

ŞİŞECAM TURNS 87

GLASS IS ETERNAL





Dear Colleagues,

As we leave another year behind us, we are happy about the strides we are making toward our goals. 2022 was a year of paving the way for innovation and development in our business sectors, proving our power in the global arena time and time again, and moving forward with dedication along our journey of transformation. Thanks to the efforts of the whole Şişecam Team, we exceeded

our goals and reinforced our success in different areas recognized with many awards.

2023 will be a year of uncertainties on a global scale, and a challenging one for the whole world. Institutions that are able to anticipate risks and adapt to change will continue to grow during this time. Our focus on productivity, cost control, quality, and customer service will positively distinguish us, as they always do. Our partnership-based approach to effective management will help us get closer to our goals, while our collaboration-based culture will help us overcome any challenge.

One of the major aspects of our success is our belief in science-based growth. We adopt our founder and global leader Mustafa Kemal Atatürk's words, "My spiritual legacy is science and reason" as our guiding principle, never wavering from the path of science and reason. We will continue to utilize and constantly improve all our capabilities to achieve a more livable planet and a more sustainable future.

On our path toward the future, we blend our experience with the power of technology and transformation. And as we make progress along this path, we appreciate your efforts and your contribution to this success story. 2023 will be the year we complete our comprehensive transformation project which includes all our business segments across various geographies. This move will bring us even closer to becoming the Sisecam of the Future.

For the 87th anniversary of our founding, as we do every year, Sisecam's Board of Directors and Executive Board once again visited our founder Atatürk, at Anıtkabir- his eternal resting place. We constantly follow his path and promise to carry his legacy and vision into the future with more than 24,000 employees, 45 production facilities across 4 continents aiming to be among world's top 3 players.

We hope that 2023 brings health, happiness, and success to you and your loved ones, as well as peace to our world.

Görkem Elverici CEO

U. f. Dun Z



Owner & Executive Editor

Ayşegül Akyarlı

Headquarters

içmeler Mahallesi, D - 100 Karayolu Caddesi, No: 44A 34947 Tuzla/İSTANBUL **T** 0 850 206 50 50

Published for the employees of Türkiye Şişe ve Cam Fabrikaları A.Ş. and subsidiaries.

Production:

AjansMedya
Merkez Mahallesi
Seçkin Sokak
Z Ofis No: 2 - 4A 325
Kağıthane - İstanbul
T + 90 212 287 19 90
info@timeoutistanbul.com
www.ajansmedya.com

Production Director

Elif Eren

Art Director

Belma Saraççı

${\bf Contributors}$

Seda Pekçelen Gizem Ünsalan

All rights reserved. The unauthorized reproduction is prohibited.

Published digitally for the employees of Türkiye Şişe ve Cam Fabrikaları A.Ş. and its affiliates.

> TÜRKİYE BANKASI Company.









28 s

NEWS FROM US Şişecam Çayırova Sports Club's Impressive Achievements







TECHNOLOGY
The Awe-Inspiring
World of Quantum
Information Science



A New Star in The Fight
Against Climate Change:
Smart Roofs







A R T Introduction to New Media Art







T R E N D
Architectural Trends
of the Future

5 A G E N D A



"WHAT IS IN YOUR JAR?"

PAŞABAHÇE JARS ACCOMPANY EVERY MOMENT IN LIFE.

Paşabahçe's new promotional campaign for jars asks users, "What is in your jar?" In doing so, the campaign also emphasizes that jars can have different functions besides preserving jams, pickles, and tomato or pepper paste. With the belief that "In your creative hands, our jars come to life and add beauty to living," Paşabahçe demonstrates various ways that customers can use its elegant and functional jars. Paşabahçe jar series like Woody, Kitchen Slim, Homemade, and many others organize kitchens, allow users to carry healthy food throughout the day, as well as adding a touch of beauty and elegance to living spaces.







WORKSHOP TIME AT PAŞABAHÇE MAĞAZALARI

NOTED FOR BRINGING A BREATH OF NEW LIFE INTO PAŞABAHÇE MAĞAZALARI'S RETAIL APPROACH, THE ERENKÖY EXPERIENCE STORE CONTINUES TO HOST COLORFUL WORKSHOPS.

Equipped with digital innovations to make shopping at Paşabahçe Mağazaları even more enjoyable and bring the customer experience to a whole new level, the Erenköy experience store hosted workshops on candle-making and lampworking. On Saturday, October 15, the workshop space on floor -1 of the Erenköy store was home to a fun, seven-person candle-making workshop. The participants first got to hear an introduction to candle-making and candle types from experts before learning about the different kinds of candles, candle wicks, colors, and fragrances. Then, they received more detailed instruction on top, middle, and bottom notes as well as the right percentages for each. Afterward, the participants created their own candles with unique fragrance and color combinations, then decorated them with dried flowers.

The lampworking workshop was held on Tuesday, October 25, with master glass artist İlhami Hancıoğlu. Held with a small group of five Paşabahçe Mağazaları Club Card members, the Introduction to Glass Workshop began with the story of glass, after which the participants got to learn about glass-making techniques. Glass master İlhami Hancıoğlu then demonstrated the glass blowing torch technique, after which the participants got to experience lampworking for themselves as they created items like evil eye beads, pendants, and keychains using a glass blowing torch alongside the instructor. Paşabahçe Mağazaları's Erenköy experience store will continue to host workshops.







NEW YEAR'S EXCITEMENT AT PAŞABAHÇE MAĞAZALARI

PAŞABAHÇE MAĞAZALARI OFFERS HUNDREDS OF DIFFERENT OPTIONS FOR THOSE WHO WANT TO MAKE THEIR LOVED ONES HAPPY WITH SPECIAL NEW YEAR'S GIFTS.

Shoppers who want to make the new year even more joyous with gifts that put a smile on their loved ones' faces are finding the product variety they're looking for at Paşabahçe Mağazaları. Some potential gifts infused with the new year spirit include the berry napkin ring, the holiday tree tealight holder, the trees mini tealight candle holder, the birds-and-stars wreath tealight holder, and the new year heart metal door décor. Those who enjoy an exotic touch will love the golden Indian elephant as an addition to their décor, while the hanging tealight holders featuring snowflakes and stars and the snowy-twinkle tealight holders make for great New Years-themed gifts. Meanwhile, the red and green candy plates add a touch of whimsy to New Year's Eve dinner tables as they instantly bring to mind candy canes.

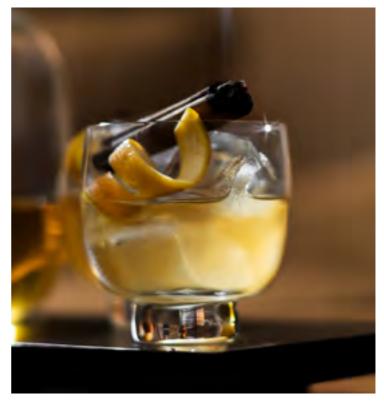


A MUST-HAVE FOR SPECIAL EVENTS: NUDE

NUDE recently served as the product sponsor for a press dinner hosted by Messe Frankfurt Istanbul, with Ambiente trade fair directors Thomas Kastl and Yvonne Engelmann. Held on November 8 at the Messe Frankfurt Istanbul office, the event featured table settings that comprised Turkish brands which attended Ambiente. NUDE Stem Zero glasses were used throughout the dinner, and the menu cards also included both the NUDE logo and NUDE's booth number at the 2023 Ambiente fair.







A STUNNING PHOTO SHOOT FOR NUDE

To celebrate the drop in temperatures, NUDE Glass held a breathtaking whisky-themed photo shoot in November. Scottish digital content creator @thewestmount used the Alba collection by NUDE Glass in both indoor and outdoor photo shoots. Offering views of the Scottish countryside, the photographs perfectly reflected NUDE's philosophy of "Simple is beautiful." NUDE's Alba collection derives its name from the Scottish Gaelic word for "Scotland." Crafted out of pure leadfree crystal, the collection achieves a modern look by contrasting a traditional heavy base with a delicate glass bowl.



NUDE SPONSORSHIP AT GASTROMASA

THE 7TH INTERNATIONAL GASTROMASA GASTRONOMY CONFERENCE TOOK PLACE AT THE HALİÇ CONGRESS CENTER ON NOVEMBER 19-20. NUDE SPONSORED TWO SESSIONS AT THE CONFERENCE.

A highly rated event in the global gastronomy scene, the 7th International Gastromasa Gastronomy Conference was recently held with the theme "Sustainability & Biodiversity." The event left its mark on world gastronomy with three separate concepts: Gastromasa Pastry, Gastromasa Bar, and Gastromasa Hospitality.

NUDE sponsored two sessions at this year's Gastromasa Gastronomy Conference. Sponsored by NUDE, the Best Female Chef award at The World's 50 Best Restaurants 22 went to Leonor Espinosa, the chefowner of Leo restaurant in Bogota. Renowned for putting Colombia on the global culinary map, Espinosa highlighted the country's gastronomy assets in a session titled "Transforming Society Through Gastronomy."

Meanwhile, Gastromasa Bar hosted world-renowned sommeliers and mixologists such as Søren Ørbek Ledet, Carlos Echapresto, Giorgio Bargiani, Hardeep Rehal, Juli Rodrigues, Laura Hernández Espinosa, and Maria Jose Huertas. Taking the stage at Gastromasa Bar, Leo Restaurant's Beverage Experience Designer and Sommelier Laura Hernández Espinosa discussed their efforts to aid in Colombia's biocultural evolution through contemporary beverages.

The conference drew great interest from an audience of 14,000, bringing together fans of gastronomy with star chefs and pastry chefs working on sustainability efforts. The talents who shared their inspiring gastronomic journeys and thoughts on the future of global gastronomy with audience members included Joan Roca, Elena Arzak, Rasmus Munk, Alex Atala, Dan Barber, Albert Adrià, Andoni Luis Aduriz, Antonio Bachour, Virgilio Martínez, Ana Roš, Andrea Berton, Andrea Tortora, Benoît Charvet, Christian Le Squer, David Gil, Diego Guerrero, Fabrizio Nonis, Dinara Kasko, Franco Pepe, Gianluca Fusto, Hélène Pietrini, Ignacio Echapresto, Janice Wong, Jeremy Chan, Jorge Vallejo, Leonor Espinosa, Manoella Buffara, Mitsuharu Tsumura, Nadia Sammut, Nicolai Ellitsgaard, Norbert Niederkofler, Paco Torreblanca, Philippe Bernachon, Riccardo Camanini, Santiago Lastra, Selassie Atadika, Simon Rogan, Thomas Bühner, and the Torres Brothers.







ŞİŞECAM AT THE EURASIA **GLASS FAIR**

ŞİŞECAM INTRODUCED ITS INNOVATIVE PRODUCTS AT THE EURASIA GLASS FAIR, HELD FROM NOVEMBER 12-16 AT THE TÜYAP FAIR AND CONVENTION CENTER.

Şişecam introduced its high-performance products created with advanced technology to visitors at the five-day Eurasia Glass Fair. The main sponsor of the International Year of Glass (IYOG) 2022, Şişecam showcased its high-performance flat glass products while giving fairgoers information about the energy savings and thermal insulation achieved thanks to glass.



The products displayed at \$isecam's booth included the \$isecam Temperable Solar Low-E Glass Neutral 70/40 and its standard equivalent \$isecam Solar Low-E Glass Neutral 70/40, which offer high light transmission and low reflectivity values that make them the ideal choice for prestigious projects where a neutral effect is desired, allowing for maximum solar control without compromising on natural sunlight. Other products shown at the fair included the \$isecam Temperable Solar Low-E Glass Neutral 50/25, which provides flawless thermal insulation and efficient solar control with a U-value of 1.0 W/m2K, as well as its standard equivalent (which comes in the same color and performance values), the \$isecam Solar Low-E Glass Neutral 50/25, designed for projects that highlight neutrality with low internal and external reflectivity.

The Şişecam Temperable Solar Low-E Glass Green 40/28, which gets its color from coating on clear flat glass, is the material of choice for warm climates and skylights, where controlled sunlight and efficient solar control are required. Another notable product at the fair was the Şişecam Temperable Solar Low-E Glass Neutral 40/22, which offers maximum thermal insulation and solar control. In addition to its neutral appearance, this range provides controlled sunlight with a U-value of 1.0 W/m2K, making it ideal for use in warm climates and skylights.

In addition to innovative products, the fair also saw the company promote the Şişecam GlassTool mobile app, which has a user-friendly interface that allows users to compare the performance values of different glass combinations. Fairgoers got the chance to test out the application at Şişecam's booth.







PAŞABAHÇE IS TURKEY'S GOLD BRAND

Held with the cooperation of the Turkish Reputation Academy (TiA) and Beykoz University, the Benefit to Economy Index (EFE) 2022 report was published for the fourth time this year. The results are now in for the index, which categorizes institutions and brands that make a difference and whose management performance provides the greatest benefit to the Turkish economy and social life into diamond, platinum, and gold classifications. Following research conducted with nearly 14,000 participants in 26 regions and 72 provinces, the brands that made the index received their certificates in a ceremony held on November 9. The report listed Paşabahçe as Turkey's gold brand in the porcelain and glassware sector.

ŞİŞECAM MEETS WITH INDUSTRY **PROFESSIONALS**

SİŞECAM HELD ONE-ON-ONE MEETINGS WITH THE LEADING FIRMS IN THE CONSTRUCTION INDUSTRY AS WELL AS TURKEY'S TOP 25 ARCHITECTS.

Şişecam attended the first-ever IPYD One-On-One Business Meetings organized by the Istanbul Project Management Association (IPYD) and held at the Istanbul Naval Museum. On November 23, Şişecam held 15 separate one-on-one meetings with investors, contractors, as well as engineering and project management firms. During these meetings, Şişecam promoted its project-based glass consultancy services to executives from the firms. After obtaining information about the firms' current projects, Sisecam went on to introduce its flat glass products, reference projects, as well as BIM Smart Objects.

Then, on November 30, one-on-one business meetings were held with the Istanbul Association of Architects in Private Practice (IstanbulSMD). A total of 25 one-on-one meetings were held with Turkey's top 25 architecture firms who are members of the ISMD. In these meetings, Şişecam representatives learned about the architects' current projects as well as introducing the company's glass consultancy services for the architects of many prestigious projects in Turkey and abroad on a perproject basis. Additionally, they shared information about reference projects utilizing flat glass products as well as Şişecam's BIM Smart Objects. At the end of the event, Şişecam was presented with a thank you certificate for its contributions to the profession of architecture.







SPOTLIGHT ON **NEXT-GENERATION FAÇADES**

ŞİŞECAM BECAME THE MAIN PARTNER OF THE SHARE INTERNATIONAL ARCHITECTURE AND ENGINEERING FORUM ON NOVEMBER 23.

The largest European network of architecture and construction professionals, SHARE Architects organized the fourth SHARE International Architecture and Engineering Forum, which brought together industry professionals from different countries. Focused on the design and performance of next-generation façades, as well as the impact of façade works on public spaces, the forum highlights the innovations in this area. Şişecam served as the Main Partner of the SHARE International Architecture and Engineering Forum, where European architects as well as façade consultants and glass professionals discussed new ideas, applications, and projects.

ŞİŞECAM ATTENDED THE 2ND INTERNATIONAL MINERAL WATER CONGRESS

ŞİŞECAM TOOK PART IN THE 2ND INTERNATIONAL MINERAL WATER CONGRESS, WHICH BRINGS TOGETHER THE MINERAL WATER INDUSTRY.

Held in Istanbul on November 17-18, the 2nd International Mineral Water Congress adopted an interdisciplinary approach in addressing the entire process from the production of mineral water until it reaches the consumer. Sisecam was among the congress attendees, sponsoring the panel discussion "R&D, Innovation, and Sustainability in Mineral Water." During the panel, the company also introduced Turkey's lightest mineral water bottle, the 110-gram Ultra Light Mineral Water Bottle.





ŞİŞECAM WAS AT THE 5TH ADVANCED MATERIALS IN CONSTRUCTION SUMMIT

ŞİŞECAM ATTENDED THE 5^{TH} ADVANCED MATERIALS IN CONSTRUCTION SUMMIT, WHICH FOCUSES ON THE BUILDING MATERIALS SECTOR.

Attended by architects, engineers, and construction professionals, the 5th Advanced Materials in Construction Summit was held in Berlin, Germany, on November 3-4. Organized by the Berlin-based Luxatia International, the summit focused on topics such as sustainable building solutions, modern uses of bio-based materials, creating smart cities of the future through advanced materials, environmentally friendly solutions, and methods of construction waste reduction, as well as tackling artificial intelligence and big data applications pertinent to the sector. Şişecam took part in the summit with a presentation titled "Transformation Shaping the Future," where the company covered advancements in both the world and the construction sector under the theme of transformation, as well as providing information about Şişecam and its reference projects.



ARCHITECTURE STUDENTS VISIT ŞİŞECAM

STUDENTS OF KADIR HAS UNIVERSITY'S DEPARTMENT OF ARCHITECTURE VISITED THE ŞİŞECAM HEADQUARTERS.

The Şişecam Headquarters hosted a group of 35 students from Kadir Has University's Department of Architecture. The third-year architecture students got to see world-renowned glass artist Simon Berger's piece "Paramparça," created to commemorate Mustafa Kemal Atatürk on November 10, as well as receiving detailed information about the work. Students also attended a presentation on Sisecam and its range of innovative products, glass consultancy services, and BIM Smart Objects. Following the presentation, the future architects visited the Sisecam Flat Glass Showroom, where they had a chance to experience the advantages of flat glass products and ask the experts questions.



TRANSPARENT SOLUTIONS FROM ŞİŞECAM

ŞİŞECAM ATTENDED THE FAÇADE DESIGN AND BUILDING SYSTEMS CONFERENCE.

Organized by BIM4Turkey, the Façade Design and Building Systems Conference brought together industry professionals to support the development of Building Information Modeling (BIM) applications and to highlight the positive impact of BIM on projects. Şişecam participated in the conference-which was held at the ITU Faculty of Architecture in Taşkışla-with a presentation titled "Transparent Solutions." Following the presentation on Şişecam's flat glass products, BIM Smart Objects, reference projects, and glass consultancy services, there was a gathering for participants who use BIM to bring their projects to life.





ŞİŞECAM ATTENDS THE 10TH INTERNATIONAL QUALITY IN CONSTRUCTION SUMMIT

ŞİŞECAM WAS AT THE 10TH INTERNATIONAL QUALITY IN CONSTRUCTION SUMMIT ORGANIZED BY THE ASSOCIATION OF TURKISH CONSTRUCTION MATERIAL PRODUCERS.

Şişecam took part in the 10th International Quality in Construction Summit organized by the Association of Turkish Construction Material Producers (Türkiye İMSAD), the umbrella organization for the construction materials sector. Held with the theme of "Sustainable Future," this year's summit saw Şişecam—the main sponsor of the United Nations' International Year of Glass—promote its sustainability efforts in flat glass production as well as its Isıcam brand to leading figures in the construction sector. The summit featured an extensive roster of speakers comprised of international award-winning architects, engineers, successful and experienced executives from national and multi-national companies, as well as academics, all of whom shared projections for the Turkish construction sector's future.

As a company that's placed sustainability at the core of all its operations and made it a fundamental element of its business model, Şişecam views its approach not as an obligation to adhere to international production standards, but as a significant responsibility. Şişecam continues to move forward with its 2030 sustainability strategy CareforNext, which comprises focal points such as "Protecting the Planet," "Empowering Society," and "Transforming Life" in line with the UN's Sustainable Development Goals.



ŞİŞECAM RECEIVES THANK YOU PLAQUE

FROM THE ISTANBUL ASSOCIATION OF ARCHITECTS IN PRIVATE PRACTICE

Hosted by the Istanbul Association of Architects in Private Practice (IstanbulSMD), the Contribution to Architecture Awards were handed out to winners in a ceremony that featured Şişecam among its sponsors. Held to commemorate the IstanbulSMD's 20th anniversary on October 25 at the Pera Palace Hotel, the ceremony saw Şişecam receive a plaque for supporting the development of architectural culture. In addition to representatives from Istanbul, the ceremony was also attended by executives and members from the Izmir and Ankara branches of SMD.

ISICAM'S HOME RENEWAL MOVEMENT

CONTINUES AT FULL SPEED!

DUE TO GREAT INTEREST, ISICAM SYSTEMS'
WINDOW REPLACEMENT CAMPAIGN HAS BEEN
EXTENDED UNTIL DECEMBER 25.



As a brand that produces solutions to fulfill the requirements of living spaces, Isicam Systems continues to promote the energy efficiency advantages of its S and K series and invite consumers to switch out their old windows. The campaign will remain in effect from September 21-December 25, 2022, applicable for consumers who replace their existing windows with Isicam S or Isicam K. Customers who replace their existing home windows with Isicam Systems' S or K series receive a gift certificate of 600 TL for purchases of 10-19.99 m2, or 900 TL for purchases of 20-35 m2, on the condition that these purchases are covered with a single certificate of warranty and are installed at the same location. Campaign details can be found at isicam.com.tr. So far, the advertising campaign has been viewed 64 million times, with isicam. com.tr receiving 91,000 visits.

ŞİŞECAM RECEIVES €240 MILLION SYNDICATED LOAN

ŞİŞECAM USED A NEW €240 MILLION SYNDICATED LOAN TO REFINANCE ITS EXISTING €175 MILLION LOAN, WHICH WAS OBTAINED IN 2019 TO MEET THE COMPANY'S INVESTMENT AND OPERATIONAL EXPENSES IN TURKEY AND EUROPE.

Şişecam received a new syndicated loan of ğ240 million from 9 banks, spearheaded by Bank of America and BNP Paribas, to refinance its existing ğ175 million syndicated loan with a three-year maturity period, which the company used in 2019 to meet its need for working capital to cover its investments and operations in Turkey and Europe. During a period of intense global fluctuations, the debt rollover ratio for refinancing was 137%. The new loan once again illustrated that international financial institutions trust in Şişecam.

Şişecam will put its new loan toward investments and working capital in Turkey and Europe. The new syndicated loan will have a maturity period of three years. As a company with permanently high credibility among international banks and financial institutions, Şişecam once again demonstrated its reputation as an investor with a strong financial position by obtaining a loan during a time of intense global fluctuations. A business that combines its production capacity with a sustainable growth approach, R&D capabilities, and digital processes, Şişecam's latest move once again illustrates that the company meets international standards of trust for its growth performance and its ability to meet its obligations.



ŞİŞECAM DISCUSSED ITS SUSTAINABILITY STRATEGY IN EGYPT

ŞİŞECAM'S CHIEF STRATEGY OFFICER ÖZLEM VERGON DISCUSSED THE CAREFORNEXT SUSTAINABILITY STRATEGY AT A PANEL HELD IN EGYPT.

The Istanbul Chamber of Industry (ICI) organized a remarkable event at the 27th session of the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC), better known as COP27, which was held in Sharm el-Sheikh, Egypt. Featured in the COP27 Side Events Program, the ICI hosted a panel in the Turkish Pavilion titled "Mobilizing the Industry for Sustainability." During the panel, Şişecam's Chief Strategy Officer Özlem Vergon introduced Şişecam's sustainability vision and its CareforNext sustainability strategy to listeners.







PAŞABAHÇE **BUSINESS PARTNERS GET TOGETHER** IN ISTANBUL



He came together with the overseas business partners of Paşabahçe at the meeting held at the Mövenpick Hotel. Europe, America, Middle East and the Asia-Pacific regions business partners met. Sales, marketing and communication functions made various presentations at the foreign business partners meeting. The meeting ended with interaction sessions.



We see a sustainable nature through glass.







SERVING HUMANKIND FOR 5 THOUSAND YEARS

During his lecture at the conference, Şişecam Chairman and Executive Member of the Board Prof. Dr. Ahmet Kırman stated that Şişecam doesn't view glass as only a business segment, but as a vital tool to serve humankind. Prof. Dr. Ahmet Kırman discussed the role of glass as a key player in many business segments from transportation to housing, architecture, energy, and healthcare, emphasizing its endless potential to meet the United Nations' Sustainable Development Goals, thanks to its unique structure as well as its ability to be 100% recycled endless times. Thanks to new products and technologies developed through science-based research, glass can meet the needs of modern life and the planet, with innovations and transformations further boosting its potential.

GLASS FOR THE BENEFIT OF THE PLANET AND HUMANITY

Şişecam's Chief Executive Officer Görkem Elverici also spoke at the conference, reminding audiences that, in the absence of glass, civilizations cannot thrive, and the world would be an unaesthetic place. As a form of matter whose numerous characteristics simply have no substitute, glass also stands out as a material that's open to improvement and innovation to meet the future needs of our planet. It is with this awareness that \$isecam continues to flex its muscles of innovation, all the while developing new products.



Şişecam Chairman and Executive Member of the Board Prof. Dr. Ahmet Kırman



Şişecam Chief Executive Officer Görkem Elverici



228 MILLION EURO SUSTAINABLE INVESTMENT MOVE FROM ŞİŞECAM

ŞİŞECAM HAS MADE THE DECISION TO INCREASE CAPACITY FOR ITS FROSTED GLASS FURNACE AND PROCESSING LINE INVESTMENTS IN MERSIN, WHICH WERE ANNOUNCED IN JULY. WITH THIS DECISION, THE ANNUAL PRODUCTION CAPACITY OF ŞİŞECAM'S SECOND FROSTED GLASS FURNACE IN MERSIN WILL GO FROM 180,000 TONS TO 244,000 TONS. MEANWHILE, ANNUAL PRODUCTION CAPACITY AT THE ENERGY GLASS PROCESSING LINE WILL INCREASE FROM 20 MILLION SQUARE METERS A YEAR TO 26.6 MILLION SQUARE METERS A YEAR.

To meet the rising global demand for energy glass, last July, Şişecam announced that it had invested in a new frosted glass furnace and a processing line in Mersin. Closing off 2022 with a strategic investment, Şişecam made the decision to increase capacity for its frosted glass furnace and processing line investments in Mersin. This decision brings the total investment cost up to 228 million euros. The new investment will also increase the annual production capacity of the second frosted glass furnace in Mersin to 224,000 tons, while raising the energy glass processing line's annual capacity from 20 million square meters to 26.6 million square meters. Şişecam Chairman and Executive Member of the Board Prof. Dr. Ahmet Kırman delivered the good news that this investment would bring Şişecam's established frosted glass production capacity up to 324,000 tons by the end of 2024. Prof. Dr. Ahmet Kırman also noted that the size of the global solar power sector went from 40 GW in 2010 to 710 GW in 2020, and is expected to increase fourfold in the coming years to exceed 3,000 GW by 2030. This decision was a result of Şişecam's production strategy of generating added value with a focus on sustainability, according to Prof. Dr. Ahmet Kırman, who expressed his confidence that this decision will support the development of Turkey's rapidly growing solar power sector.



We see tomorrow's technology through glass.





ŞİŞECAM CONTINUES TO SOAR AMONG TOP COMPANIES

ŞİŞECAM CONTINUES ITS ASCENT IN CAPITAL MAGAZINE'S ANNUAL "TURKEY'S MOST ADMIRED COMPANIES" SURVEY.

Şişecam became the 8th most admired company in Capital Magazine's "Turkey's Most Admired Companies" survey. Ranking two points higher as compared to last year, Şişecam maintained its leader position in the ceramics-glass industry. Conducted through independent research, the survey evaluated 422 companies from different industries based on 21 criteria. Şişecam succeeded by ranking high on the list according to eight criteria, which are: contribution to the economy, social opportunities offered to employees, employee competency, environmental awareness, financial stability, social responsibility, integration into international markets, and value creation for investors.

ŞİŞECAM CEO GÖRKEM ELVERİCİ INTERVIEWED BY FORBES

IN AN INTERVIEW WITH WORLD-RENOWNED FORBES MAGAZINE, ŞİŞECAM CEO GÖRKEM ELVERİCİ DISCUSSED THE IMPORTANCE OF GLASS AND ŞİŞECAM'S FUTURE VISION.

Şişecam CEO Görkem Elverici was recently interviewed by Forbes magazine, wherein he discussed the story and miracles of glass, as well as its potential to make the world a better place. Elverici emphasized the importance of glass by stating, "We have to celebrate this miraculous material because it could make the world a better place." He also touched upon ongoing projects within the scope of the International Year of Glass. Emphasizing that glass is the world's most sustainable material, as it can be recycled 100% endless times without loss of quality, Elverici reminded readers of Sisecam's innovative approach, stating that the company intends to bring the sector to a whole new level through its R&D efforts. Interviewer Judith Magyar also conducted an in-depth review of Şişecam's sustainability strategies and holistic transformation efforts, sharing her personal thoughts on the subject. According to Magyar, if there is a single global company to ensure that glass can help us achieve the UN's Sustainable Development Goals, that company is Şişecam.









CEO GATHERINGS CONTINUE

ŞİŞECAM CEO GÖRKEM ELVERİCİ MEETS YOUNG ŞİŞECAM EMPLOYEES VIA CEO GATHERINGS.

Şişecam CEO Görkem Elverici continues to get together with members of Gen Z. Through gatherings with Gen Z employees of Şişecam working across different business segments, Elverici listens to the opinions and suggestions of these young employees. Elverici most recently got together with employees in the Strategy and R&D departments as part of the CEO Gatherings event series. A separate CEO Gatherings event was also held at the Ankara Flat Glass Plant. These gatherings will continue in 2023.



ŞİŞECAM TURNS 87!

A GLOBAL PLAYER WITH MORE THAN 24,000 EMPLOYEES AND 45 PLANTS, ŞİŞECAM PROUDLY CELEBRATES ITS 87TH YEAR. ŞİŞECAM COMMERATES ITS FOUNDER WORLD RENOWNED LEADER KEMAL ATATÜRK WITH RESPECT ON ITS 87TH ANNIVERSARY.

Founded in 1935 under the instruction of great leader Mustafa Kemal Atatürk, Şişecam continues to carry his legacy and vision into the future. With more than 24,000 employees and 45 plants with sales to over 150 countries, Şişecam is taking decisive steps toward its goal of ranking among the top three global players in its business segments. Şişecam blends 87 years of expertise with a journey of transformation to become even more successful on a global scale. Providing input for different sectors across various geographies with its focus on global excellence and its robust production capabilities, Şişecam continues to move toward its goals and generate value for its stakeholders through smart use of technology, a competent workforce, and data-driven decision-making mechanisms.

ŞİŞECAM VISITED THE GREAT LEADER ATATÜRK'S MAUSOLEUM

As is customary each year, Şişecam's Board of Directors and Executive Board visited the Great Leader Atatürk at his mausoleum- Anıtkabir on its 87th anniversary. Held on November 26, the visit saw Şişecam's Board of Directors and Executive Board place a wreath on Atatürk's mausoleum before observing a moment of silence. The visit continued at the Misak-ı Milli (The National Pact) Tower, where Şişecam Chairman and Executive Member of the Board Prof. Dr. Ahmet Kırman signed the Anıtkabir Special Guest Book.





IMPRESSIVE ACHIEVEMENTS

ŞİŞECAM ÇAYIROVA SPORTS CLUB'S SAILING DIVISION MADE ALL OF US PROUD IN NATIONAL TOURNAMENTS.

ATATÜRK SAILING CUP AND CLOSING RACES

Hosted by Şişecam Çayırova Sports Club's Sailing Division and featured on the Turkish Sailing Federation's provincial event calendar, the Atatürk Sailing Cup and Closing Races took place on November 12-13. Club athletes received 4 first-place, 3 second-place, and 2 third-place rankings, thus coming in first place in the Optimist and ILCA classifications at the Clubs Cup.

Optimist General

Damla Öztürk 1st place Doğa Diğiş 2nd place Kaan Akbulut 3rd place

Optimist Girls

Damla Öztürk 1st place Doğa Dığış 2nd place Zeynep Eylül Karaduman 3rd place

Optimist Junior

Zeynep Eylül Karaduman 1st place

ILCA 4 General

Yağız Aşçıoğlu 1st place Defne Uçal 2nd place

OCTOBER 29 REPUBLIC DAY CUP SAILING RACES

Hosted by Şişecam Çayırova
Sports Club's Sailing Division and
featured on the Turkish Sailing
Federation's provincial event
calendar, the October 29 Republic
Day Cup Sailing Races took place
on October 29-30. Club athletes
received 2 first-place, 1 thirdplace, and 1 fifth-place ranking,
thus receiving the second-place
cup in the Optimist classification
and the third-place cup in the
ILCA classification.

Optimist General Classification

Alperen Ağma 1st place Optimist Junior Girls Zeynep Karaduman 3rd place

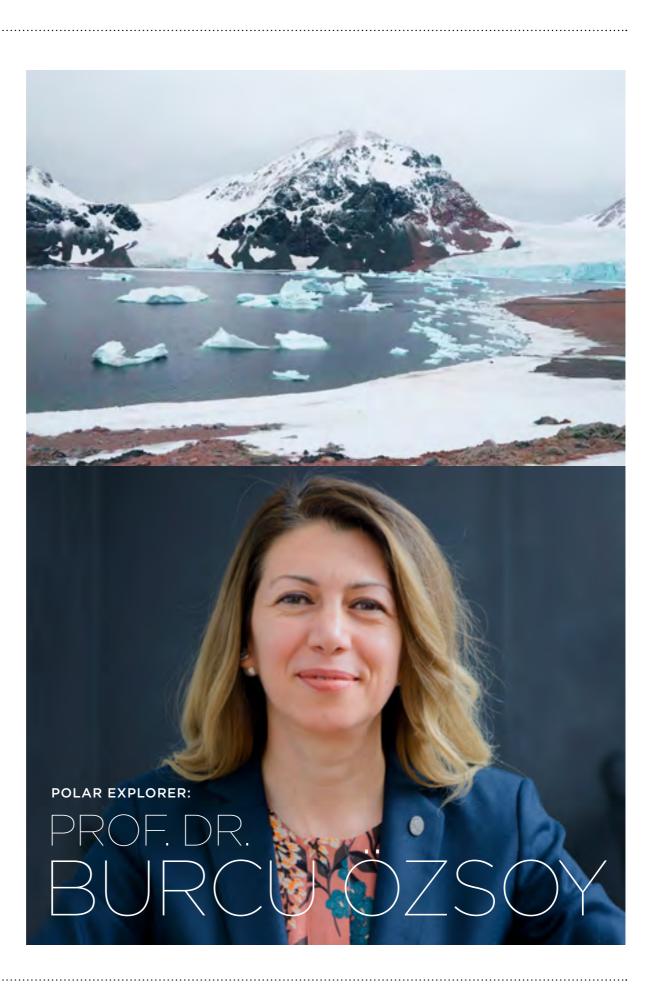
ILCA 4 General Classification

Yağız Aşçıoğlu 1st place Defne Uçal 5th place



We see development through glass.





TÜBİTAK MARMARA RESEARCH CENTER (MAM) POLAR RESEARCH INSTITUTE DIRECTOR PROF. DR. BURCU ÖZSOY SHINES A LIGHT ON THE PAST AND FUTURE OF OUR PLANET THROUGH HER YEARS-LONG SCIENTIFIC RESEARCH IN ANTARCTICA.





Hello Ms. Özsoy, let's start with a customary question: Can you tell us a little about yourself in your own words? What were some of the turning points in your life that brought you to the present day as a "Polar Explorer"?

Hello, first of all, I'm very happy to be here with you, as well. As you mentioned, there are some crucial turning points that we don't notice while we're experiencing them, but that shape our lives. They're actually the important factors behind our successes; they're what make us who we are. My life's journey toward the poles began around the time I started studying for my PhD. As a geodesy and photogrammetry engineer, I used to view the world as a whole. However, the reality that it was physically impossible for me to see every part, to work in every corner, is what guided me toward the field of satellite data and remote sensing. My doctoral advisor was also a scientist who was an expert in the field. However, there were two topics we were both curious about and wanted to research: Mars and

Antarctica... I suppose it's clear which one I chose. That was the precise moment when Antarctica entered my life and shaped my present day.

You previously served as the head of Istanbul Technical University's Polar Research Center (ITU PolReC), and you are currently the director of the TÜBİTAK Marmara Research Center Polar Research Institute (TÜBİTAK MAM KARE). Could you tell us briefly about your team and your ongoing projects?

At the Polar Research Institute, we essentially operate as a national contact point that coordinates the polar science studies carried out on Turkey's behalf. We organize polar expeditions that allow Turkish scientists to conduct scientific research in both the Arctic and Antarctic poles. Additionally, we undertake projects that aim to educate and raise social awareness about the polar regions as well as global climate change, whose effects we are beginning to feel more and more in our daily lives. At the TÜBİTAK Marmara Research Center, we are currently working with 11 researchers, including myself. This team comprises researchers from different disciplines, including captains, geologists, as well as environmental, meteorological, naval technology, and geodetic engineers. We hope that, in the future, we'll be able to take on even greater projects with a much larger team.

How did you decide to specialize in Antarctic sea ice?

I had also conducted research on marine pollution during my postgraduate studies, so the sea and the environment were always a part of my life. An important factor in remote sensing studies is confirming and supporting the data through land surveys. As I was debating "Mars or Antarctica?" with my doctoral advisor, when I thought about which of those destinations would allow me to go and conduct land surveys-at least with the options available at the time-it wasn't too hard to choose. Sea ice is the propelling force behind the global climate system. The freeze-melt cycle of sea ice guides ocean

currents on a global scale, and sea ice also reflects sunlight, thus helping to maintain the Earth's heat balance. Yet despite playing such a critical role, it's sad that very little is known about it. That is why I decided to study sea ice.

How many times have you been to Antarctica, and how did you feel the first time you stepped out onto the White Continent? When is your next trip to Antarctica?

So far, I've been to Antarctica seven times, the first time being in 2006. In 2023, I'll join our National expedition to Antarctica during summer there—which will be during the opposite season in our hemisphere.

Is there a permanent settlement in Antarctica? How do you conduct research there? Could you tell us about the process from data collection to analysis in broad strokes?

We currently have a campsite at Horseshoe Island, which is located to the west of the Antarctic Peninsula. Despite its limited resources, this campsite is a big asset for us during our



studies there. In the future, we plan to construct a research station on the same island that would allow scientists to also spend the winter there, thus providing an opportunity for longterm scientific research. Although the campsite and the rental boats only allow us to be there physically during summer, our observation stations located on-site collect data all year long. In fact, we can continuously access our meteorological data, for instance, via satellite communication. However, ecosystem studies and other research that requires instant, real-life observation can only be done in the summer. Meanwhile, research that requires sampling is done by properly transporting said samples to Turkey and analyzing them in labs here.

We have long been hearing news about sea ice melting. What does this mean for our planet?

Unlike glaciers, sea ice is formed when ocean water freezes. So, we're talking about a mass that

already belongs in the ocean melting and re-freezing. However, changing climate conditions cause less sea ice to form each year. This is particularly true for the Arctic, or the North Pole... Thousands of square kilometers of sea ice have disappeared completely.

Considering that sea ice forms the basis of climate, the less sea ice there is, the more the currents slow down-which causes extreme weather conditions around the world. On the other hand, the melting of glaciers-which form on land out of frozen freshwater-is similar to throwing ice cubes into a glass that's already filled to the brim: it causes the existing ocean borders to expand, thus triggering a rise in sea levels. According to modeling that's been done, if all the glaciers on Earth were to melt, sea levels would rise more than 60 meters-unfortunately, many city centers in Turkey fall below this altitude.

What do current studies on sea ice tell us about global climate change?

The North and South poles respond differently to climate change. In the Arctic, approximately 3 million square kilometers of sea ice have already disappeared. Every decade, we lose approximately another 5%. What this means is that an area of nearly four times the size of Turkey no longer freezes. There are scenarios that suggest sea ice will disappear completely by 2100. Meanwhile, in Antarctica, we have observed an increase in the area covered by sea ice-yet thickness is another important parameter when it comes to sea ice, and we are still unable to measure it precisely.

Perhaps the most summedup version of the message sea ice has for us is: "the climate is changing rapidly, and we must not wait any longer to take action." After all, it's nearly impossible to climates to form

in a world without sea ice, which means our entire planet would be covered in ice.

What do researchers working in Antarctica hope to contribute to the future of our planet?

Research in Antarctica not only enables us to gain a better understanding of our planet's natural processes, but it also provides us with information about the conditions in past ages. For instance, the discovery of ozone depletion is the result of long-term studies in the region. In short, scientists are working in these regions to understand the past, analyze the present, and prepare for or even prevent future global disasters.

Is combatting global climate change the only goal of research done on Antarctic sea ice? Can data obtained from such research be used in other areas?

Although sea ice is a propelling force for climate, it can also be seen as a threat to naval

transportation. It's not possible for every ship to navigate ice under every condition. Areas where sea ice has melted or retreated allow for new sea routes to open up, thus providing access to new natural resources and areas for fishery activities. However, finding new sources for our energy consumption needs will perhaps bring about other outcomes that will not make us happy.

We know that melting glaciers and sea ice have already started to affect many regions. How will these major reflections of climate change alter the face of the Earth as we know it?

This may sound a little ironic, but a lack of sea ice and glaciers may resemble a scene from a Hollywood movie. They signal to us the emergence of an extremely cold, ice-covered Earth with massive storms.

Many people struggle to associate polar melting with climate change, a reduction in food production, the threat of droughts, and many other outcomes. Could you briefly explain to us the butterfly effect of melting glaciers and sea ice?

We know that warming oceans will retain less carbon dioxide, and thawing permafrost will release more greenhouse gases. So, the reality is that a changing climate will result in greater greenhouse gas emissions, which in turn cause greater climate change. Additionally, a lack of ice to reflect sunlight back into space will mean more sunlight is absorbed, further driving up temperatures, So, here, the positive feedback mechanism tells us that the higher the temperatures rise, the faster they will rise.

A changing climate impacts different parts of the world differently. In some regions, it may alter precipitation regimes, causing flash floods and either more or less rains overall, while in other regions it may trigger storms. Many issues previously unseen, such as tornados or prolonged forest fires in the Mediterranean, are connected to climate change and polar melting. Of course, changing climates affect agricultural land, which impacts food supply. This is why we foresee that climate migration will occur.

When it comes to glaciers and polar bears, most of us picture a polar bear or a penguin waiting helplessly on a small iceberg. What can be done to prevent such pictures in the future? Icebergs and ice shelves that

lcebergs and ice shelves that have broken off glaciers and are floating out at sea make up these animals' living and hunting grounds. With fewer such habitats, these animals also face the risk of extinction. Individual efforts will no doubt have a positive impact on this trajectory, but global measures play a much bigger role.

This year's COP27 wasn't very satisfactory in terms of its messaging and content. What are your thoughts on that?

During COP27, some countries tried to back out of the 1.5°C target adopted in COP26, but they failed. India's proposal to phase down all fossil fuels was unfortunately omitted from the final draft.

Although it is heartening to see that climate awareness grows each year, in light of the cost of activities to reduce/stop climate change as well as current technological developments, it is of course not possible for policymakers to enact the exact right decisions.

What would you recommend to young people who seek to embark on an academic career in science?

Science begins with curiosity. Actually, what I would recommend to all readers is to be curious, to ask questions, and to do research on topics they are curious about. In the past, accessing information was much harder than it is today. Yet when we consider the current state of technology, we can access a paper published on the other side of the world-whether that's the U.S. or China-on almost the same day. This gives us a much higher chance of finding the answers to our questions.

Also, in the past, "having a profession" was an idea that was important to our decision-making. However, we now see that having an undergraduate degree can be enough to work on different

areas of a particular branch besides its core professions. So, it's possible to further your education in different areas through postgraduate studies and work on interdisciplinary projects.

What can individuals do to combat climate change?

As individuals, our most important responsibility is to develop our consumption habits and to educate the public at all ages, thus persuading policymakers to make the right decisions when it comes to climate change.

What do you think about Şişecam's sustainability policy, Care4Next?

Şişecam's strategies throughout the entire process from raw material procurement to postconsumer recycled materials are exemplary for many industries. I respect the efforts that align with or even surpass the UN Sustainable Development Goals.

What do you have coming up in the near future?

In the short term, we have our next Antarctic and Arctic expeditions on the horizon. In the long term, we will continue to strive toward our dream of a Turkey that achieves success in the international climate and polar sciences arena for a more sustainable world.



0 Z I





A NEW FIELD OF STUDY THAT'S GAINING MORE POPULARITY IN RECENT YEARS, QUANTUM INFORMATION SCIENCE PROMISES VAST DATA PROCESSING POWER. BUT WHAT EXACTLY DOES QUANTUM INFORMATION SCIENCE MEAN, AND HOW DO QUANTUM COMPUTERS WORK? JOIN US AS WE SEEK ANSWERS.

As the name suggests, quantum information science and technology is an extremely exciting discipline that's based on quantum mechanics. The two biggest scientific breakthroughs of the 20th century-computer science and quantum mechanics-come together in this incredible technology. The unusual properties of matter on a subatomic (or quantum) level is what forms the core of quantum information science and technology. As research in the field has picked up pace in recent years, the popularity of quantum technology continues to grow. To sum it up, quantum information science promises to deliver much greater data processing power than what is available with today's most advanced supercomputers. As a result, you could say that the main goal of quantum information science and technology is to make computers much faster and much more powerful.

WHAT ARE QUANTUM COMPUTERS?

Before we delve into quantum information science and technology, we'll first have to take a more detailed look at quantum computers. Quantum computers are electronic devices that have the capacity to perform quantum

computations. Although building a quantum computer is a highly complicated process, many of the biggest tech firms from IBM to Google are working on it.

Quantum computers are aweinspiring devices in that they have the potential to solve problems that even some of today's most powerful supercomputers struggle to solve. So, how do they do it? As you may know, traditional computers use a binary number system of O and 1, with each data-carrying digit called a bit. By contrast, quantum computers operate based on quantum data units called qubits. Qubit data does not consist of the numbers O and 1: instead, gubits can hold much more information, which means they offer much greater possibilities. This means much more advanced processing power as compared to the classical computers of our day. The more qubits a quantum computer has, the more processing power it holds.

If we delve a little deeper, qubits exhibit a phenomenon known as quantum entanglement, which means sets of qubits are so correlated that they cannot be considered independently of one another.

In other words, their state is always dependent on the states of other qubits in the same set. This dynamic enables the qubits to interact with one another and share information no matter how far apart they are. Scientists working to build quantum computers strive to make use of these surprising mechanics. We're talking about computers that are a million times faster and more powerful than today's most powerful supercomputers. To put it another way, the advancement of quantum information science and technology points to the rise of brand-new data processing opportunities. Isn't that exciting?

A BRIEF LOOK AT THE HISTORY OF QUANTUM INFORMATION SCIENCE

The concept of quantum computing was first modeled by physicist Paul Benioff in the early 1980s. Following his research, physicist Richard Feynman and mathematician Yuri Manin suggested that quantum computers have the potential to do things that classical computers cannot. Then, in 2012, the world's first commercial quantum computing-focused enterprise 1Qbit was formed. Based in Vancouver, Canada, 1Qbit has collaborated on projects with big companies like Microsoft, IBM, and Fujitsu to date. 1Qbit develops algorithms

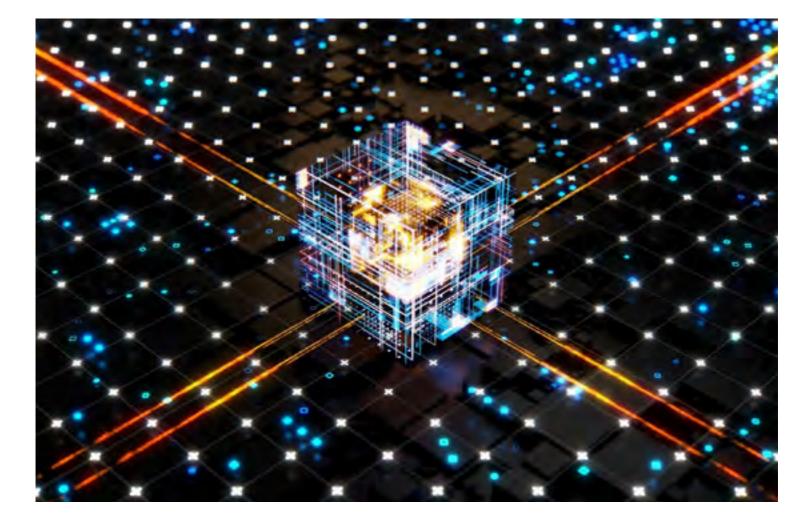
and software for quantum information processing hardware, which are used for a variety of applications. The company forges ahead with the belief that new hardware will play a key role in the future of information technology.

IBM AND GOOGLE'S QUANTUM **COMPUTING PROJECTS**

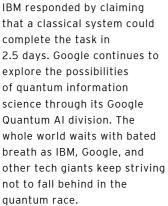
Introduced by IBM in 2019, Quantum System One made headlines as the world's first integrated quantum computing system. The introduction of this 20-gubit commercial computer system was highly important, as it meant quantum computing was no longer limited to labs and could enter the workplace. IBM's latest exciting step on its

quantum computing journey was last month's introduction of the 433-qubit quantum processor, Osprey. The company is working at full speed to increase qubit capacity even further.

Google is another tech giant that's working on quantum computing projects. Those who closely follow technology news will remember the company's jaw-dropping announcement in 2019. The team at Google stunned everyone by announcing that a quantum computer named Sycamore could complete a task in 200 seconds that would take a supercomputer 10,000 years to finish. Finding the 10,000-year figure to be an exaggeration,



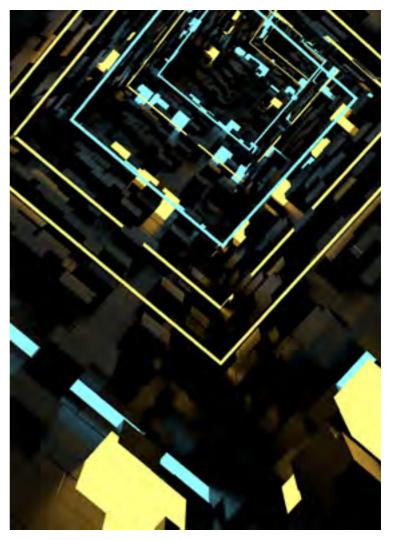


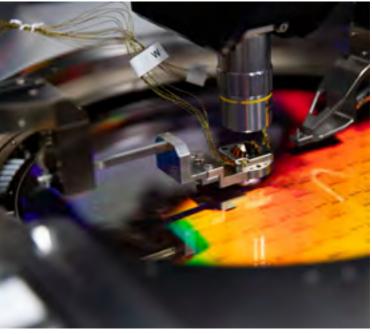


THE FUTURE OF QUANTUM INFORMATION TECHNOLOGY

To sum up, the biggest advantage of quantum information technology is that it allows us to develop devices with far greater capacity than

even today's most powerful supercomputers. As quantum computers can assess all possible configurations at once, allowing them to quickly solve problems that would take an extremely long time for today's classical computers to solve. This is precisely why many different fieldsfrom governments to financial service institutions to the medical industry-are paying close attention to quantum information science these days. As advancements in quantum computing take us one step closer to the future, we can't wait to see what new and exciting developments are in store over the coming years.





Z Z





COULD SMART ROOFS BE THE INNOVATION WE NEED TO MITIGATE THE NEGATIVE EFFECTS OF THE CLIMATE CRISIS ON CITIES?

According to a report published by CDP, the London-based notfor-profit charity that works to reduce the impact of climate change and conserve natural resources, 2022 was a year where we strongly experienced the devastating impact of climate change on our planet. Throughout the year, four out of five cities worldwide experienced climate hazards that are not at all easy to deal with, such as heat waves, heavy rains, droughts, and floods. The same report suggests that natural disasters due to the climate crisis are expected to grow even more intense and frequent by 2025. One out of every three cities will have to combat climate hazards that will affect at least 70% of their population. As you can see, the outlook is rather bleak. Faced with this reality, humankind must work diligently to come up solutions for our future, to combat the climate crisis. By placing people at the core of the measures we take to combat the climate crisis, we can build a healthier future

for city dwellers. One of the most important steps we can take toward this end is to prioritize the development of smart roofing that can be used in big cities. As emphasized in the abovementioned report, it is more important than it's ever been for cities to take bold, concrete, and effective steps toward dealing with the climate crisis.

LET'S GET TO KNOW SMART ROOFS

When we say, "smart roofing," we don't want you to think of those retractable roofs you see in restaurants or cafes. Although these systems are also sometimes called smart roofs, the ones we're discussing have been designed as mechanisms that can play a key role in our measures to deal with the climate crisis. This genius idea is the brainchild of Dutch startup MetroPolder. The company views rainwater as a resource, not waste, and creates inspiring projects that can help us in our fight against the climate crisis.



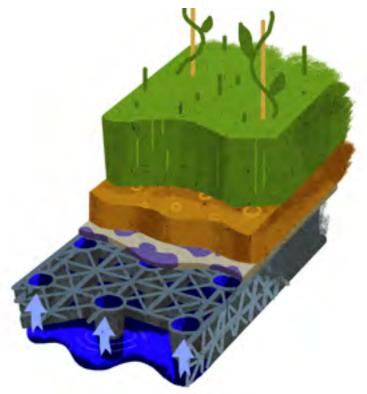


Based on the idea that rainwater is the source of all life, the team behind MetroPolder suggests that it is us people who turn it into wastewater. So, how can we utilize rainwater in cities? The first thing that comes to mind, of course, is to use it to water our plants, as well as for cooling purposes. What's more, rainwater can very well be filtered and used as drinking water. The Polder Roof developed by MetroPolder is a project that was designed to make all this a reality.

WHAT EXACTLY DO SMART **ROOFS DO?**

At its core, the Polder Roof is a smart roof designed to store rainwater and delay

drainage. The reality is that we will experience downpours at a greater frequency in the coming years due to the climate crisis we're facing. What's more, these downpours are expected to get more intense over time. During heavy rains, the asphalt surfaces in large cities exert significant pressure on sewage systems. The previously mentioned smart roofs enable rainwater storage directly on roofs, thus mitigating the problems caused by heavy rains and helping to prevent flooding incidents in large cities. Flooding disasters also occur with some frequency in our country, and their prevention requires a great deal of investment. Smart



roofs that allow for rainwater to be stored and reused are precisely one of those investments.

MetroPolder's smart roofing project is intriguing in that it has the capacity to deal not just with downpours but with extreme heat, as well. These roofs store rainwater in a special water retention buffer, which not only prevents flooding but can also be used to cool down buildings in the summer.

You may be wondering why we don't build more extensive sewage systems or rainwater storage tanks to combat flooding and downpours. The advantage of smart roofs is that they are cheaper than both of those options. Another advantage is that they make cities greener and more livable. These mechanisms make it easier to construct the green roofs, rooftop gardens, and rooftop parks we will likely encounter more frequently in the future.

So, how do smart roofs work? To sum it up briefly, these mechanisms transform rooftops into smart water storage units. The smart roof is essentially a system of water retention boxes where rainwater can be stored. Once the system is activated, the rainwater is stored in pools that can be controlled efficiently. Thanks to this system, all rainwater that falls on the roof can be stored and later either drained into the sewage system or used for another purpose. Smart roofs are equipped with a smart valve that helps them when it comes to preventing floods, and that can also be used as

an irrigation mechanism for rooftop gardens.

To date, smart roof projects in the United States and Europe have yielded positive results. By using smart roofs such as the Polder Roof system, rooftop gardens can become green spaces where various herbs are grown and city residents can enjoy a breath of fresh air amidst the metropolitan hustle and bustle. Although some of the advantages we've listed are still in their development phase, they illustrate that smart roofs can play a crucial role in city life and make water management easier in the future.





SUSTAINABILITY





IS IT POSSIBLE TO ACHIEVE OUR DREAM OF

ZERO EMISSIONS?

THE CONCEPT OF "NET ZERO EMISSIONS" IS ALWAYS AT THE FOREFRONT OF DISCUSSIONS ABOUT THE FIGHT AGAINST THE CLIMATE CRISIS. HERE, WE TAKE A CLOSER LOOK AT WHAT THE TERM MEANS AND WHETHER THIS GOAL IS A REALISTIC ONE.

Unbearably hot heat waves, severe droughts, destructive floods... As most of us know by now, the climate crisis is the reason behind most of the extreme weather conditions seen all over the world, from Europe to India. Prior to last month's United Nations Climate Change Conference (COP27) held in Egypt, the United Nations Environment Programme (UNEP) released the Emissions Gap Report, which calls on all societies to take immediate and comprehensive action in fighting against the climate crisis. If we don't

move quickly, it may unfortunately be too late for the whole world. Or, to put it more explicitly, the United Nations' report reveals that the situation is extremely urgent, and if comprehensive social transformation does not take place, the entire world will face a major climate disaster. The reason, according to the report, is that the goals of the Paris Agreement have not yet been met.

To give a refresher on the goals of the Paris Agreement-which was signed in 2015 and entered into force





in 2016-the decision was made to limit global temperature increase in this century to 2 degrees Celsius. However, according to the Emissions Gap Report, if worldwide climate policies continue the way they are today, the global temperature increase will reach 2.8 degrees Celsius by the end of this century-which is truly an extremely alarming increase.

WHAT DOES NET ZERO **EMISSIONS MEAN?**

To stop global temperature increase before it's too late, the most important step humankind can take is undoubtedly to reduce greenhouse gas emissions. This year's edition of the Emissions Gap Report also stressed that emissions must

be reduced by 45% worldwide to prevent a global disaster. The report once again reminds the whole world that social transformation is possible, but that we must act in solidarity to achieve it.

When it comes to discussions on how to reduce emissions, the goal of "net zero emissions" is something we hear often. So, what exactly does it mean? "Net zero emissions" refers to the idea of getting manmade greenhouse gas emissions as close to zero as possible, with the remainder being reabsorbed into the atmosphere. In other words, it is the practice of controlling the emission of gases that cause a greenhouse effect, such as carbon dioxide and methane.

In the end, it means controlling global warming. However, if carbon emissions continue at their current pace, it will unfortunately be impossible to combat the climate disaster forecasted by the United Nations.

IS NET ZERO EMISSIONS A **REALISTIC GOAL?**

Research suggests that it is possible for the world to achieve its goal of net zero emissions by 2050, but underlines that certain large-scale changes must be made. There are many things to be done, from a total transformation of energy systems to ending all coal and fossil fuel use. In fact, experts suggest that reaching the goal of a world with net zero

emissions is one of the biggest challenges that humanity has faced to date. Of course, the changes we refer to are not limited to the operations of large corporations or the decision-making mechanisms of governments. We must not forget that this will entail changes that will affect the lifestyles and production methods of people all over the world. In short, reaching our goal of net zero emissions worldwide is difficult but not impossible.

WHAT CAN BE DONE TO REACH **OUR GOAL OF NET ZERO** EMISSIONS?

Many governments and businesses are striving to reach their goal of net zero



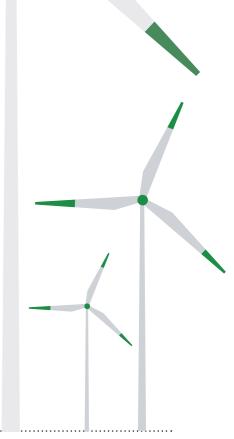
emissions by 2050. Today, we know that the energy sector is responsible for nearly three-fourths of greenhouse gas emissions. Therefore, combating the negative effects of the climate crisis must entail a transformation of the energy sector. The first step that we can take is to produce electricity using natural resources like wind, solar, and hydropower-after all, energy production with these resources doesn't release any greenhouse gases. Experts also take every opportunity to remind us that using renewable sources for energy production will significantly reduce carbon emissions. One thing the general public can do is to avoid transportation

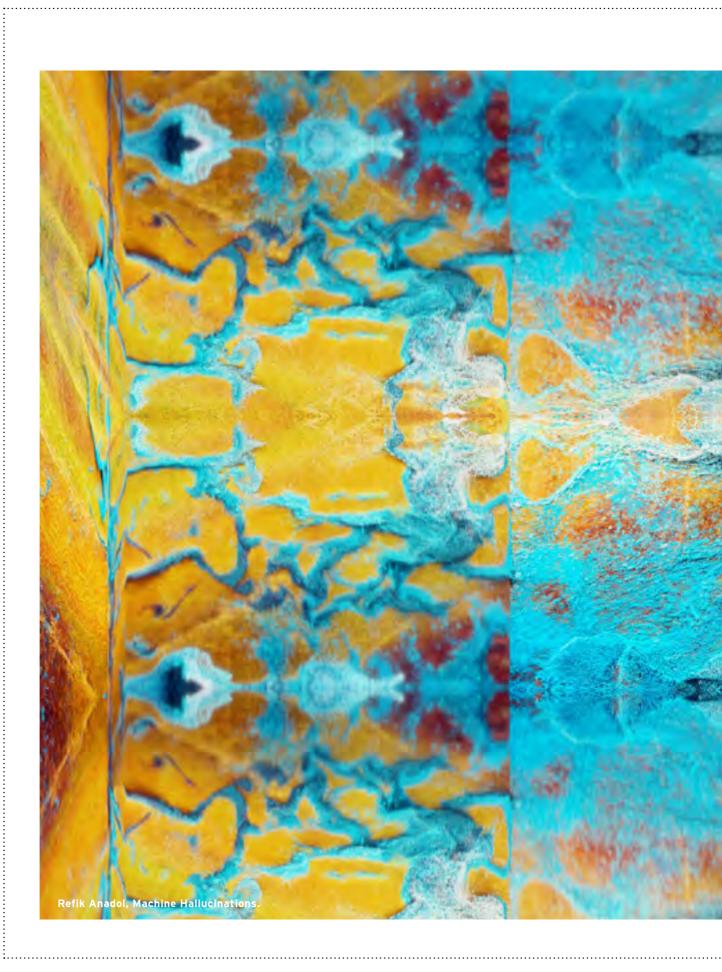
options and vehicles that use fossil fuels in favor of electric-powered alternatives. Both the institutions and countries that promised to reach net zero emissions by 2050 must take important steps toward their goal before 2030.

WHO IS DOING WHAT?

According to information released by the United Nations, more than 70 countries—including the United States and China—have promised to reach net zero emission goals. Meanwhile, over 3,000 organizations and financial institutions have collaborated with the Science-Based Targets initiative to reduce their emissions. More than 1,000 cities, over 1,000 educational

institutions, and over 400 financial institutions have also joined the United Nations' Race to Zero campaign, promising to reduce global emissions by half by the year 2030. Last month, Turkey also shared its new climate goal with the whole world at COP27. According to its statement, Turkey has increased its emission reduction target for 2030 from 21% to 41%. This means Turkey will have to reduce nearly 500 million tons of greenhouse gas emissions by 2030. As you can see, countries around the world are working to meet the goal of net zero emissions. We hope to see the positive results of these efforts reflected in next year's climate change reports.







INTRODUCTION MEDIA ART

LATELY, WE'VE BEEN HEARING MORE AND MORE ABOUT NEW MEDIA ART. JOIN US AS WE EXPLORE THE HISTORY OF THESE CONTEMPORARY ARTWORKS AND DISCOVER SOME OF THE TOP MEDIA ARTISTS OF OUR DAY.

One of the most popular branches of art today, new media art is a vast and inspiring field. Every artwork produced using electronic media technologies can fall under the umbrella of new media art. Many tech-based elements from computer animation and video games to interactive installations and artificial intelligence (AI)/augmented reality (AR) applications can all be used to create new media artworks. But before we go any further into detail, it's a good idea to mention that there is a difference between digital art and new media art. While digital art is an artform on its own, new media art is a broader term-one that also encompasses digital art.

A BRIEF HISTORY OF **NEW MEDIA ART**

When discussing the history of new media art, it's hard to establish strict boundaries, as some of the

elements that fall under this branch of art emerged as early as the 20th century. The reason it's called "new" is because it emerged much more recently than traditional branches of art such as painting and sculpture. In other words, the new media art of today is a space that questions how artistic production should be and challenges traditional methods of art production.

When we look at the history of new media art, we see artists in Chicago who experimented with video art in the early 1970s, combining computer technologies with traditional branches of art such as sculpture, photography, and graphic design. Then, we see that the improvement of computer graphics by the late 1980s and the growing prevalence of the internet by the 1990s contributed to the emergence of interactive art.

NEW MEDIA ARTISTS

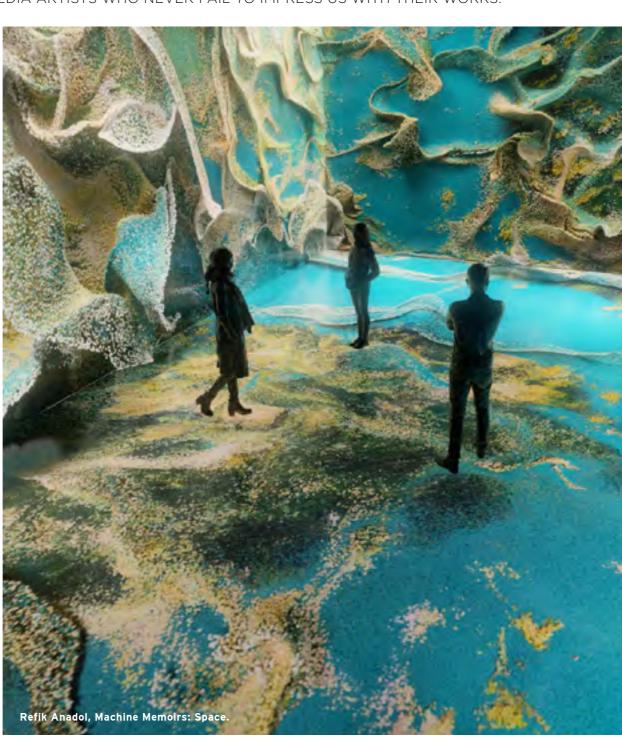
WHOSE WORKS INSPIRE US

INSTEAD OF GETTING LOST IN THE HISTORY OF NEW MEDIA ART, LET'S TAKE A LOOK AT THE PRESENT DAY, WHICH WILL HELP YOU GET A BETTER UNDERSTANDING OF THIS ARTFORM. HERE ARE SOME NEW MEDIA ARTISTS WHO NEVER FAIL TO IMPRESS US WITH THEIR WORKS.



REFİK ANADOL

Refik Anadol is undoubtedly one of the first names that come to mind on the topic of new media art. He is, for lack of a better word, the star of the Turkish new media art scene, and his impressive exhibitions all around the globe have introduced this artform to the masses. In his works, Anadol uses data and machine learning to combine new media art with architecture. This results in incredible works that could be called data sculptures or paintings. Anadol continues to work out of his personal studio in Los Angeles, with his most recent exhibition at Pilevneli Gallery, 2021's "Machine Memoirs: Space," generating plenty of buzz in Istanbul. In this exhibition, Anadol presented works that tackle mankind's space exploration journey from different aesthetic perspectives and thematic orientations. The artist continues to work with the view that AI is more like a teammate than a tool.



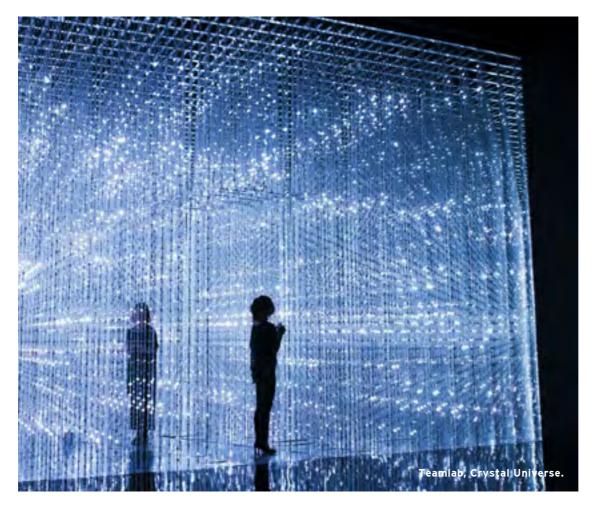






MARIO KLINGEMANN

Mario Klingemann is a groundbreaking artist when it comes to the use of Al in artworks. The German artist has made a name for himself through his use of neural networks, code, and algorithm in his works, which invite viewers to contemplate both humans' and machines' capacity for creativity. Klingemann's "Memories of Passersby I" was a pioneering work that blended Al and art. A fully autonomous Al trained on thousands of portraits by Western European masters continuously produced new portraits, stunning fans of art and technology alike. "Memories of Passersby I" also made history in 2019 as the first AI artwork sold by Sotheby's.



TEAMLAB

Formed in 2001, teamLab is an international art collective whose collaborative works combine art, science, technology, and natural elements. In recent years, the collective's works were showcased in various exhibitions at Istanbul's Borusan Contemporary, and teamLab works can also be found in the museum's permanent collection. The interdisciplinary collective doesn't just include artists; there are also programmers, engineers, mathematicians, and architects. The core aim of teamLab works is to examine how the self perceives and understands the world, and to challenge the boundaries of our perception. To date, the teamLab collective has presented works to art lovers in cities like New York, London, Paris, Singapore, Beijing, and Melbourne.







ES DEVLIN

English artist Es Devlin has made a name for herself through impressive collaborations with numerous world-renowned artists and brands. She has created incredible stage designs for concerts by some of the biggest stars in music like Lady Gaga, The Weeknd, Beyoncé, Adele, and U2, as well as undertaking collaborations with fashion giants such as Louis Vuitton and Yves Saint Laurent. Devlin's large-scale works focus on light and music, and could even be called stage sculptures. One of the artist's most recognized works is the 360-degree sculpture, "Memory Palace," from 2019. This incredible work of art maps out momentous events in human history-an unforgettable, 18-meter-long work that covered the entirety of the gallery space where it was exhibited.





CAN BÜYÜKBERBER

Visual artist and director Can Büyükberber creates audiovisual experiences that take on both digital and physical forms. Using various technologies from virtual reality (VR) and AR to projection mapping, Büyükberber generally creates works that tackle the idea of perception. Striving to create pieces that are immersive, Büyükberber has presented his awe-inspiring works in various spaces all around the world, most notably at Contemporary Istanbul.





ARCHITECTURAL TRENDS

OF THE FUTURE

LET'S TAKE A CLOSER LOOK AT TRENDS THAT WILL SHAPE THE FUTURE OF ARCHITECTURE.

As is the case with every discipline these days, global developments and changes reshape the agenda of architecture, as well. This results in exciting architectural trends that adapt to the rapidly changing requirements of modern life and society. As topics like climate change, sustainability, and energy efficiency have been at the forefront of the global agenda in recent years, they have of course influenced architectural trends, as well. Once we came face to face with the impact of human activities on the environment and ecological systems, efforts to make architectural projects more sustainable have naturally gained momentum. In light of all these developments, we can rest assured that we will encounter smart,

eco-friendly buildings much more frequently in the future. Now, let's take a look at climate change and sustainability focused architectural trends that are poised to shape the future of architecture.

REGENERATIVE ARCHITECTURE PLAYS A LEADING ROLE

The regenerative architecture movement aims to make architecture more sustainable. This movement is focused on eliminating architecture's harm to nature, on forming strong connections between people and nature, and on restoring damaged ecosystems. In regenerative architecture, special attention is paid to the use of natural elements as production materials during construction.





The use of recycled materials is also prioritized to minimize the amount of construction waste. While we're on the subject, it's important to remember that architecture entails more than just buildings. Regenerative architecture is a field that also considers the land where the building stands, energy usage, flora, and fauna. As a result, regenerative architecture views architecture as a part of nature, thus seeking to minimize harm to the environment. This is an architectural movement we will certainly hear more about in the future.

THE RISE OF SUSTAINABLE **BUILDING MATERIALS LIKE** STEFI

Known for its incredible durability, steel is one of the most useful materials in architecture. What's more, it's also one of the most frequently recycled materials worldwide. In recent years, steel has become more popular in the world of architecture due to

its efficiency, sustainability, as well as its affordability. A wide variety of architectural projectsfrom commercial structures to contemporary residential projects-can incorporate steel to their advantage. When it comes to the creative and effective use of steel in architecture, one of the first projects that spring to mind is Singapore's Helix Bridge for pedestrians. Other prominent materials in sustainability-focused architectural projects include bamboo, carbon reinforced concrete, and cross-laminated timber.

BUILDINGS ARE GOING GREEN

The biophilic design trend can be summed up as the idea of making buildings and homes greener. This trend is certainly music to the ears of present-day city dwellers who have less and less access to green spaces with each passing day. A concept first introduced by social ecology professor Stephen Kellert in the 1980s, biophilic design is centered around the idea

of introducing natural elements to modern buildings and cities. Buildings and homes constructed with this approach are not only environmentally friendly, but they also undoubtedly have a positive impact on mental health. Biophilic design can be used in both the exterior and interior design of buildings. Get ready to see more peaceful buildings and homes surrounded by green.

THE IRRESISTIBLE CHARM OF MINIMALISM

It is way past time we bid farewell to majestic structures. It looks as though two of the key concepts for the architecture of the future are functionality and the rational use of materials. Simple, minimalist elements lend these two concepts physical form in architectural structures. Simplicity is now much more sought after both in material choices and details. Monochrome options, no-frills designs, open spaces, airiness, and many other elements we associate with

minimalism will continue to play a key role in architectural and design trends in the years to

3D PRINTED HOUSES

Given all its benefits, it was inevitable that three-dimensional (3D) printing technology would also make an impact on architecture. Due to its affordability and fast output, experts predict that 3D printing technology will be used much more regularly in the construction of new buildings. An inspiring development in recent years was the 3D printed houses out of raw earth from architecture firm Mario Cucinella Architects. Named TECLA, these 3D printed houses utilized clay obtained from the riverbank. While the use of natural materials makes TECLA inspiring from a sustainability perspective, these homes were also noted for their aesthetic appearance. Another recent development in 3D printed houses comes from the United States, where the firm Icon announced it would build





100 houses with 3D printing technology in Austin, Texas.

BOTH SUSTAINABLE AND PRACTICAL: INTRODUCING SMART HOMES

One way to live in a way that respects nature and to minimize

the effects of the climate crisis is to use energy resources efficiently. A concept that entered our lives thanks to technological advancements, smart homes can play a key role in achieving such efficiency, as the advantages they offer are

no longer limited to boosting our quality of life or making our homes more comfortable. When we control the lighting elements, heating-cooling systems, and other devices via smart home technologies, we have the opportunity to use energy more efficiently. When we consider the ongoing energy crisis around the world and how important reducing fossil fuel use is in combating climate change, the importance of using energy efficiently in our homes becomes even more apparent.



A YEAR OF ACCOMPLISHMENTS

IN 2022, ŞİŞECAM ONCE AGAIN WON PRESTIGIOUS AWARDS ON BOTH A NATIONAL AND INTERNATIONAL SCALE, AS WELL AS ACHIEVING HIGH RANKINGS IN LISTS PUBLISHED BY TRUSTED INSTITUTIONS.





Şişecam Chairman and Executive Member of the Board Prof. Dr. Ahmet Kırman received the Chairman of the Year Award at the Le Fonti Awards, organized by one of Italy's leading news channels with a focus on economics.





Şişecam's Chief Executive Officer Görkem Elverici was featured in Fast Company's Sustainability Leaders of Turkey 50 list.



FAVORITE COMPANIES

Şişecam once again ranked among the top 10 companies in Realta Consulting's Turkey's Favorite Companies 2022 list.



Ranking among the
10 Most Admired
Companies in Capital
Magazine's Turkey's
Most Admired
Companies survey,
Şişecam became
Turkey's Most Admired
Company in the
ceramics-glass industry.



In the first edition of the Strong Women of Export Award Ceremony organized by the Turkish Exporters' Assembly (TiM), Şişecam received the leadership award in the Cement, Glass, Ceramics, and Soil Products industry.



M.I.C.E.

Hosted by KREA M.I.C.E.,
the awards ceremony for
Turkey's top company
executives in 2022 saw
Şişecam CEO Görkem
Elverici, Şişecam Chief
Human Resources Officer
Şengül Arslan, and Şişecam
Chief Sales Officer Ebru
Şapoğlu received some of the
highest votes, after which
they received the Golden
Leader Award in the CEO,
CHRO, and CMO categories,
respectively.



An important element of our corporate legacy, our Şişecam Glass Works Collection website received three awards at the Altın Örümcek (Golden Spider) Awards.



Şişecam won the silver award in **the treasury** transformation category at the **26**th **Alexander Hamilton Awards.**





Şişecam's 2021 Annual Report received a Gold Award and an Honorary Award at the Annual Report Competition (ARC), one of the world's most prestigious annual report competitions hosted by MerComm. The report also received the Gold Award in its own category as well as the Silver Award in the Regional Special Achievement: Best Agency Report category at the 21st Vision Awards hosted by the League of American Communications Professionals (LACP).



At the Stevie The International Business Awards® and The Stevie® Awards for Great Employers, Şişecam's HROneGlobal Transformation Program received the silver award in the Human Resources Department of the Year category, while its Global Young Talent Program Together received the bronze award in the Best Youth Employment Strategy category.



CIMENTO, CAM, SERAMIK VE TOPRAK ÜRÜNLERI IHRACATCILARI BIRLIĞI

At the 4th Champions of
Export Award Ceremony hosted
by the Cement, Glass,
Ceramics and Soil Products
Exporters' Association, Şişecam
received the award for the
company with the highest
exports in the flat glass,
glass household products, and
glass packaging categories.
Additionally, Şişecam Flat Glass
was recognized as the
company to increase its exports
the most.



Paşabahçe received the Best Customer Experience Management Award in the Glassware category at the A.L.F.A. Awards.



Paşabahçe Mağazaları's
Erenköy Experience Store
received the Honorary Award
in the Digital Transformation
category at the 21st
Perakende Güneşi (Retail
Sun) Awards.



The Paşabahçe
Experience Store
received a Special
Mention for its
interior design—
created by demirden
| ilio—at the German
Design Award, one
of the world's most
prestigious design
awards.

FAST@MPANY

Şişecam's ranking in the Corporate Culture 100 studyorganized by Fast Company and ERA Research with the support of Kariyer.net-rose by 61 points as compared to 2021, landing at 17.



Şişecam's Chief Human
Resources Officer Şengül
Arslan was listed in the
8th edition of Economist
Magazine's "50 Most Powerful
HR Leaders," which ranks key
figures in HR. Additionally,
she received an award for her
fourth time appearing in the
"50 Most Effective CHRO"
study by BMI Business School
and DataExpert.

Superbrands

Paşabahçe, became one of **Turkey's super brands** in the Superbrands Turkey brand ranking program.



Paşabahçe was listed as
Turkey's gold brand in the
porcelain and glassware
sector in the Benefit to
Economy Index (EFE) 2022
Report, a collaborative
effort between the
Turkish Reputation
Academy (TİA) and
Beykoz University.



Paşabahçe, won the Bronze Award in the Best Marketing Team in the Retail Industry category at The Hammers Awards 2022.



Şişecam's Chief Financial Officer Gökhan Güralp was featured in Fortune Turkey's "C-Suite Series - Fortune 50 CFO 2022" list.





The Sırma Eco-Friendly water bottle and the Kazbegi lemonade bottle designs received 2 silver awards in the Beverages category at the Crescent and Stars of Packaging Competition. The Sırma Eco-Friendly water bottle also received an award for its eco-friendly design at the XONE Design Awards hosted by the Cement, Glass, Ceramics and Soil Products Exporters' Association.



Şişecam Flat Glass received the Best Façade Material of 2020 Award for its Temperable Solar Low-E Glass Neutral 70/37 product at the annual Roof and Façade Materials Awards.



Şişecam's Chief Sales
Officer Ebru Şapoğlu
received an award for
her ranking in the "50
Most Effective CMOs"
list, which is held by BMI
in collaboration with
Fortune Turkey and
DataExpert to assess
marketing leaders in the
business world.



The Ilo candle holder collection by NUDE Glass won the Excellent Product Design award in the Tabletop category at the 10th German Design Awards.





The NUDE No.3 Martini glass designed by Ozan Özalp and the NUDE Dream Parade champagne glass designed by Seda Tunca received awards in the Tableware category at the Good Design Awards 2022.



Şişecam received the Gold Star award within the "Harvest" theme at the annual manufacturers' award ceremony hosted by Ford Otosan.



Şişecam's Chief Supply Chain Officer **Dr. Selma Öner** was listed as one of the **top 10 leaders in the "Turkey's 50 Most Powerful Purchasing and Supply Chain Managers"** in 2021.

A C M C M

exhibition

Coffee Break: The Adventure of Coffee in Kütahya Tiles and Ceramics

ONLINE

PERA MUSEUM

Home to ceramic production during the time of the Phrygian, Hellenistic, Roman, and Byzantine civilizations, Kütahya was also the second most important ceramic production center in the Otto-man era, after İznik. This traditional artform is still alive and well in Kütahya, as can be seen in this special selection from the Suna and İnan Kıraç Foundation's Kütahya Tiles and Ceramics Collection. The exhibition offers a look at coffee routines and rituals, as well as studying concepts such as public space, social role, and economy which are associated with modernity through the perspective of Kütahya ceramics, which contributed a great deal to coffee culture and its development. You can also take a virtual tour of the exhibition on the museum's website.







concert

Mor ve Ötesi

DECEMBER 30

ZORLU PSM TURKCELL STAGE

One of the most beloved bands in Turkish rock for over 20 years, Mor ve Ötesi is made up of Harun Tekin (vocals & guitar), Burak Güven (bass), Derin Esmer (vocals & guitar), and Kerem Özveğen (drums). The group previously represented Turkey at the Eurovision Song Contest in Belgrade in 2008, and now they're reuniting with Istanbul audiences after a long hiatus. If you want to greet the new year with a high dose of energy, why not reward yourself with a Mor ve Ötesi concert?







book

Stolen Focus: Why You Can't Pay Attention

JOHANN HARI

METIS PUBLISHING

When journalist-writer Johann Hari noticed how challenging it became for him to focus on anything in recent years, he first blamed himself before realizing that most people suffer from the same problem. That's when he began to explore in depth the reasons behind our inability to focus. In "Stolen Focus," Hari not only delves into these reasons in detail, but he also shares some methods by which we can regain our focus as individuals.

