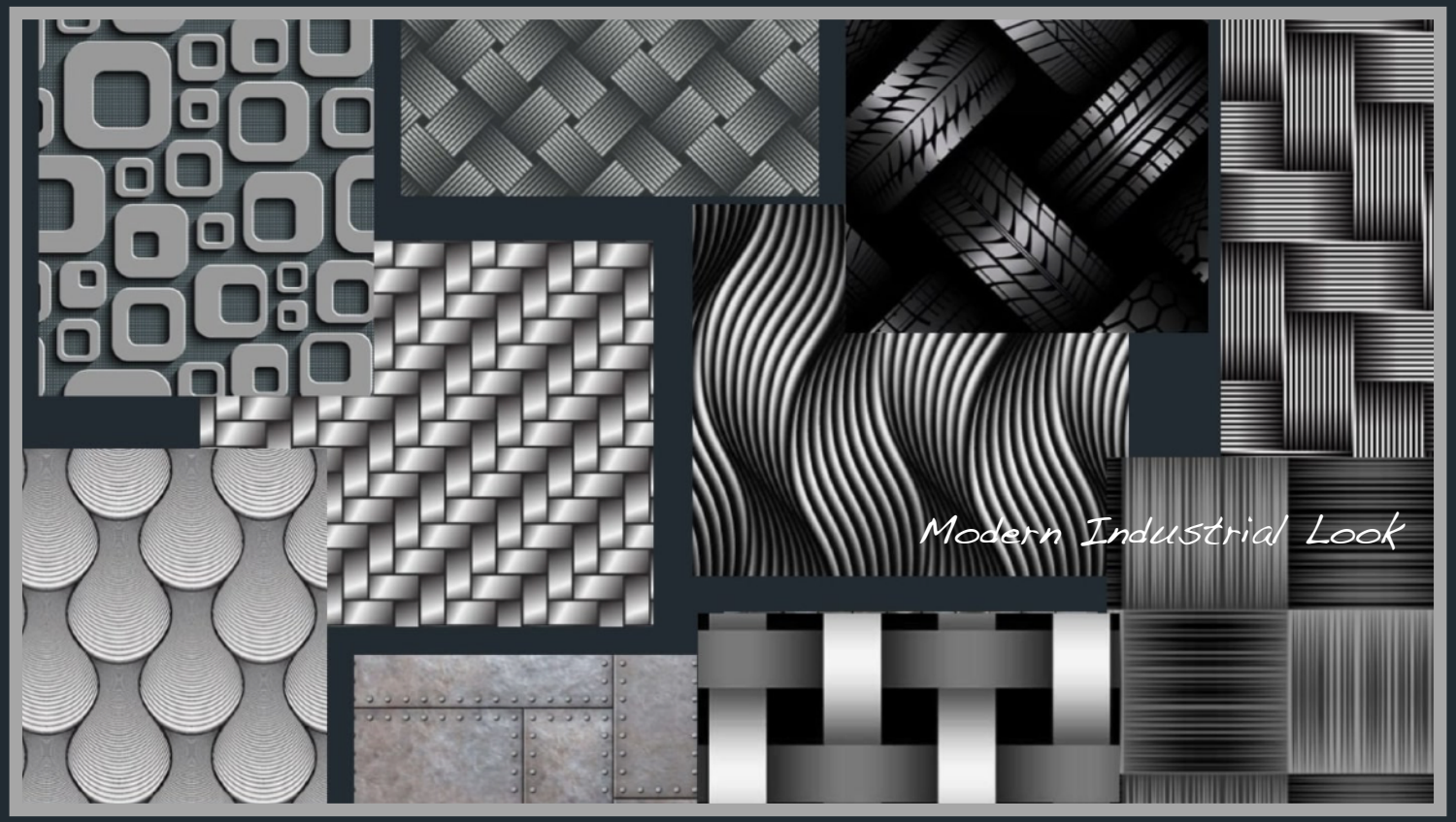


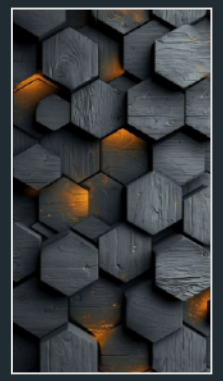


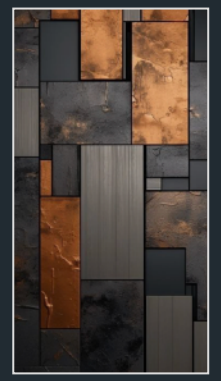


Unique Industrial Art Look

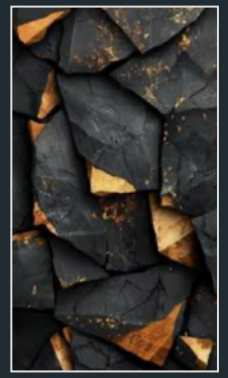


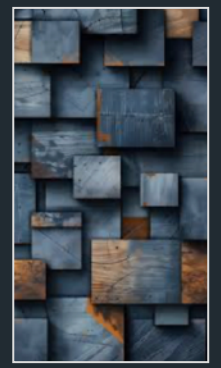


Modern Industrial Look

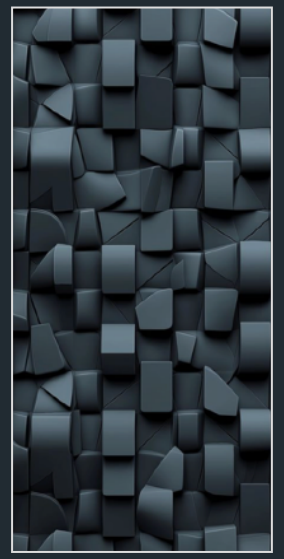


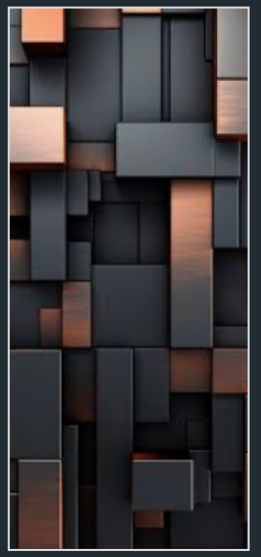


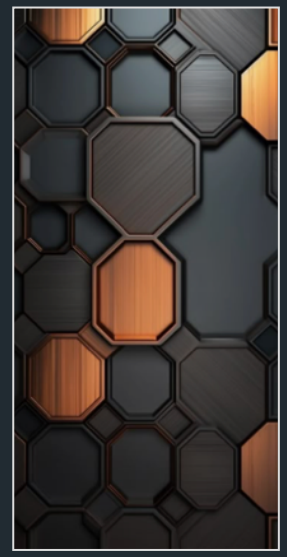
Modern Pattern Look



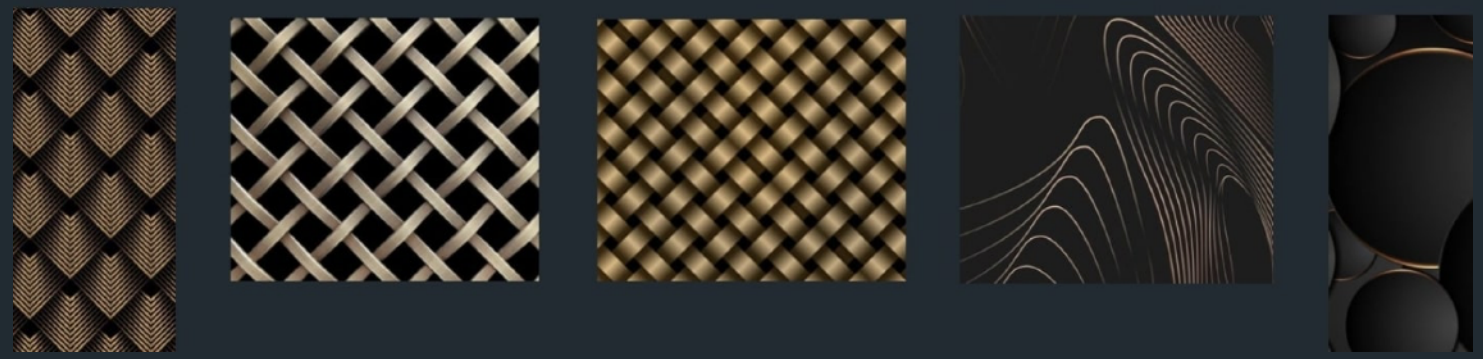


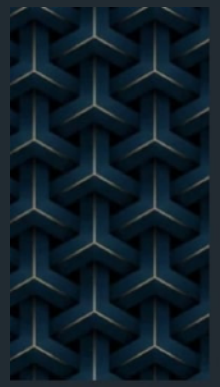


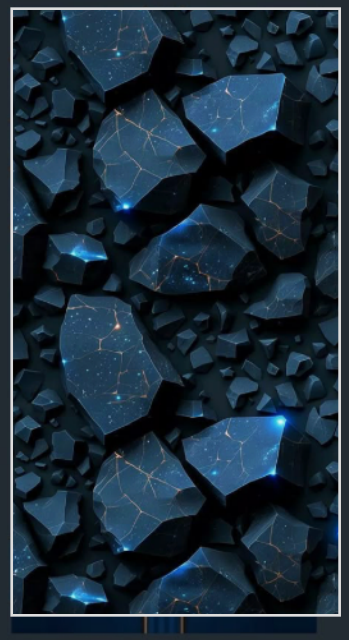


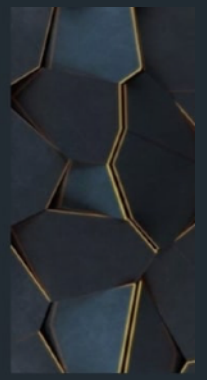


Unique Golden Look

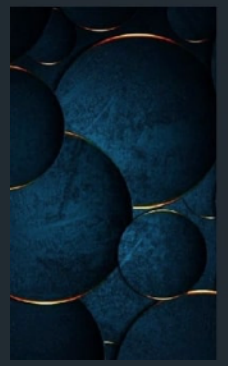
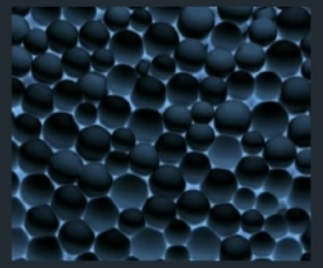


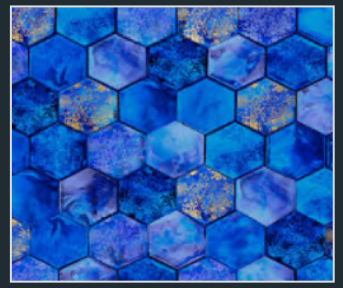
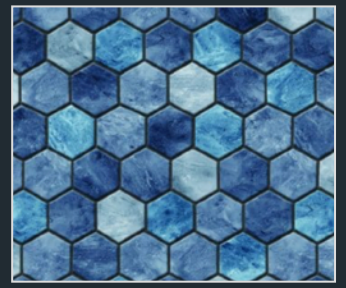






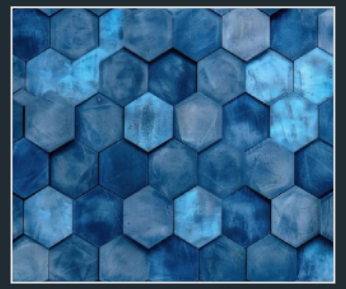
Modern Pattern Look

Modern Art Look

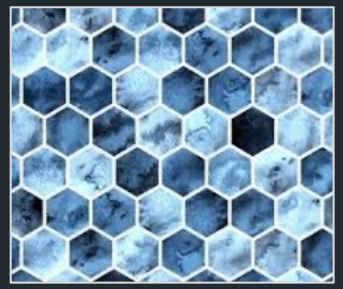


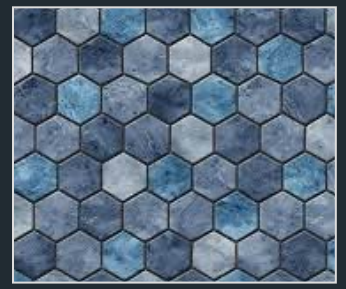


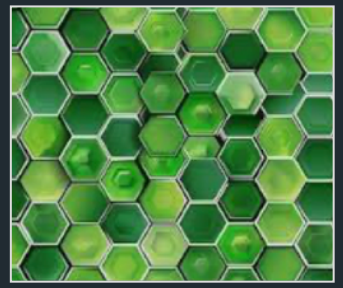
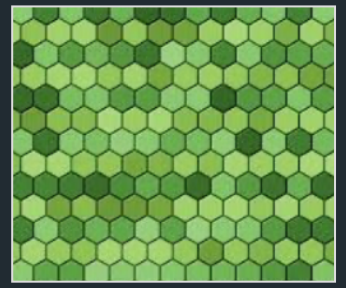
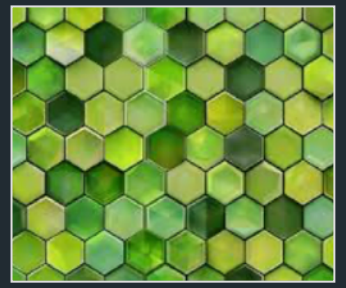
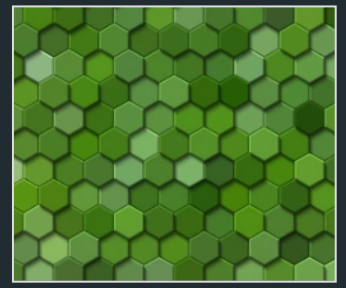




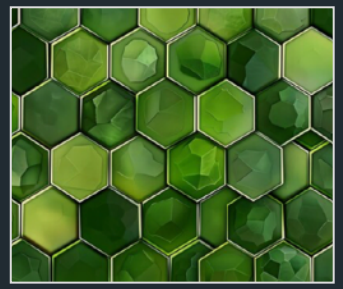
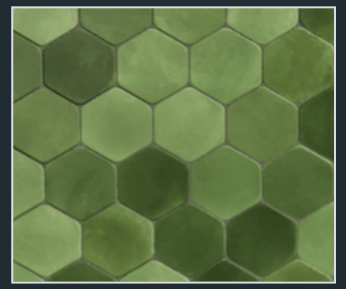
Modern Art Look



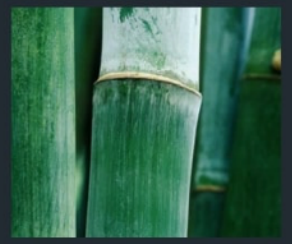



Modern Art Look

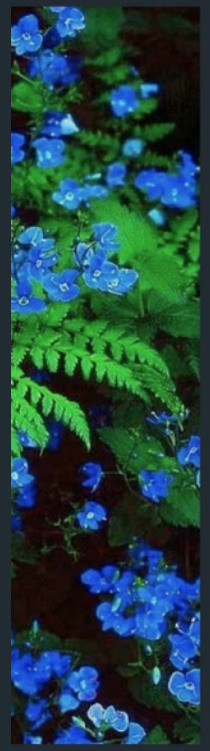
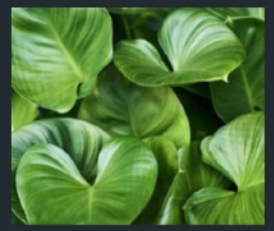
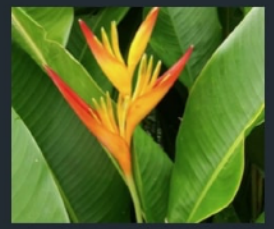







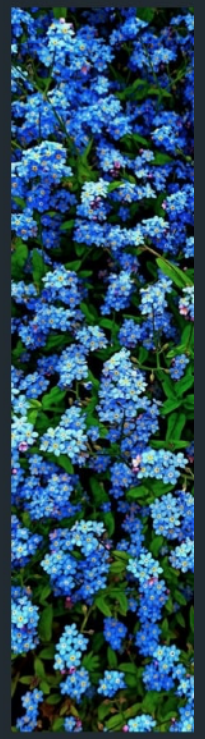

Unique Bamboo Look




Unique Flower Look








Unique Nature Look




Unique Solar Panels
with Natural Wood Look


Natural Wood Look


Unique Solar Panels
with Natural Rock and Stone Look

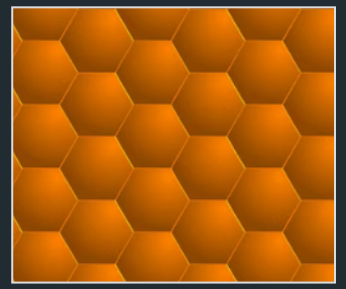

unique marble look


Unique Solar Panels
with Genuine Leather Look


unique marble look

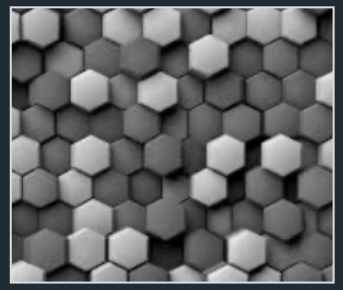


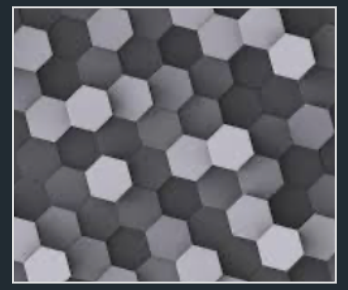

Modern Art Look




Modern Art Look



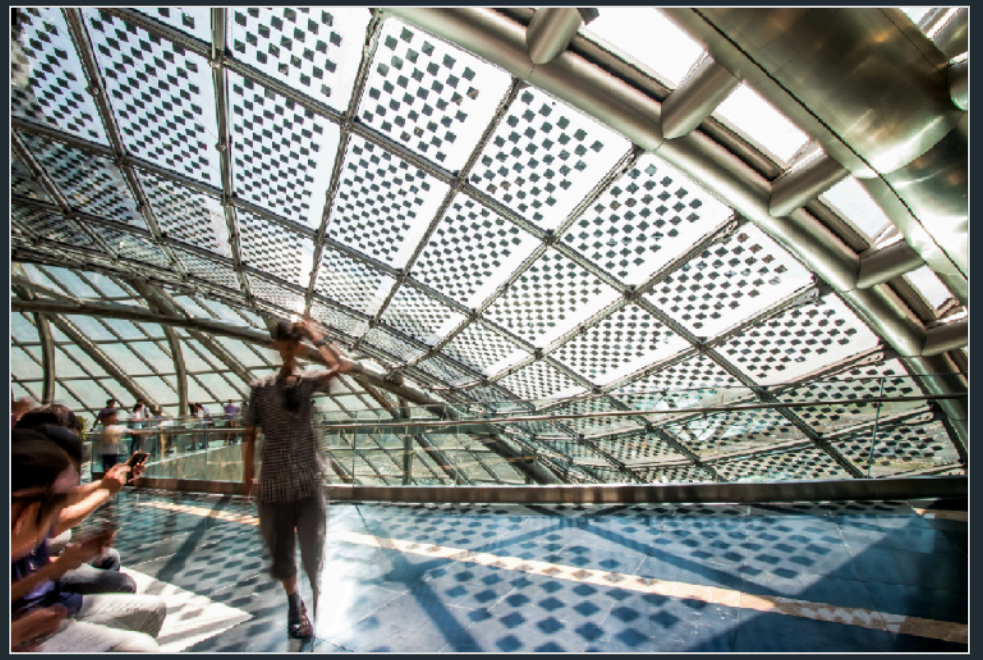



“ the sphere”

Astana Exhibition Center

“ the sphere”

Astana Exhibition Center



2.403 Transparent Panels

by Renzo Piano Building Workshop

Kimbell Art Museum

Dome Amphitheater

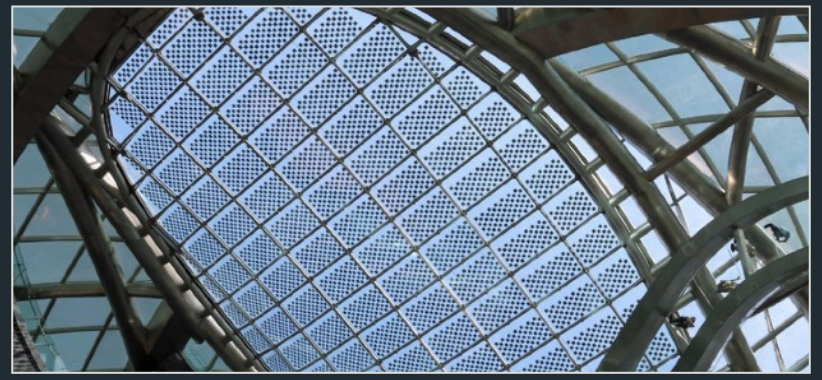
720 Custom-Made Panels

17 different sizes

All in the shape of a trapezium

amphitheater

stadiums
sport centers



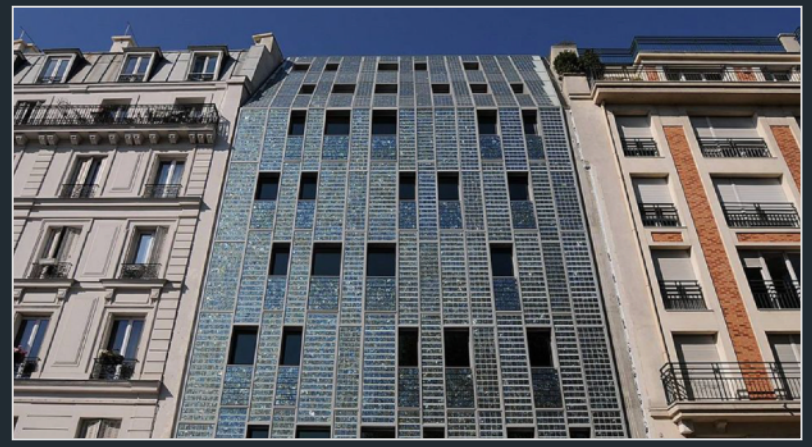
science center

unique facade

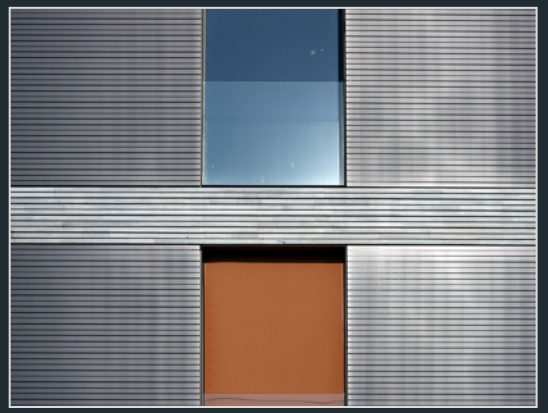
Audi experience center

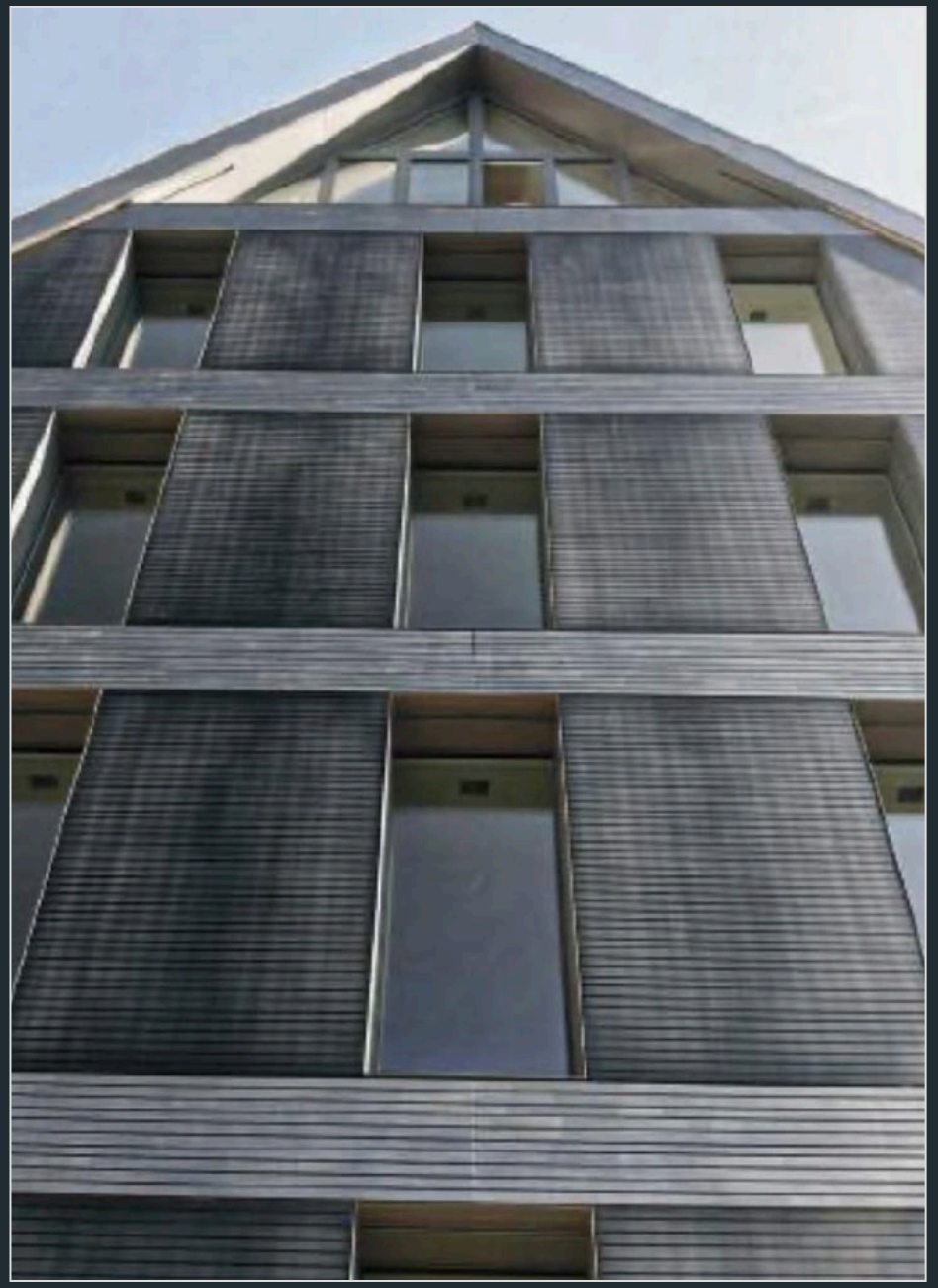
Audi Munich experience center

Emmaus Solidaritet
unique facade installation
Paris – France



Roosli project

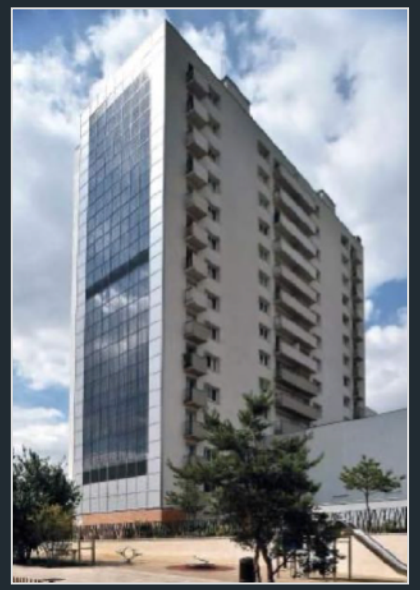


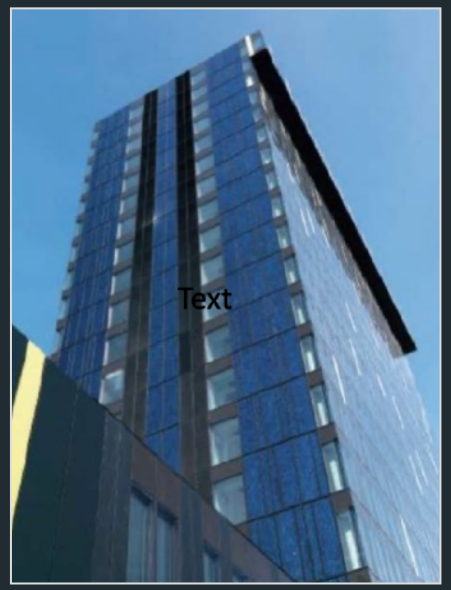


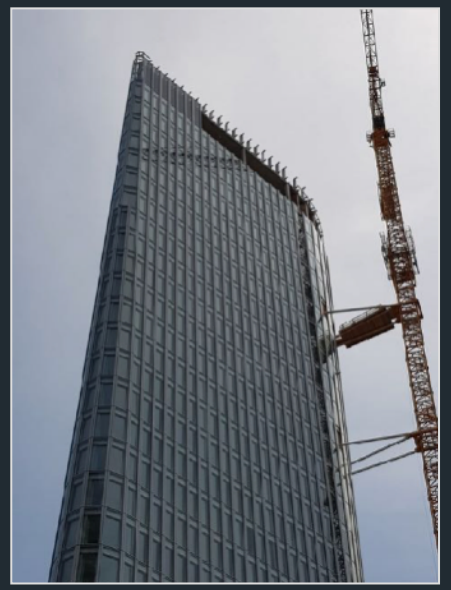
Aesch – Switzerland

unique facade & roof installation

Towers







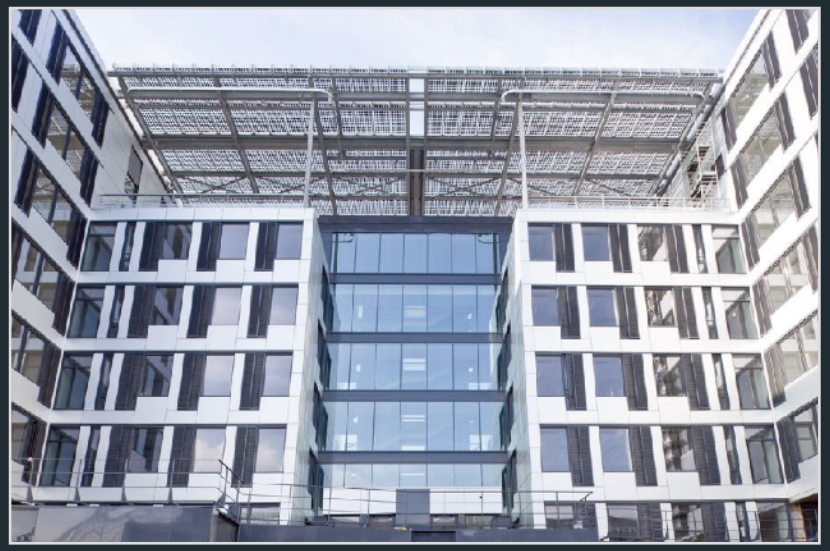
unique projects

unique projects

unique projects

General Hospital Vienna

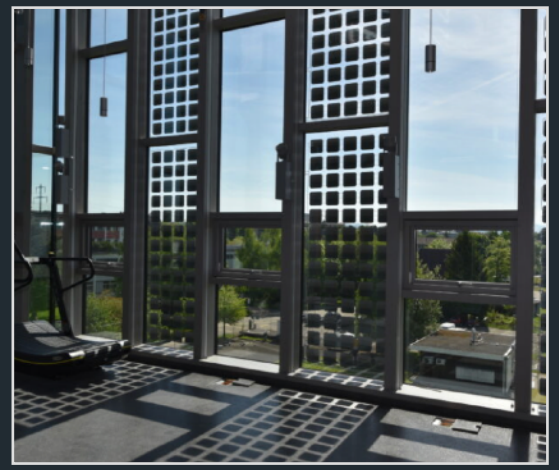
Headquarters
France

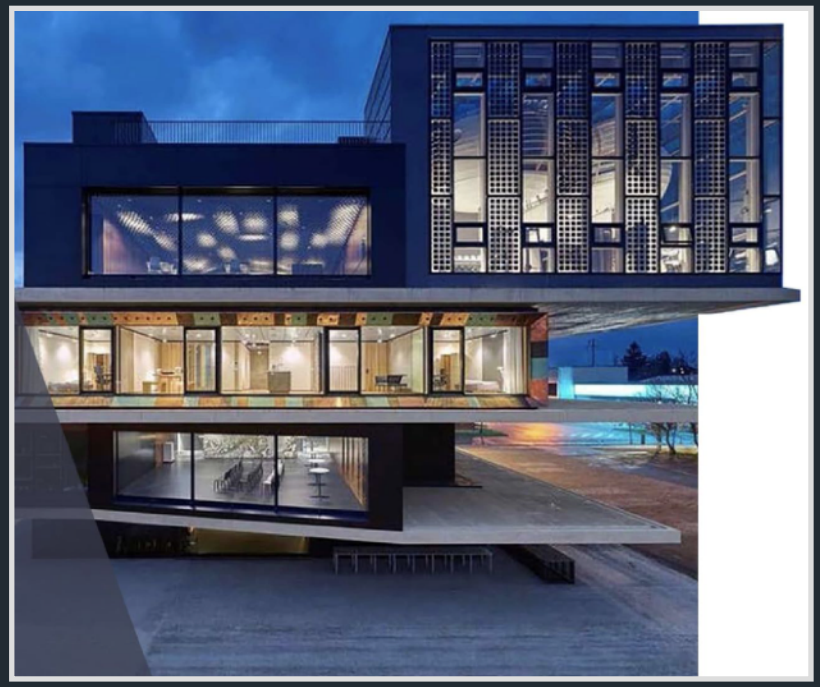


off–grid building

Biessenhofen
Germany

roof & facade installation





Dubendorf

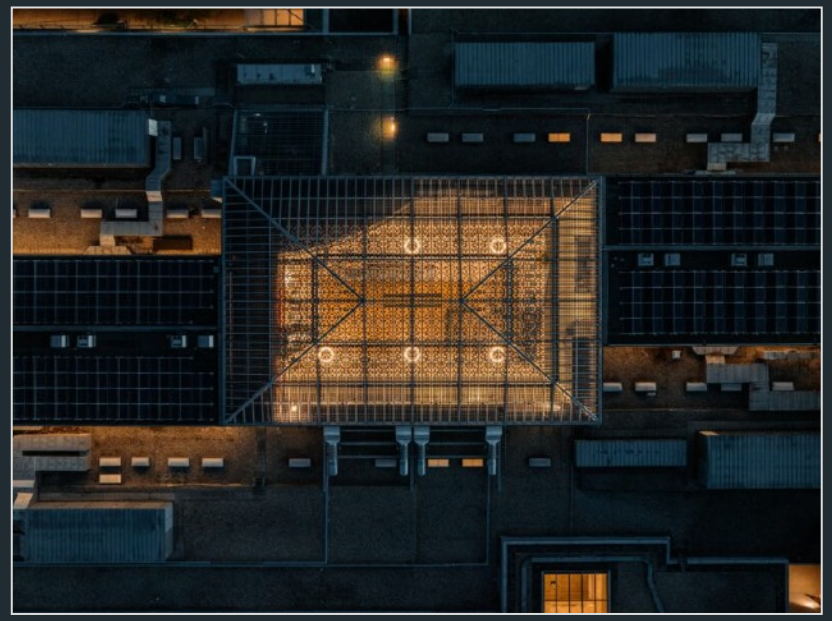
Switzerland

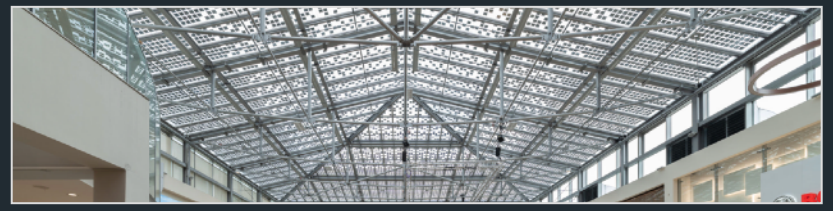
Energiewurfel

Constance – Germany

Pierre Arnaud Foundation

Pierre Arnaud France



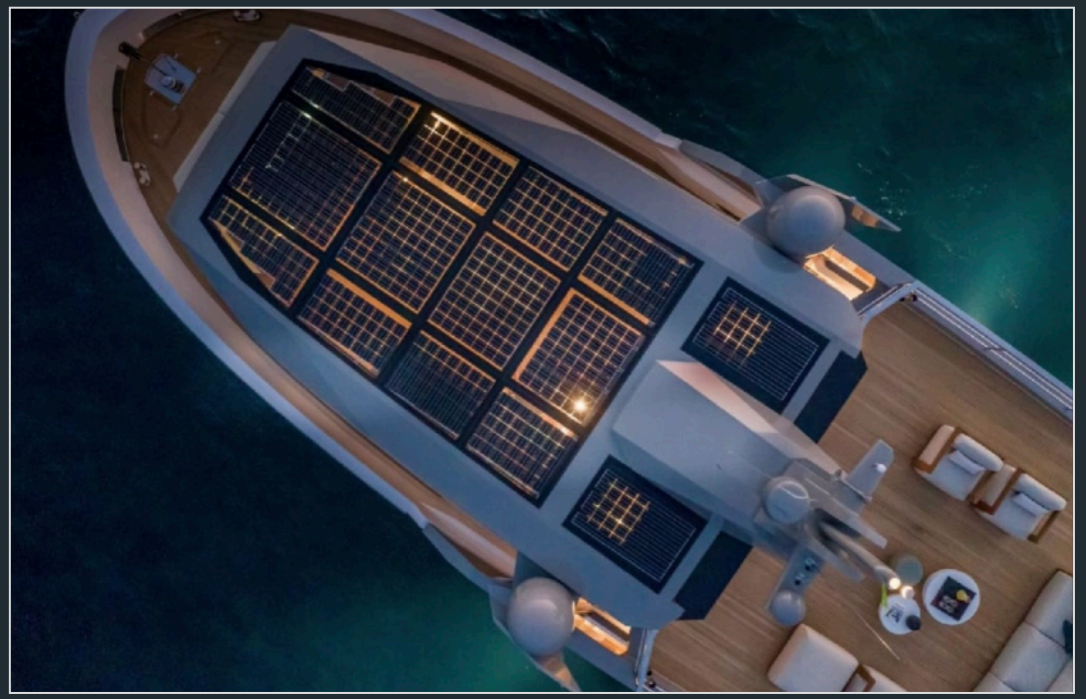


shopping malls
transparent roofs

Marburg
Germany

unique energy project

yachts



yachts

unique cruise ships

on cars

Fronius
solar inverters

facade Empl

Canada

ventilated facades

roof & facade installation

Schweiz

Switzerland

ventilated facades

ventilated facades

Coop Headquarters

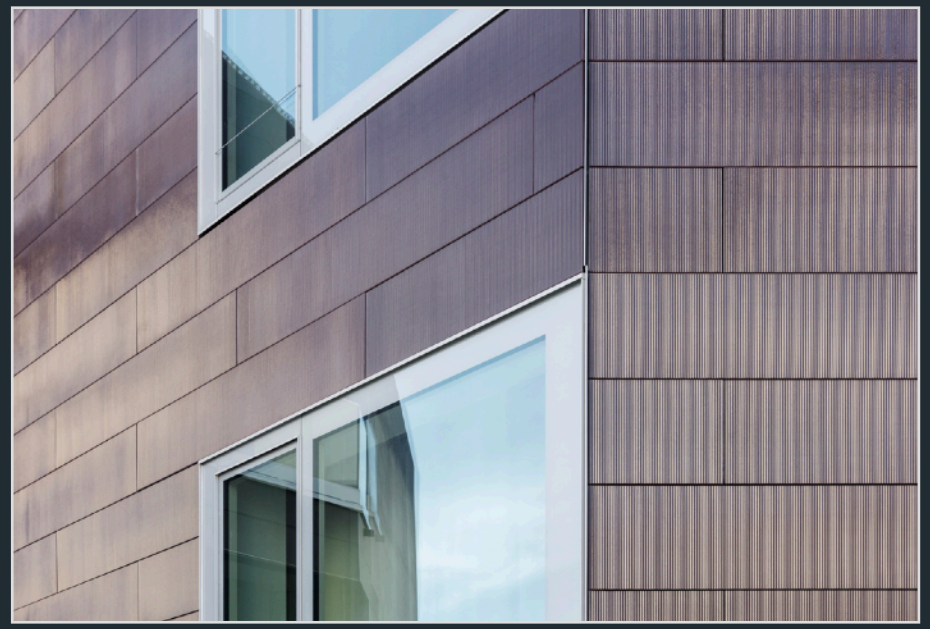
facade & roof

ventilated facades

Solaris

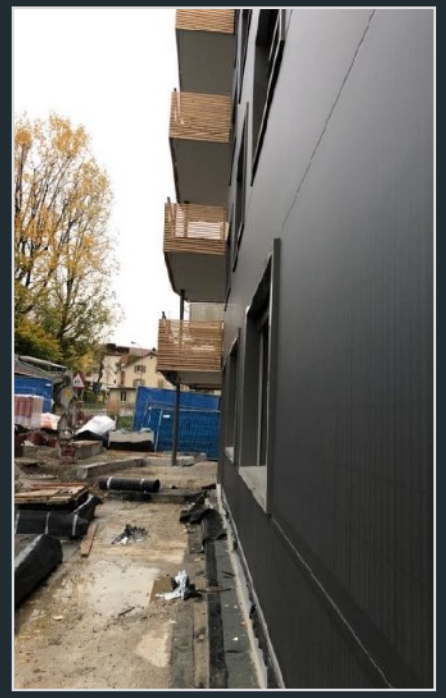
Zurich

Switzerland



zero energy building

ventilated facades



unique facades

Talstrasse
Zurich

Switzerland

ventilated facades

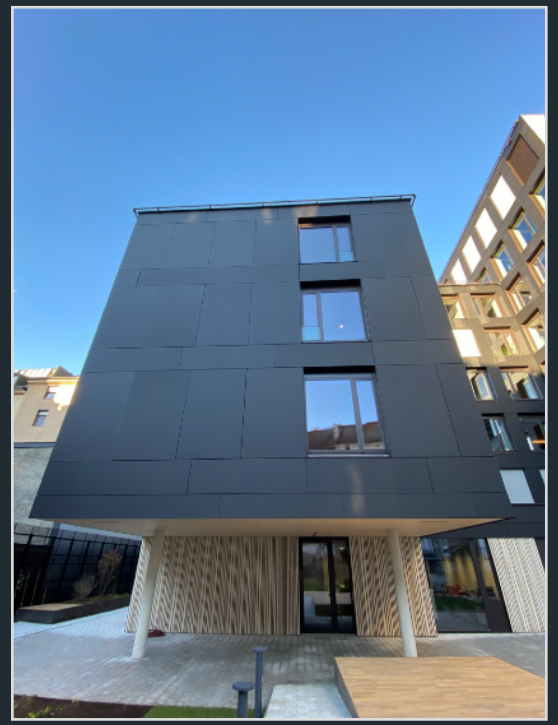
facade – roof

self–sufficient residence

ventilated facades

self–sufficient office building

Tyrol



facades – roof

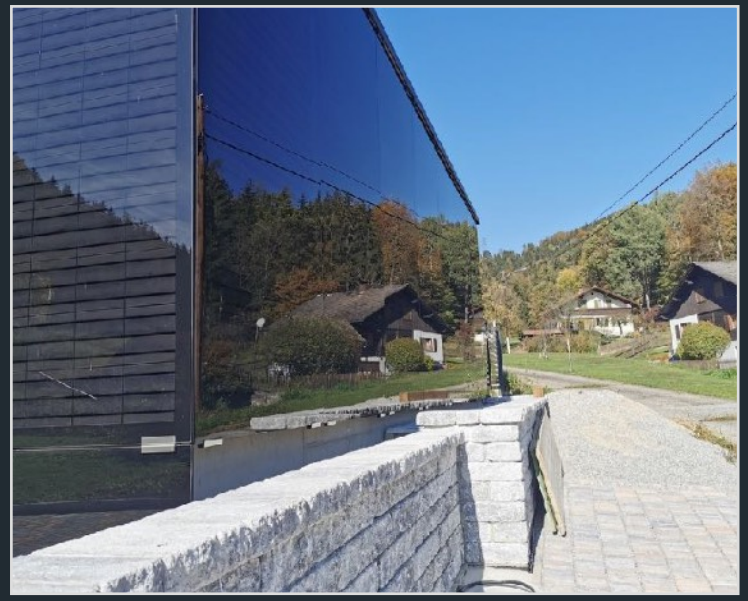
ventilated facades

self–sufficient
residences

Sonnenpark project

ventilated facades

facades
roofs
balconies
storage

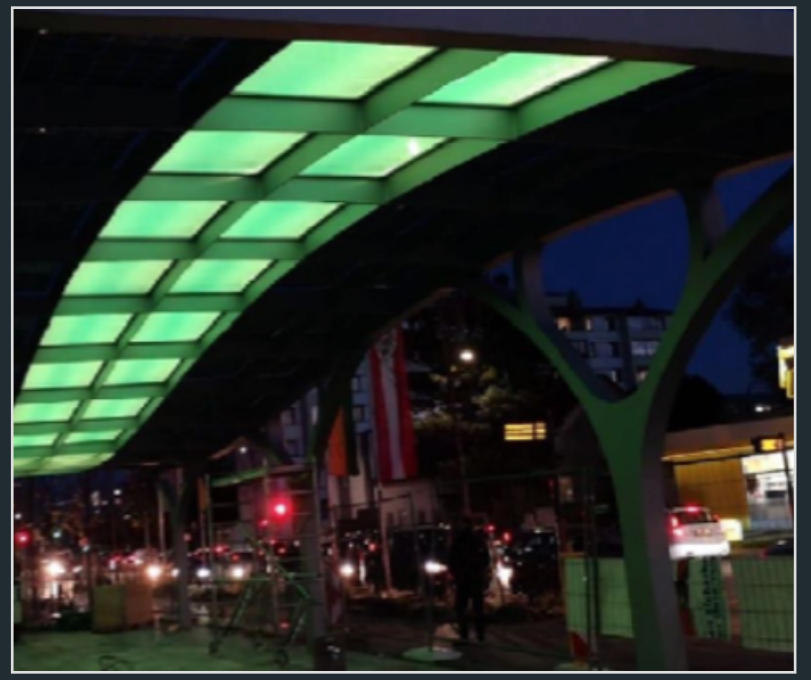


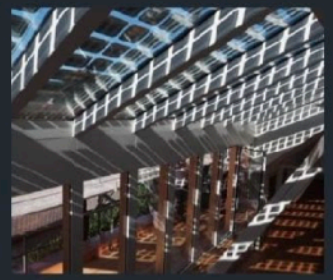
roof & facade

Unique Indoor Parking

Fehlmann Areal Winterthur

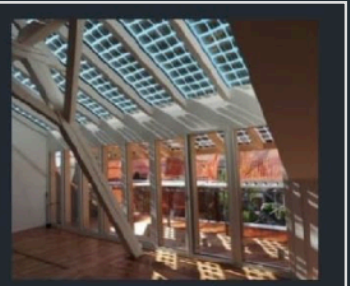
unique projects “the waves”

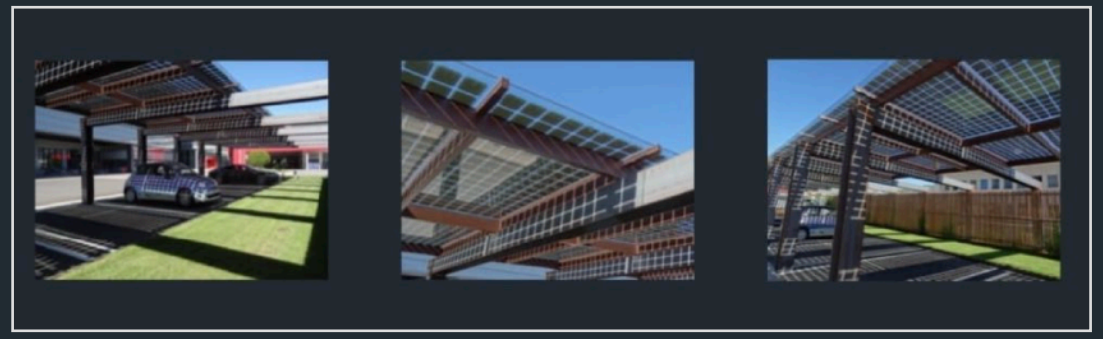


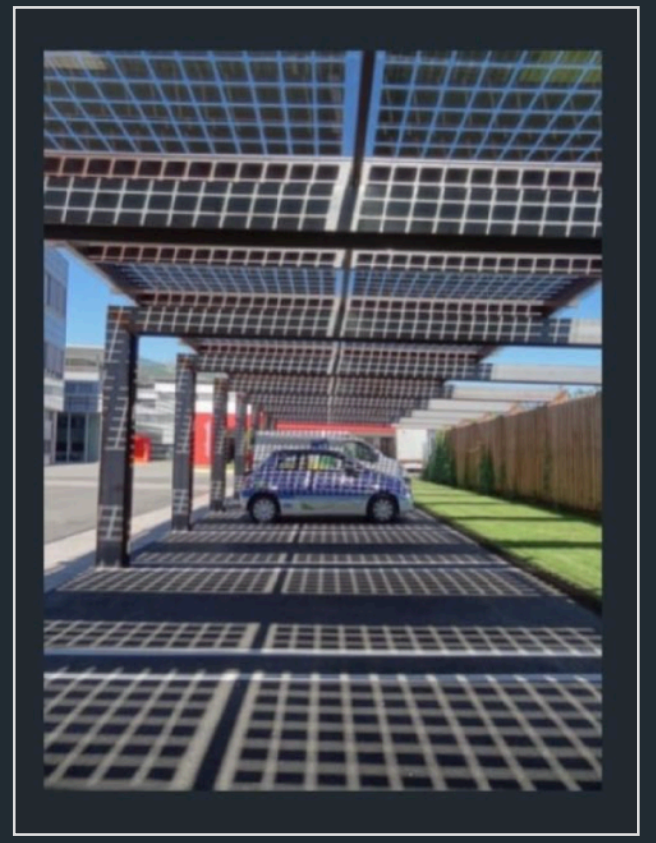

terraces







carports

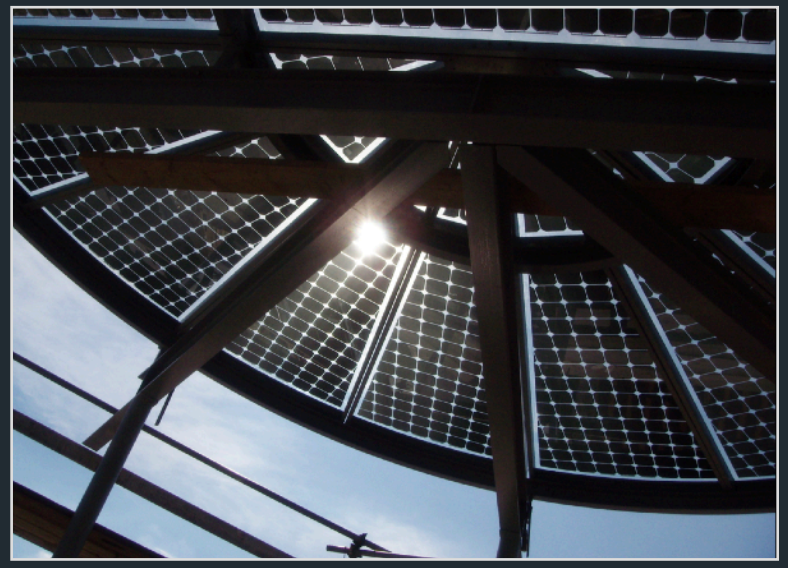


Audi

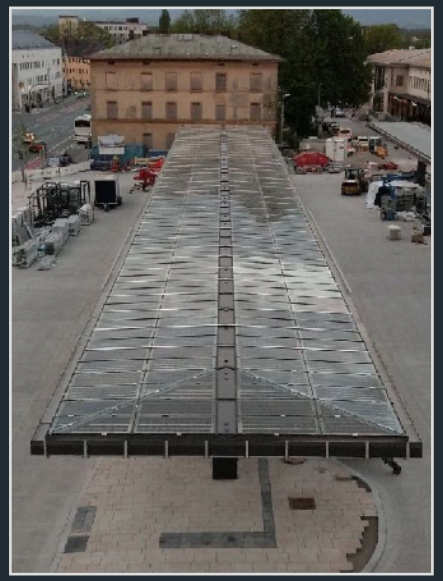
unique charging hubs

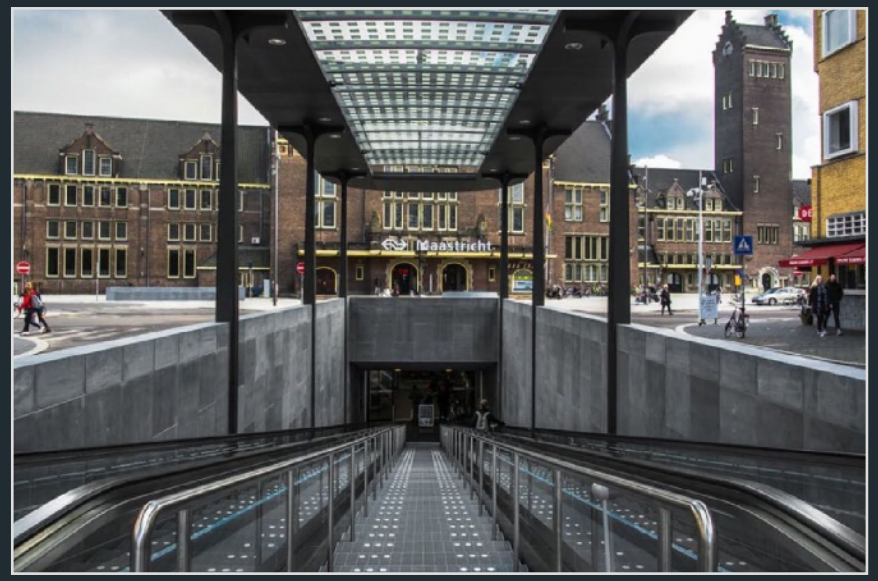
Schönbrunn Zoo

Båstad Tennis Stadium



Swedish International Championship

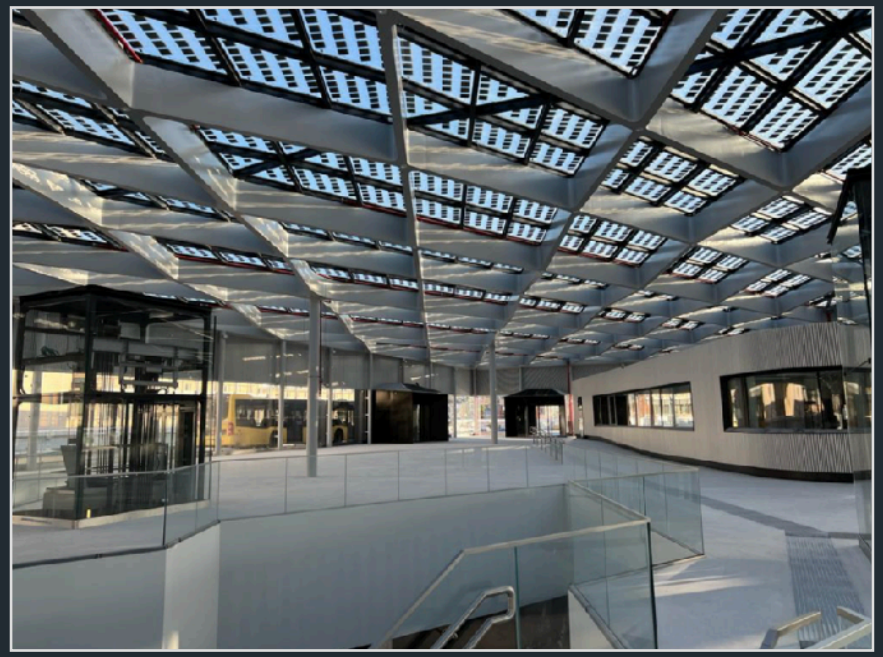




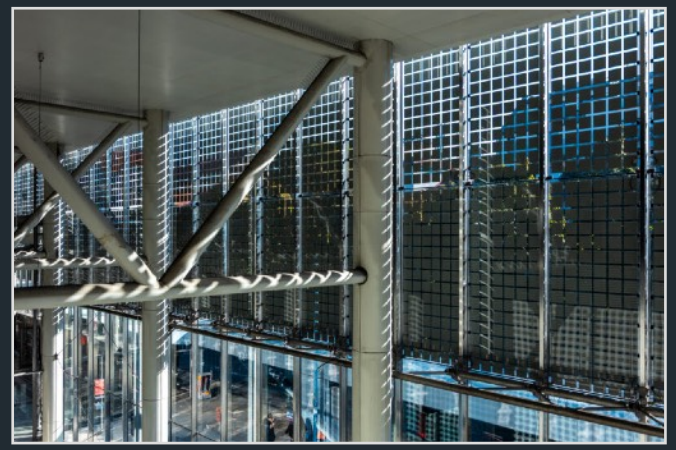
Maastricht

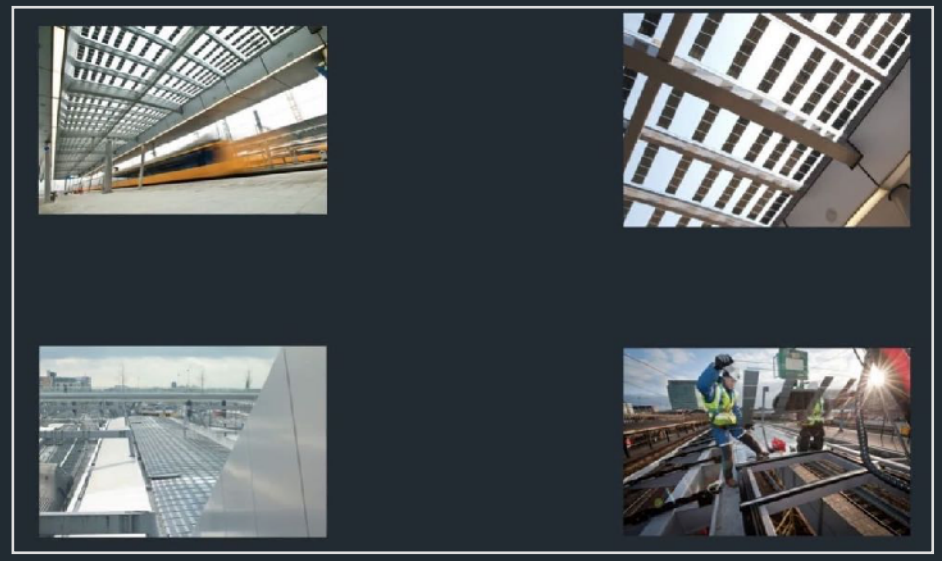
central bus station
8.000 m2
3.560 panels

Belgium



Vienna central train station





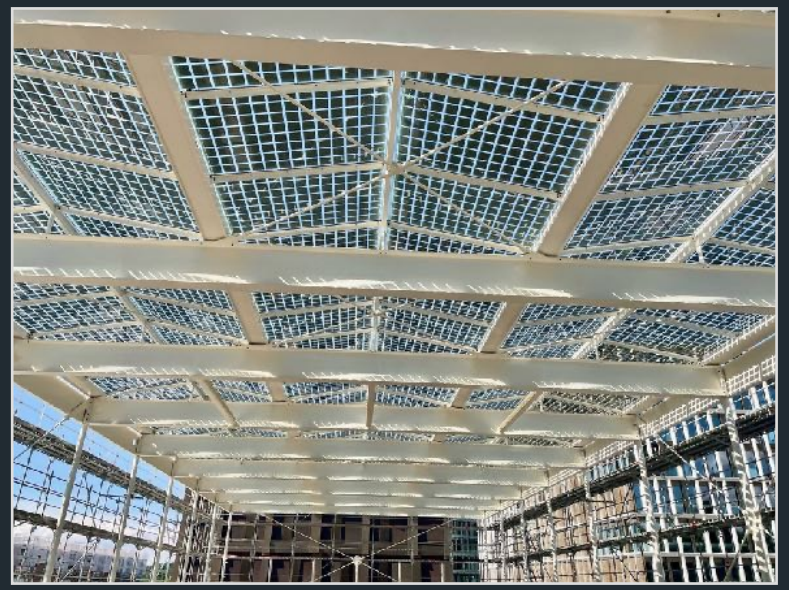
Utrecht central train station

panels of any size & shape

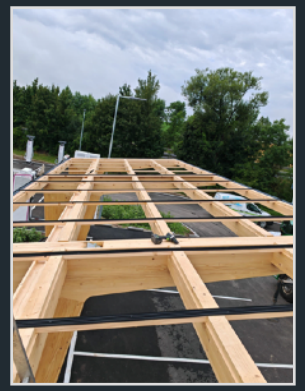
triple–side roof installation

Switzerland

Zurich



Allmend School



public charging stations

wooden constructions

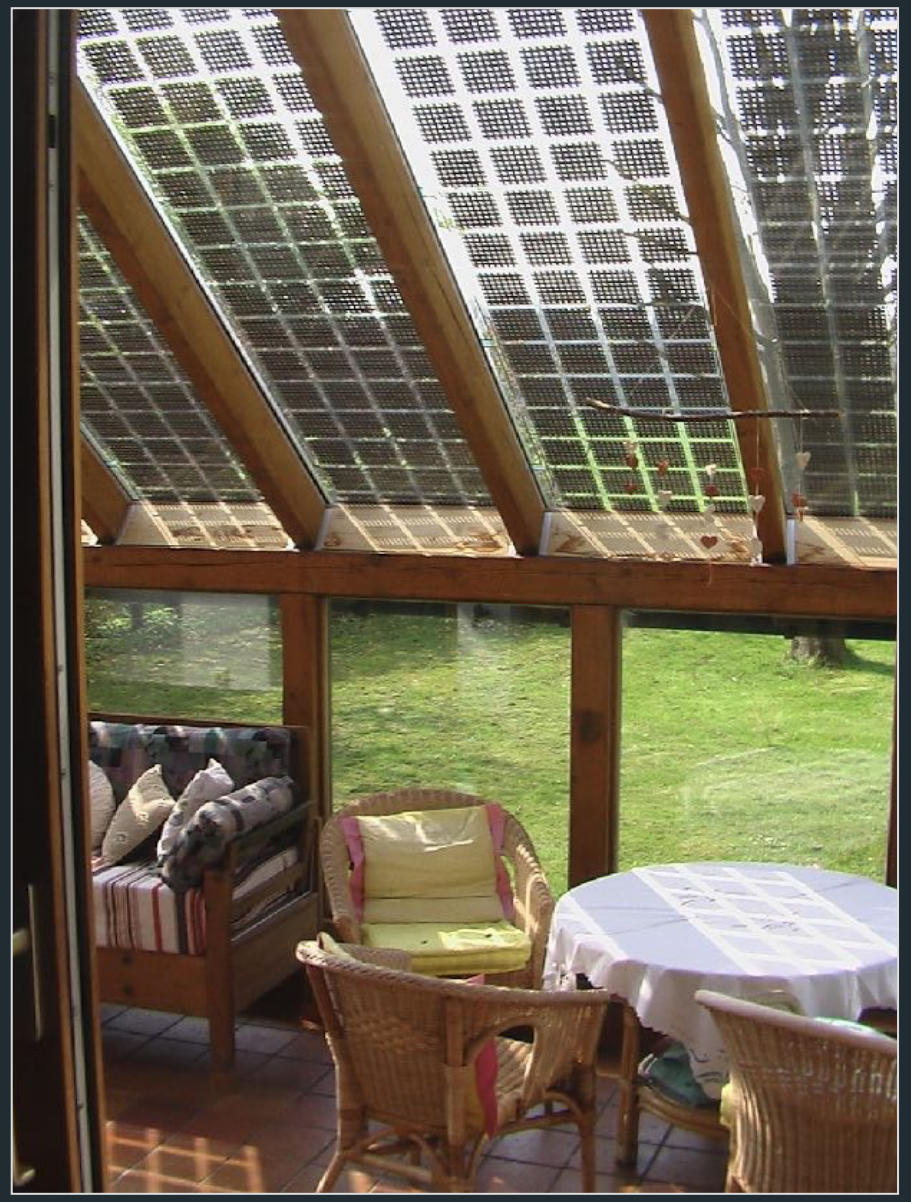
roofs and balconies

roofs
&
canopies


REWE
REWE
REWE
REWE

Unique Projects

perforated transparency



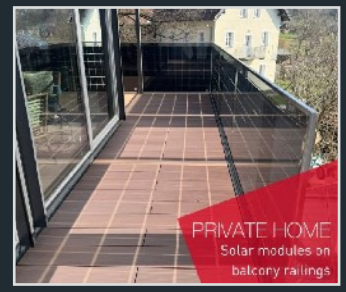
timber frame

unique wooden construction

Switzerland

unique panels – length 5m

balconies



fences & balconies

unique flower fence

country house

transparent flower balcony

Tamins
Switzerland

facade & roof installations

facade panels:
designed by Bruno Krucher

Leather Look

Weisses Schlössli
Davos

public places

certificates

Zertifikate

EN61215-2/EN61730

Issued under the responsibility of:

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

TESTING DECLARATION

Reference No.	SGP-19922
Date of issue (YYYY/MM/DD)	2023.01.25
Total number of pages	1
Testing Laboratory	AIT Austrian Institute of Technology GmbH
Address	Giefinggasse 2, 1210 Vienna, AUSTRIA
Applicant's name	Ertex Solartechnik GmbH
Address	Peter-Mitterhofer-Straße 4, 3300 Amstetten, Austria
Test specification	1) Terrestrial photovoltaic (PV) modules - Design qualification and type approval 2) Photovoltaic (PV) module safety qualification
Standard test method	Sub-clauses of IEC 61215-2:2021 and IEC 61730-2:2016
Used test procedure/sub-clauses	MQT 01, MQT 02, MQT 19.1, MQT 6.1, MQT 15, MQT 03, MQT 13, MQT 10, MQT 11 (50+200 cycles), MQT 12, MQT 14.1, MQT 18.1, MQT 18.2 MST 01, MST 02, MST 03, MST 07, MST 11, MST 14, MST 16, MST 17, MST 25, MST 26, MST 42, MST 51 (50+200 cycles), MST 52, MST 53, MST 54
Test report reference number	2.00.80579.1.0a, 2.00.80579.1.0b, 2.00.80579.1.0c, 2.00.80579.1.0d
Additional information	-

This testing declaration is based on the result of a single examination of the product sample(s) submitted and does not give any presumption of conformity of the products from the current production.

Samples of the product have been tested and found to be in conformity with the above-mentioned standard and / or non-standard test procedures. Details concerning the product itself as well as the test procedure are documented in the named test report.

Test item description	Photovoltaic (PV) Module(s)
Trade Mark	Ertex Solartechnik GmbH
Manufacturer	Ertex Solartechnik GmbH
Model/Type reference	VSG SEMI BACK 44.4 (270 Wp), VSG SEMI BACK 66.4 (270 Wp) VSG MONO SIDE 44.4 (350 Wp), VSG MONO SIDE 66.4 (350 Wp)

Head of Competence Unit: Energy Conversion and Hydrogen — Responsible for the content

i.V. DDI Dr. Stephan Abermann — i.A. DI (FH) Thomas Krametz

Page 1/1

Kugelfall / Pendelschlag

Stadt Wien | Prüf-, Inspektions- und Zertifizierungsstelle

ertex solartechnik GmbH
z.H. Herrn Ing. Christian ULRICH
Peter-Mitterhofer-Straße 4
3300 Amstetten

per E-Mail an: christian.ulrich@ertex-solar.at

Magistratsabteilung 39
Rinnböckstraße 15/2
1110 Wien
Telefon +43 1 4000 8039
Fax +43 1 4000 99 8039
post@ma39.wien.gv.at
ma39.wien.at

MA 39 – 21-03445

Wien, 31. August 2021
Gesamtseiten: 8

Prüfbericht

über Kugelfall- und Pendelschlagprüfungen an Verbundglas mit Photovoltaik-Einlagen

Auftraggeber/ Werk	ertex solartechnik GmbH, Peter-Mitterhofer-Straße 4, 3300 Amstetten
Auftragsdatum	13. April 2021
Prüfgut	Verbundglas mit Photovoltaik-Zellnetz aus 2 x 6 mm Einscheiben-Sicherheitsglas beziehungsweise 2 x 6 mm teilvorgespanntem Glas
Prüfguteingang	10. Juni 2021
Auftrag	Kugelfallprüfung gemäß ÖNORM EN 14449 sowie Pendelschlagprüfung gemäß ÖNORM EN 12600

FEUER PRÜFUNG

Alu König Stahl GmbH
Goldschlagstraße 87-89
1150 Wien

IBS – Institut für Brandschutztechnik und Sicherheitsforschung Gesellschaft m.b.H.
Akkreditierte Prüf-, Inspektions- und Zertifizierungsstelle
Petzoldstraße 45 / 4020 Linz / Austria
T +43 732 7617-250 | F +43 732 7617-199
office@ibs-austria.at | www.ibs-austria.at
Firmenbuchnummer 89136d
Landesgericht Linz | UID-Nr. ATU23281705

10. Jänner 2022
Roland BECK / AM
+43 732 7617 - 885

Nachweis über die weitere Verwendbarkeit des Prüfberichts Nr. 12120405-1,RevA vom 10. Jänner 2013

Prüfgegenstand:

Schüco SCC 60 Aluminium-Fassade mit PV-Modul-Ertex-VSG und Mineralwolledämmung

Prüfergebnisse:

positiver Nachweis **B-s1, d0**

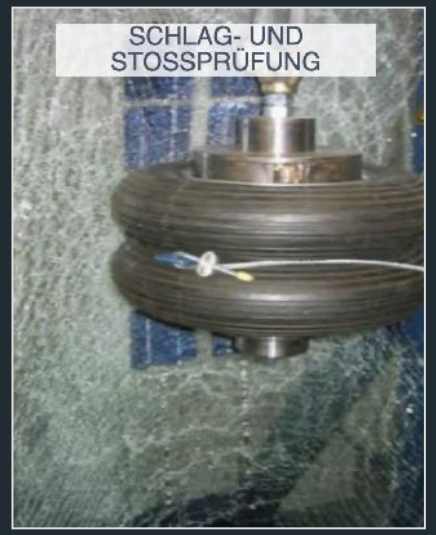
Grundlagen:

ÖNORM B 3800, Teil 5:
„Brandverhalten von Baustoffen und Bauteilen – Teil 5: Brandverhalten von Fassaden Anforderungen, Prüfungen und Beurteilungen"
Ausgabe: 15. April 2013

Geltungsdauer:

Der Prüfbericht Nr. 12120405-1,RevA vom 10.09.2013 ist in Verbindung mit diesem Schreiben weiterhin bis zum **7. Juni 2027 bzw. bis zum Ende der Koexistenzperiode einer anwendbaren harmonisierten Produktnorm** verwendbar.

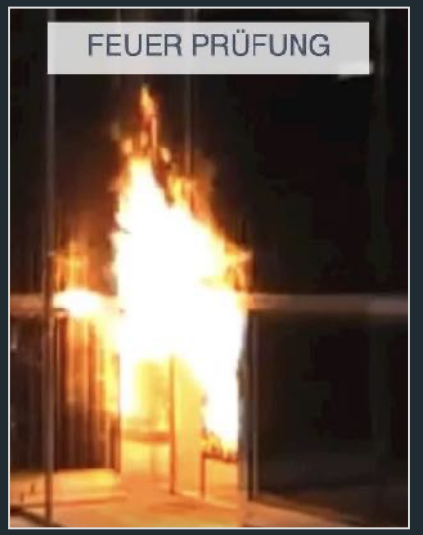
extreme crash test

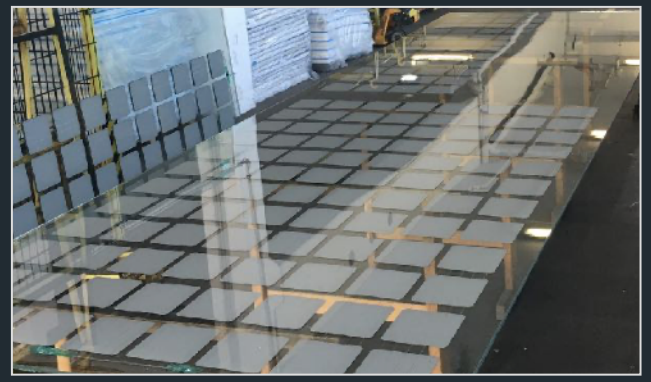


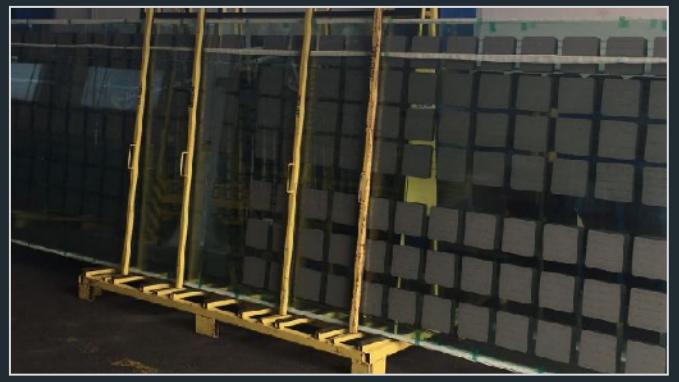
extreme hail test

Ice Cube
Diameter 70mm – Speed 110km/h

extreme fire test

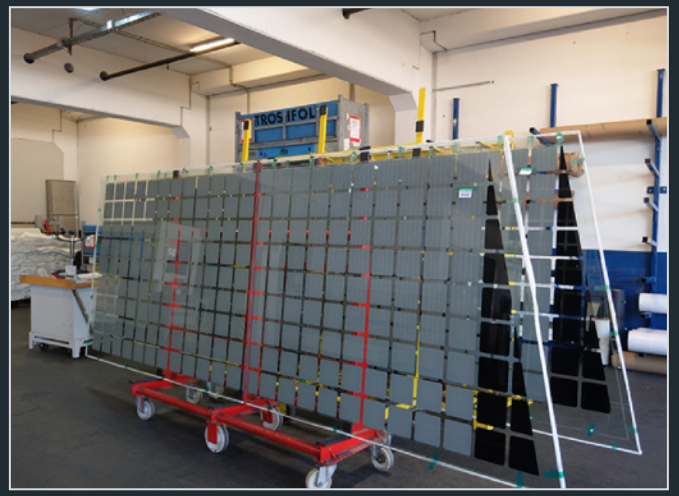






unique huge
custom–made panels
for special projects

5,100 x 2,440 mm
World Record

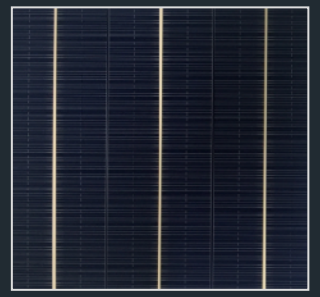


Austria's most
innovative Companies
at iLab of Austria's Pavilion

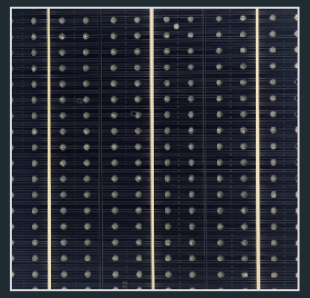
award – perforated cells

Dubai

handmade process
unique perforated transparency



before

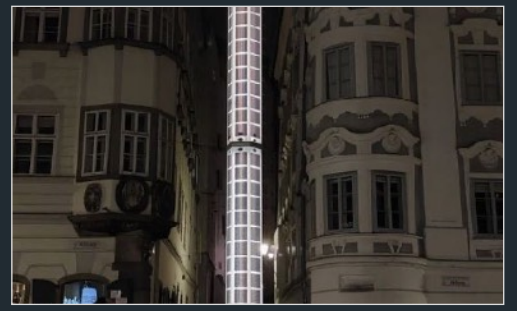


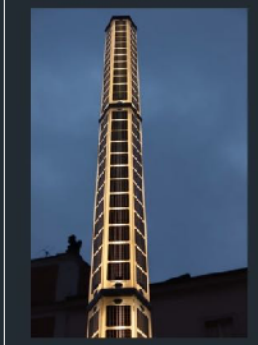
after

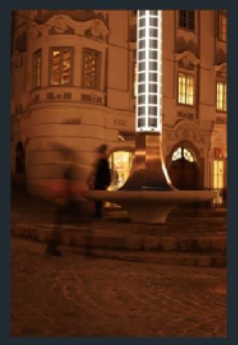
patented technology

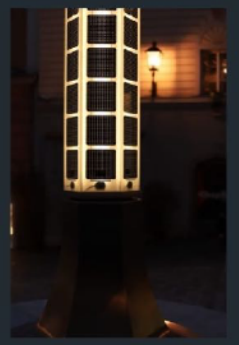
Lichtbrunnen

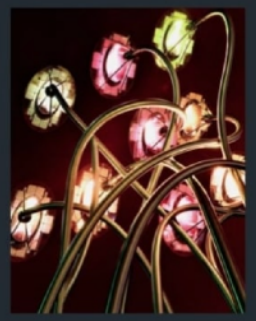
Linz – Austria

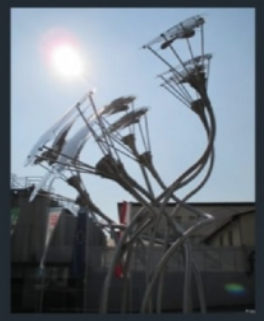


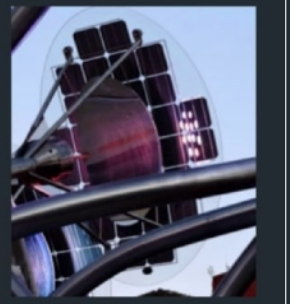






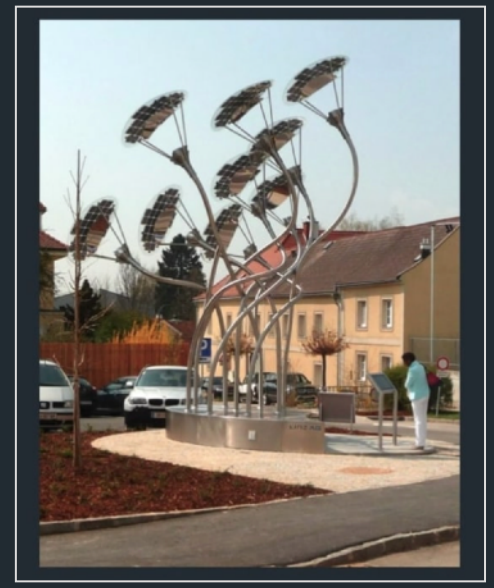






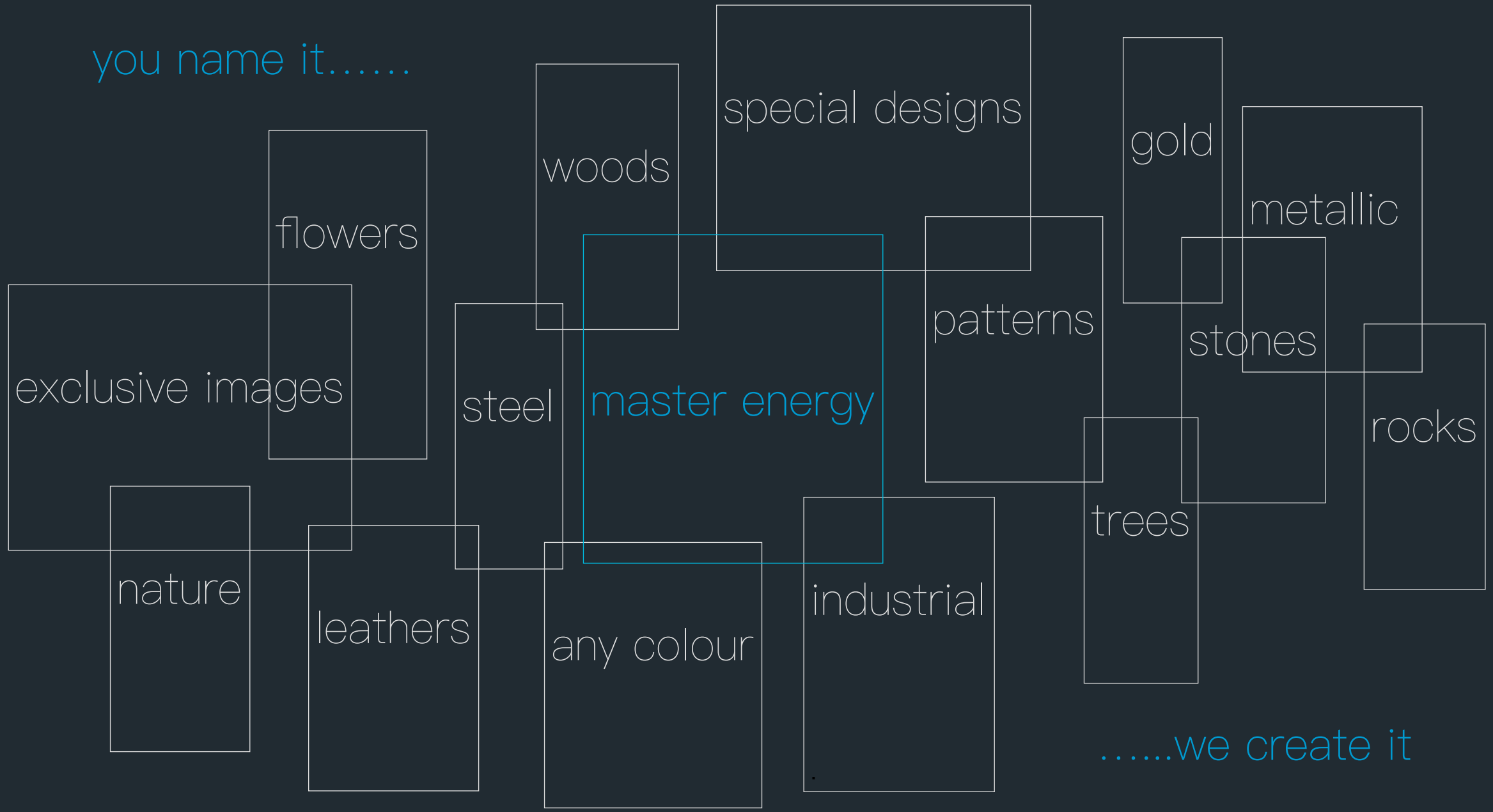
Sonnenblumen

Linz – Austria



ultra–modern museum
Germany

art & technology


you name it.....
special designs
woods
gold
metallic
flowers
exclusive images
steel
master energy
patterns
stones
rocks
trees
nature
leathers
any colour
industrial
.....we create it

Roofing

Balconies

Sky Lights

Spandrels

Brises Soleil

Ventilated Facades

Sound Walls

Curtain Walls

Active Building Skins

Walkable Floor

Canopies & Shade House

The Building Façade of the Future: Energy-Generating and Aesthetic

The Pioneer & World Leader in Building Integrated Photovoltaics (BIPV) since 2004

contacts

Cyprus

Limassol

e: sales@master–energy.eu
w: www.master–energy.eu

Cyprus Headquarters
3095 Limassol

Cyprus Warehouse
3015 Limassol

architects
architects@master–energy.eu

tech support
support@master–energy.eu

administration
admin@master–energy.eu

Greece

Athens
GR – 15125

e: info@master–energy.eu
w: www.master–energy.eu
p: +30 211 770 7112

Athens Warehouse
GR – 19400
Athens International Airport
Attiki Odos (Exit Local Roads)

Thessaloniki Warehouse
GR – 57009
National Road

Certified Manufacturing Excellence

We are committed to the highest standards of integrity, transparency, and technical excellence.

Our bids are structured to reflect the actual project requirements and technical specifications, ensuring full alignment with International Compliance Standards and ESG (Environmental, Social and Governance) reporting mandates.

We strictly adhere to anti–fraud and anti–corruption policies. Each bid is intended for the authentic implementation of the project and provides a reliable basis for Audit Committees, financial institutions, and certification bodies (e.g. LEED).

We do not participate in or facilitate practices that may misrepresent the project cost or jeopardize the legal status of the final investor or the structural integrity of the final construction.

The world's leading dual certification holder for both: electronics (IEC 61215/61730)
construction (EN 12600/12543)