

İKMİB's Complimentary Magazine | Issue: 2024/3

Mergers and Acquisitions in the Chemical Sector are Increasing



The Hidden Potential of Türkiye's Chemical Industry: Rubber Türkiye is the second largest plastic producer in Europe Dr. Süha Taşpolatoğlu: We are evaluating acquisition opportunities to expand into new geographies





the responsibilities that fall upon us."

"There is no field untouched by chemistry. We continue to fulfill all

"WE ARE AWARE OF THE ADDED VALUE WE CREATE AS THE CHEMISTRY FAMILY"

We are together again in this issue of Chemist, the key publication of our

As we approach the end of 2024, our chemical sector has maintained a strong export performance despite national and global economic and social challenges. At İKMİB, through domestic and international events organized throughout the year, we have worked to carry our exporters' potential to target markets, aiming to increase both the country's and sector's exports. In this context, we participated in fairs worldwide and organized sectoral trade delegations for the subsectors forming our chemical industry. In this issue, you will find detailed coverage of all these activities.

Additionally, we conducted interviews with sector veterans to bring you the latest developments in our pharmaceutical, plastics, and rubber sectors. Global warming and climate change have necessitated many new regulations, impacting everything from economies to social life. Our report on this topic provides insight specifically for the chemical sector.

Unfortunately, wars around us persist. Given the current trajectory, peace and stability do not appear to be on the horizon anytime soon. Naturally, global economies are also negatively impacted by such geopolitical instability. As we endure increasingly challenging financial conditions and mounting costs that cannot be met, we cannot ignore the reality that industrial facilities face closure risks, and the danger of mass unemployment looms.

While governments work to maintain macroeconomic balance, solutions are being sought for companies to withstand these challenges. One of these solutions is mergers and acquisitions, which we have highlighted in this issue for your benefit.

We have also analyzed two global economic powerhouses, the United States and the United Kingdom, in our country dossier. The importance of these two G8 member countries for our chemical sector continues to grow. As İKMİB, we support enhancing relations with these countries to ensure stability and seize opportunities within our increasing trade volume.

Dear colleagues, As the chemistry family, we are fully aware of our economic and social added value. We are a leading supplier for all other sectors, providing both raw materials and finished products. There is no field untouched by chemistry. We continue to fulfill all the responsibilities that fall upon us.

A few years ago, we emphasized the importance of digitalization, and today, we have moved beyond it. While we were discussing Industry 4.0 not long ago, we are now debating the risks and advantages of industrial facilities entrusted to artificial intelligence. To provide a brief perspective, we have included a small digitalization report in this issue, with a promise to delve deeper into the topic in upcoming editions.

Dear readers, Until we meet again in the first Chemist issue of 2025, I wish you all healthy and successful days.



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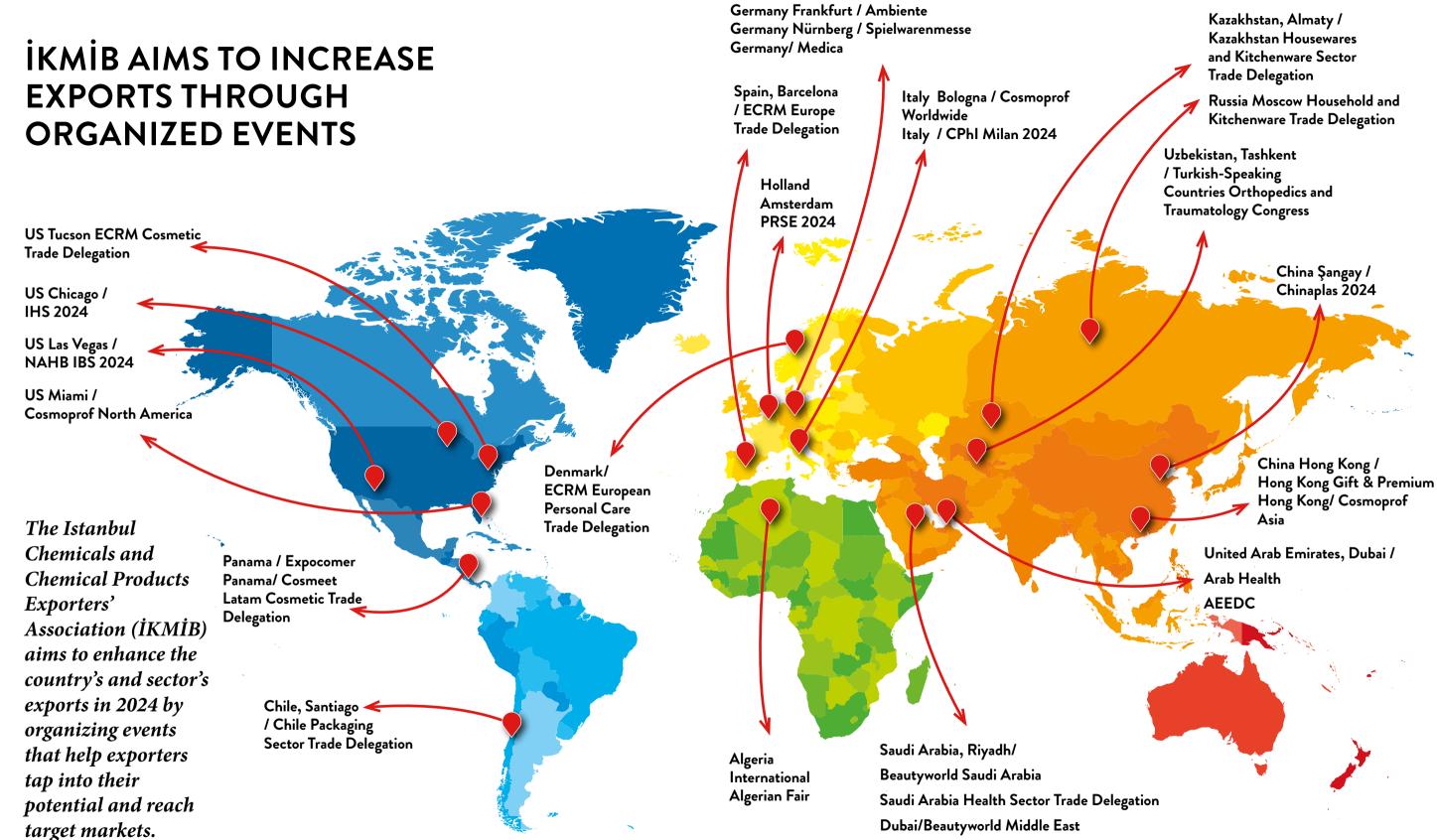


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İKMİB SHOWCASES ITS STRENGTH IN LATIN AMERICA WITH COSMETICS AND CLEANING PRODUCTS

İKMİB organized the Cosmeet Latam Sectoral Trade Delegation with the participation of 25 Turkish companies in the cosmetics and cleaning products sector.

aking significant steps to boost chemical exports, the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) successfully brought the cosmetics and cleaning products sector to the Latin American market with a powerful event. The Cosmeet Latam Sectoral Trade Delegation, held in Panama from September 1-7, 2024, aimed to further strengthen the sector's position in international markets.

The delegation to Panama featured 25 companies operating in cosmetics and cleaning products. The event drew significant interest not only from Panama but also from neighboring countries such as Chile, Colombia, Mexico, and Brazil. A total of 658 bilateral business meetings were held with 70 purchasing

companies from 14 countries, creating major opportunities for the sector. Additionally, the delegation visited leading chain stores in Panama, gaining valuable on-site market research experience.

12 MILLION DOLLARS EXPORT TO PANAMA IN THE FIRST 7 MONTHS

Highlighting Panama's importance as a market for cosmetics and cleaning products in Central and South America, İKMİB Chairman Adil Pelister stated: "This year, we organized the third delegation for the cosmetics and cleaning products sector and the fourth Cosmeet event within the past year. After Africa and Asia, we held the Cosmeet Sectoral Trade Delegation in Panama again

from September 1-7, 2024, following last year's success. Panama ranks among the top markets for our exports to Central and South America. In the first seven months of this year, exports of essential oils, cosmetics, and soap products to Panama amounted to \$2.7 million. Additionally, exports of washing preparations reached \$726,000 in the same period. Our total chemical exports to Panama in the first seven months stood at approximately \$12 million. When we analyze the figures, we see that the cosmetics and cleaning products sector accounts for a quarter of the total chemical exports to this country. Moreover, bilateral meetings with purchasing companies from neighboring countries will help increase Turkish companies' market share in the region. As İKMİB, we will continue to support our sector as always."





TURKISH COSMETICS SECTOR RECEIVED GREAT INTEREST AT BEAUTYWORLD MIDDLE EAST

Leading representatives of Türkiye's cosmetics and cleaning products sector came together at the Beautyworld Middle East fair through the national participation program organized by İKMİB.

eautyworld Middle East 2024, one of the world's most significant cosmetics and cleaning products exhibitions, took place in Dubai between October 28-30 this year. The Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB), which aims to strengthen Türkiye's cosmetics, beauty, and cleaning sectors in international markets, organized the national participation program for the 19th time. With the participation of 114 Turkish companies, local brands showcased their latest products on the global stage, garnering significant attention. Exporting companies had the opportunity to present a wide range of products, including cosmetics, perfumery, fragrances, skincare, haircare, nail care, raw materials, essential products, natural and organic items, cleaning products, packaging materials, aroma substances, and accessories. The Türkiye pavilion attracted intense interest, and Turkish cosmetics firms

were able to both strengthen relationships with existing business partners and establish new collaborations.

"COSMETICS EXPORTS INCREASED BY 3.15%"

Highlighting that the Beautyworld Middle East fair is the most important event in the Middle East for the cosmetics, personal care, and cleaning products sector, İKMİB Chairman Adil Pelister stated that they aim to promote Türkiye's innovative products and solutions in global markets to boost export potential. He said:

"With broad participation from Türkiye, the Beautyworld Middle East 2024 fair offers significant collaboration opportunities for professionals in the largest cosmetics and beauty fair of the Middle East. Türkiye is a net exporter in cosmetics products. In the January-October period this year, our cosmetics sector exports increased by 3.15%, reaching \$1.711 billion. Exports of washing and cleaning preparations also reached \$758 million during the same period. Additionally, our cosmetics exports to the United Arab Emirates rose by 18.09% to \$79 million, while exports of washing and cleaning preparations to the UAE totaled \$7.4 million in the same period."









İKMİB SHOWCASES THE STRENGTH OF TÜRKİYE'S PHARMACEUTICAL INDUSTRY IN ITALY

Continuing to strengthen the industry through activities that promote Türkiye's chemical sector in global markets, İKMİB showcased the Turkish pharmaceutical sector at one of the world's most significant pharmaceutical fairs, CPHI Milan 2024, with an info stand.

s the leading export association for the chemical sector, the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) continues to bring the Turkish chemical sector to global markets with determined steps. İKMİB promoted the Turkish pharmaceutical industry internationally with its info stand at CPHI Milan 2024, one of the world's leading pharmaceutical fairs. Held in Milan, Italy, between October 8-10, the fair welcomed 44 Turkish companies representing the entire value chain of the pharmaceutical industry.

Commenting on the event, İKMİB Chairman Adil Pelister said: "The CPHI 2024 fair is one of the largest pharmaceutical fairs globally, held annually in different countries. It takes place in various regions worldwide, including North America, China, India, and Southeast Asia. The fair is a global meeting point for companies and professionals operat-

ing in fields such as pharmaceutical raw materials, pharmaceutical production, biotechnology, and drug development. As İKMİB, we participated with an info stand to share information and promote the Turkish pharmaceutical industry. A total of 44 Turkish companies attended the fair. In 2023, our pharmaceutical

products sector achieved an export value of 1.5 billion dollars. According to data from the first nine months of this year, the sector's exports reached 1.1 billion dollars. We believe that such fair events will contribute to increasing exports. The next CPHI Fair will be held in Frankfurt between October 28-30, 2025. Additionally, the CPHI Middle East Fair will take place in Riyadh between December 10-12, 2024. I already wish success to our companies that will participate in these fairs."





TÜRKİYE'S COSMETICS SECTOR MEETS BUYERS IN COPENHAGEN

The Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) organized the "ECRM Copenhagen Cosmetics Sectoral Trade Delegation" in Copenhagen, Denmark, for the cosmetics and cleaning products sector.



Throughout the event, Turkish companies showcased branded or private label products such as skin care products, personal care products, soaps and wet wipes, and baby care products to buyers. During the two-day organization, 478 bilateral business meetings were held with approximately 75 purchasing companies from the USA, Denmark, and neighboring countries, including major buyers and retail chains like Watsons, Carrefour, and Rossman.











TÜRKİYE'S INNOVATIVE COSMETIC POWER SHINES AT COSMOPROF ASIA 2024

İKMİB organized Türkiye's national participation for the 12th time at Cosmoprof Asia 2024, one of Asia's largest cosmetic and beauty industry fairs.

he Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) left its mark on Cosmoprof Asia 2024, one of the most prestigious beauty and cosmetics industry events in Asia. At the fair, attended by 20 companies from Türkiye, Turkish brands had the opportunity to showcase their product range and solutions to the Asian market. Through the national participation program organized for the 12th time by İKMİB, Türkiye successfully demonstrated its strength and representation capability on the international stage this year.

Held in Hong Kong between November 13-15, 2024, the fair brought together hundreds of participants from around the world, serving as a heartbeat for the cosmetics, personal care, perfume, natural products, and beauty technology sectors. Turkish companies attracted great attention from visitors with their advanced and high-quality

product portfolios.

"WE AIM TO STRENGTHEN TRADE RELATIONS WITH THE ASIAN MARKET"

Commenting on the cosmetics and cleaning products sector, İKMİB Chairman Adil Pelister stated: "Türkiye has drawn attention, particularly in recent years, with its rise in production quality, design, and innovation in cosmetics and personal care products. It is an important opportunity for our Turkish companies to showcase this potential at Cosmoprof Asia 2024. Asia is a rapidly growing region with significant potential in the global cosmetics market. As İKMİB, we aim to strengthen trade relations between our cosmetics and cleaning products sector and the growing Asian market. This year, we organized Türkiye's national participation at the fair for the 12th time, with a total of 20 companies from our country attending as participants. We believe that our participating companies have seized opportunities for new business partnerships and agreements in the Asian market during the fair. We will continue to support our sector to contribute to increasing exports."







NEWS



TÜRKİYE'S COMPANIES MAKE A DIFFERENCE AT MEDICA 2024 FAIR

The Turkish national participation at the Medica 2024 Fair was organized for the 15th time this year by İKMİB. A total of 227 companies successfully represented Türkiye in the medical sector.

edica 2024, recognized as one of the most significant fairs in the medical industry, took place in Düsseldorf, Germany, between November 11-14. The Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB) organized the national participation for the 15th time this year, leading the strong representation of the Turkish medical sector on the international stage. A total of 227 companies from Türkiye participated in the fair, including 36 group participants and 191 individual participants. Turkish companies showcased a wide range of products, from medical devices to surgical equipment, hospital furniture to software solutions, to more than 80,000 visitors.

Evaluating the export figures of pharmaceutical products within the medical products sector, İKMİB Chairman Adil Pelister stated: "The export

of our pharmaceutical product group grew by 0.17% in the first 10 months of this year, reaching 1.24 billion dollars. During this period, our pharmaceutical product exports to Germany increased by approximately 14%, reaching close to 60 million dollars. Germany ranks fourth among the countries where this product group is exported the most. For our sector, Germany is an important export market. The Medica Fair, held annually in Germany, stands out as a meeting point where ideas and innova-

the best possible way by organizing national participation in the sector's most important fairs. Our country continues to develop in the healthcare and medical fields every year, positioning itself as a significant market. Through the fairs we participate in and the sectoral trade delegations we organize, we contribute to the sector's development and its goal of increasing exports. We are already planning activities for the upcoming period. We will continue to stand by our sector, which maintains steady growth despite challenging conditions."

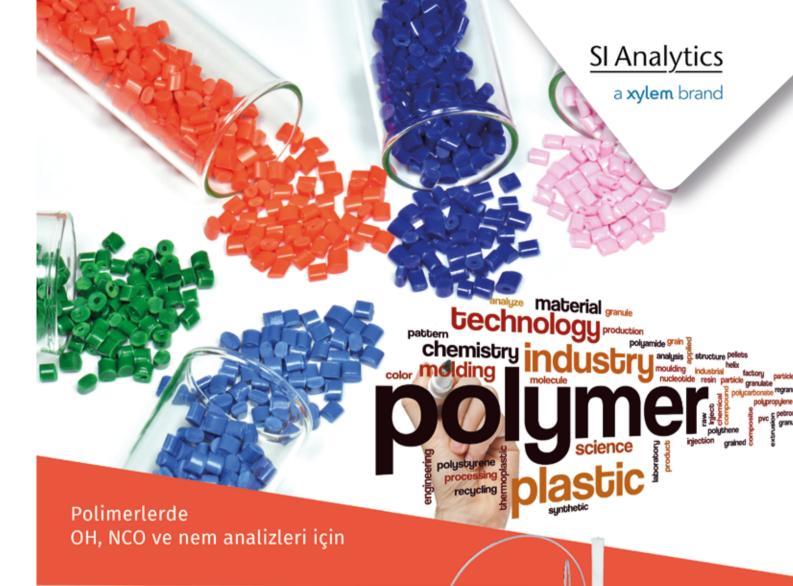
tions shaping the future of the health-

care world come together. At İKMİB, we

support the promotion of our country in







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Türkiye is the second largest plastic producer in Europe

Türkiye's plastics industry, with production exceeding 10 million tons, ranks as the second-largest producer in Europe and shines as a growing market with a turnover close to \$45 billion.



lastic bottles, bags, containers, and many more... The plastic industry, indispensable in daily life, appears in various fields, from food to automotive, healthcare to the packaging industry. Ranking as one of the leading areas in the chemical sector, the plastics industry further increased its contribution to the Turkish economy in 2023. With a total production exceeding 10 million tons, a turnover approaching \$45 billion, and direct exports surpassing \$7 billion, the sector draws attention. Annual growth rates exceeding Gross National Product (GNP) growth over the past decade emphasize the strategic importance of the sector in the country's economy. With its production capacity, Türkiye has risen to second place in Europe and sixth place globally in the plastics industry. Continuous technological advancements and increasing production capacities play a significant role in this success.

\$1.28 BILLION IN EXPORTS

The plastic raw materials sector achieved a total export value of \$1.28 billion in the first half of 2024 through exports to a broad geographic range. Establishing a wide trade network by exporting to 175 countries worldwide, the sector's largest export destination was the Russian Federation, accounting for 9.34% of total exports with \$119.87 million. It was followed by Italy with an 8.31% share and \$106.63 million, and Germany with a 5.97% share and \$76.64 million. Romania and Spain rank fourth and fifth in plastic raw material exports.

Türkiye has risen to second place in Europe and sixth place globally in the plastics industry.

Exports to the top five countries constituted 35.04% of total exports, while exports to the top 10 countries, including Egypt, Algeria, Greece, the United States, and Bulgaria, accounted for 52.43% of total plastic raw material exports. A comparison of January-June export figures for 2023 and 2024 shows a 2.10% decrease in 2024 exports compared to the previous year.

CARBON-NEUTRAL EXPORT INITIATIVES FROM THE EUROPEAN UNION

The European Union has taken significant steps to prevent environmental pollution in industry in recent years. Drafting a series of regulations to increase the use of recycled raw materials in plastic products, the EU mandates companies to use at least 25% recycled raw materials in their products by 2025. Additionally, the EU has set a target to recycle at least 55% of plastic packaging in member countries by 2030, aiming to further reduce waste generation. Efforts are also underway to ensure that Extended Producer Responsibility (EPR) systems for all





types of packaging are operated with minimal operational costs and ease by 2025.

Since July 3, 2021, the EU has banned the use of single-use plastics within its borders. With the enactment of this law, approximately 50% more plastic has been recycled. Seeking to minimize issues caused by plastic waste, the European Union announced a new plan under the "Zero Pollution Action Plan" to tackle microplastic pollution. Measures have been taken to ban the sale of products that lead to microplastics, including cosmetics, detergents, and toys, in phases. Throughout the plan, microplastic pollution is expected to be reduced by 30% and pellet pollution by 74% by 2030.

On September 25, 2023, the European Union took a significant step against intentionally added microplastics within the framework of the REACH Regulation of EU chemical legislation. These new regulations envisage banning the sale of microplastics and products that release them.

TÜRKIYE LEADS IN PLASTIC WASTE IMPORTS

Since China banned plastic waste imports in 2018, there has been an increase in Türkiye's imports of plastic waste. According to 2021 data from the European Statistics Office (Eurostat), Türkiye was the largest importer of waste from the European Union, with 14.7 million tons. Eurostat data further revealed that Türkiye was the top importer of recyclable plastic waste from the EU in 2022, importing 319,000 tons, equivalent to 29% of all recyclable plastics sent outside the EU. Türkiye was followed by Indonesia and Malaysia. According to 2020 data from the Turkish Statistical Institute (TÜİK), 32 million tons of waste are generated annually in Türkiye, of which only 11.8% is recycled.



Adding a new initiative to its activities for the plastics sector, which has a significant share in the chemical industry's exports, İKMİB organized its first national participation in PRSE - Plastics Recycling Show 2024, one of the world's most significant events in the plastic recycling sector. Adil Pelister, President of İKMİB, emphasized the importance of attending the fair to stay in sync with global recycling developments and not fall behind in the latest technologies in the sector. He also highlighted that the participation of Turkish companies at the fair is a significant step for exports, being a key player in the sector, and aligning with sustainability and the European Green Deal.

Pelister noted that Türkiye's plastic sector exports exceeded \$10 billion in 2023, with half of these exports destined for Europe. He expressed belief that Turkish companies' participation in the PRSE fair would contribute to capturing a larger share of Europe's \$137 billion market and following new trends and developments in the recycling sector. He also mentioned plans to organize another national participation at the fair in 2025.



LÖSEV Çiftliği'nden doğal Satsuma Mandalina

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"We are rapidly increasing our share of the global economy"

"Our plastics sector, with an economic scale approaching \$50 billion, has become one of the most important manufacturing industries in our country."

PAGDER Chairman
Kenan BENLILER

AGDER Chairman Kenan Benliler stated that the main driving force behind the rapid growth of the Turkish plastics sector is its success in exports. He discussed the sector's critical position within the chemical industry, its role in economic development, and Türkiye's competitive advantages.

What role does plastics, as one of the locomotive sectors of the chemical industry, play in Türkiye's economic development?

The chemical industry is one of the sectors with the most extensive interaction across industries and, therefore, has the greatest impact on employment and economic growth. When we analyze our country's chemical industry, we see that plastics hold the largest share among chemical sub-industries. In fact, this is not unique to our country. Worldwide, the plastics sector is observed to be the largest component of the chemical industry. The main reason for this is that the plastics sector

provides intermediate inputs to a wide range of industries. One of the clearest indicators of our sector's role in Türkiye's development is undoubtedly its growth rates. Since 2009, Türkiye's compound annual growth rate has been approximately 2.61%. During the same period, the plastics sector's compound annual growth rate was 5.84%. This means the plastics sector has grown 2.2 times faster than our country. As a result, today, our plastics sector, with an economic scale approaching \$50 billion, has become one of the most important manufacturing industries in our country.

What is the export potential of the Turkish plastics industry? Which countries with growth potential are on your radar?

The rapid growth of the Turkish plastics sector is primarily driven by its export success. When we analyze the last 20 years, we see that our sector has rapidly increased its share of the global economy. Over this period, after China and Poland, Türkiye

ranks third in increasing plastics exports in terms of value. For example, during this period, Germany increased its exports by 75%, Italy by 74%, while Türkiye's plastics exports increased by 700%. In terms of quantity, Türkiye is the leading country in export growth. While this is encouraging, it also highlights areas where our sector's exports face challenges. Unfortunately, we have not been able to increase our export unit prices as much as our competitors. If we can transition to higher value-added production in the upcoming period, I can confidently say that our sector has tremendous export potential. For instance, in the plastic products category, Türkiye is the world's sixth-largest exporter in terms of quantity. While we export similar amounts as Italy and Poland, who rank just above us, their export value is double ours. In other words, without increasing the quantity of our exports, we could double our export revenue.

On the other hand, market diversification is crucial for sustainable growth in exports. In this context, our sector aims to go beyond traditional markets and expand into more distant markets. In the medium to long term, we aim to grow in markets like the U.S. and Japan.

In which areas does Türkiye's plastics sector have a competitive advantage compared to the world? What strategies should be followed to strengthen its position in the global market?

One of the standout features of the Turkish plastics industry compared to its competitors is its dynamic structure that enables quick decision-making. We had the opportunity to observe this closely during the pandemic. During the period when supply chain disruptions impacted production worldwide, the Turkish plastics sector became the second-largest exporter among the top 30 exporting countries, following China. Post-pandemic crises in our region also shed light on the sector's crisis management capabilities.

Going forward, our sector should focus not on quantitative growth but on qualitative growth. Instead of increasing production capacity, we need to change our production composition to create products with higher added value. Achieving this requires investment in R&D, design, and branding. Over the past 20 years, Türkiye ranks third, after China and Poland, in increasing the value of plastics exports.

What kind of profile does Türkiye exhibit in terms of waste management, a concept expected to gain even more importance in the future, and what sustainability efforts is PAGDER undertaking?

The Turkish plastics recycling sector has made significant strides in recent years, reaching high processing capacities. Unfortunately, this progress in recycling is not reflected in waste management. As is well known, Türkiye lacks a source-separation system. As a result, plastic waste comes into contact with organic waste, making high-quality recycling of these materials impossible. Central and local authorities must collaborate to quickly implement an effective source-separation system.

As PAGDER, through our "Plastics Returning Home" project launched in 2014, we aim to raise awareness of recycling in society. Under this project, we donate shelters made entirely from recycled materials to animal shelters in collaboration with municipalities, providing our animal friends with secure and warm homes.

What are your thoughts on the R&D investments and potential for developing innovative products in the sector?

In recent years, we have witnessed an acceleration in R&D investments within our sector. However, in the current economic climate, where financing costs are rising, small and medium-sized enterprises may be hesitant about R&D investments. At this point, I believe that centers capable of offering solutions to companies lacking sufficient technical infrastructure for R&D, as well as facilities for testing and analysis, are essential. The Chemistry Technology Center (KTM), initiated by the Istanbul Chemicals and Chemical Products Exporters' Association (İKMİB), represents a crucial step to fill this gap in our sector. We hope that our sector stakeholders will make the best use of this opportunity to develop much higher-quality products.



"WE ARE EVALUATING ACQUISITION OPPORTUNITIES TO EXPAND INTO NEW GEOGRAPHIES"

"We take pride in the fact that one out of every ten medicines used in Türkiye is an Abdi İbrahim product. We continue to assess new acquisition opportunities and strategic partnerships to expand into new geographies."



r. Süha Taspolatoğlu, CEO of Abdi İbrahim, states that they are a company that never limits success to merely producing medicines or achieving commercial growth. He says, "In line with our mission of 'Improving Life and the Future' and our focus on creating long-term value, we work to contribute to our business, society, environment, and humanity, aiming to leave a positive mark on the world."

With its over-century-long journey, how do you evaluate the enduring success of Abdi İbrahim,

a pioneer in the Turkish pharmaceutical sector? What do you think is the secret to maintaining this solid journey?

While evaluating the 112-year success story of Abdi İbrahim, I would like to particularly emphasize that our strong values, which form the foundation of our company, have been passed down through generations with visionary leadership. Abdi İbrahim has never confined success solely to producing medicines or commercial growth. Guided by our mission of 'Improving Life and the Future' and our focus on creating long-term

value, we aim to contribute to our business, society, environment, and humanity, striving to leave a positive mark on the world. Thanks to this holistic perspective, the name Abdi İbrahim has always been associated with leadership, pioneering achievements, and excellence.

Abdi İbrahim presents a strong profile in its sector. What is the company's strategy in the global market?

Today, as Abdi İbrahim, we collaborate with over 30 licensors globally and offer our stakeholders the industry's most extensive portfolio of over 250 brands and 500 products in chemical, biotechnological, and consumer health segments. This is facilitated by Türkiye's largest and most equipped field sales team of 2,500 professionals. We are proud that one out of every ten medicines used in Türkiye is an Abdi İbrahim product.

Our Production Complex in Istanbul, which spans a total closed area of 142,500 m² and features state-of-the-art technology, is the largest facility in the MENA region, with a production capacity of 700 million units. Within this complex, we have our R&D Center, Chemical Products Production Facility, Hormone Production Facility, Sterile Ophthalmology & Sterile Inhalation Production Facility, and AbdiBio, Türkiye's largest biotechnological drug production facility. Beyond our market leadership, we also maintain our leadership in employment, creating the highest level of employment in the Turkish pharmaceutical sector with our team of 5,500 skilled and qualified personnel.

In addition to our local strength, we are also an influential player in the international arena. We are growing in foreign markets day by day, currently exporting to over 70 countries. Today, we operate with our organizational structures in 18 countries, including Türkiye, Germany, Albania, Azerbaijan, the United Arab Emirates, Bosnia and Herzegovina, Algeria, Georgia, Morocco, Iraq, the UK, Italy, Kazakhstan, Kosovo, North Macedonia, Uzbekistan, Saudi Arabia, and Tunisia.

In 2010, we established Abdi Farma in Portugal, which holds the marketing authorization for all Abdi İbrahim products in European markets. We currently offer our products in count-



ries such as Germany, Italy, the UK, France, the Netherlands, Croatia, the Czech Republic, and Spain.

In 2012, we partnered with Japan's leading company Otsuka Pharmaceutical to establish Abdi İbrahim Otsuka (AIO) in Türkiye with a 50% partnership.

In the same year, we acquired a 60% stake in Global Pharm, one of Kazakhstan's largest companies, forming Abdi İbrahim Global Pharm. Similarly, in 2014, we established Abdi İbrahim Remede Pharma in Algeria with a 50% partnership with Remede Pharma. These investments are significant milestones shaping our growth ambition beyond Türkiye.

As a result of these investments and our ambitious vision, in 2020, we acquired a 28.5% stake in OM Pharma, a Swiss pharmaceutical company, alongside a Swiss joint venture group. This acquisition made us the first and only Turkish



With 5.500 Employees, the Industry's Employment

Exporting to 70+

GAME CHANGERS





pharmaceutical company to establish a strategic partnership with a European pharmaceutical company.

In 2024, we established Abdi Cigalah Pharma in partnership with Cigalah Healthcare, a leading company in pharmaceuticals and consumer health in Saudi Arabia and Gulf countries. With this partnership, we aim to export our innovative products, starting with the Saudi market and expanding to other Gulf countries.

How do you evaluate the global competitiveness of the Turkish pharmaceutical sector? What steps is Abdi İbrahim taking to gain a competitive advantage internationally?

Our country boasts a strong pharmaceutical industry with a long history, qualified workforce, and high production technology and capacity. Today, the Turkish pharmaceutical industry exports medicines to about 185 countries, including many European countries like the UK, France, and Germany, as well as North America, Eastern Europe, CIS, the Middle East, and North Africa. According to IQVIA data, Türkiye ranked 19th in global sales in dollar terms in 2023 and is projected to remain among the top 20 markets by 2027.

As a company, we aim to establish ourselves as a prominent player in developed markets and increase the share of our international revenues to 50% of our total income. Leveraging our experience in Kazakhstan, Algeria, and developing

countries, we continue to evaluate new acquisition opportunities and strategic partnerships to expand into new geographies.

Innovation is one of the key factors for success in the pharmaceutical industry. Can you tell us about Abdi İbrahim's R&D efforts?

We are among the companies making the highest R&D investments in Türkiye. Our R&D and innovation efforts focus on high-value products that require advanced technology and provide a competitive edge in national and international markets. We continue our efforts to develop differentiated products and business models in the consumer health sector and produce our biotechnological drugs in the biotechnology field. Our R&D vision plays a significant role in these efforts. In addition to projects conducted internally, we carry out joint projects with domestic and international scientific institutions and engage in know-how transfer.

At our R&D center, staffed by experts mostly holding doctorate and master's degrees, we work on nearly 100 products across various indications and dosage forms in medicines, medical devices, and dietary supplements. We have over 35 innovative projects supported by TÜBİTAK, and we have filed over 280 patent applications for projects developed at our R&D center.

Thanks to our R&D efforts, we continuously enhance our competitive advantage in both local and global markets. With our innovation-driven approach, we are committed to producing solutions that create value in healthcare and building a healthier future.

Given the growing importance of minimizing environmental impacts from production to export, what is Abdi İbrahim's sustainability approach? How does your sustainability strategy create a difference in the global market?

At Abdi İbrahim, we operate with the awareness that human health is interconnected with the health of our planet. We shape all our actions with an ESG (Environmental, Social, Governance) perspective, enabling us to measure the company's performance not only through positive financial results but also by the impact created for society and the environment. Under our HEAL2050 strategy, which we have designed with a long-term value creation focus, we concentrate on three main areas: improving the future of the ecosystem, humanity, and business.

One of our standout projects under the "Improving the Future of the Ecosystem" initiative is the Green Harmonization project, where we completed Phase 1 successfully. Using an AI-based intuitive optimization algorithm, we reduced greenhouse gas emissions from packaging materials by 28% per product, marking a first in the global pharmaceutical industry. This project saved 179 tons of packaging material, energy equivalent to the annual consumption of 150 households, and 1 million euros annually in material costs.

Moreover, in 2023, we achieved a significant milestone. Since 2020, we have been reporting to the Carbon Disclosure Project (CDP) and previously received grades of "B, B, B" in our reports. Thanks to our consistent sustainability efforts, we became the first and only Turkish pharmaceutical company to make it to the A List of the CDP's Climate Change Program. This year, we also pledged to set a "2050 Net Zero Emission Target" in line with the SBTi Net Zero Standard.

How has 2023 and the first half of 2024 been for your company?

At Abdi İbrahim, we carry out all our investments in line with our "Vision 2025" strategy, which we announced in 2020 and guides the company's

"We became the first and only Turkish pharmaceutical company to establish a strategic partnership with a European pharmaceutical company through OM Pharma."

five-year future. The five growth areas we have identified under this strategy are: the Turkish market, international markets, consumer health, production services, and biotechnology. We continued to expand our presence in strategic geographies to increase our impact in international markets. In the consumer health sector, we developed business models that will position us ahead of our competitors with differentiated products. In biotechnology, our efforts to produce our own biotechnological drugs are advancing rapidly. With the steps we take in sustainability to improve our society and environment, we embrace the





In Türkiye: 250
Brands,

500 Products

In International Markets:

120

Brands,

220

COMPANIES TAKING SWIFT ACTION AGAINST CLIMATE CHANGE GAIN VALUE

Based on data collected from companies that have reached a fundamental level of maturity in addressing climate change, the EY 2023 Sustainable Value Study reveals the actions companies have taken to combat climate change, their expectations, and the value they have achieved.

35%

of companies state that one of the top three barriers to doing more for climate change is retaining talent or developing skills.

cite the lack of expertise in climate change on the board or within management as one of the top

20%

report that their biggest investment is in "human resources

9%

say they have completed recruitment or talent development processes to acquire expertise in climate change.

THE BIGGEST EXTERNAL FACTORS HINDERING GREATER EFFORTS TO COMBAT CLIMATE CHANGE:

39%

cite customers not changing their purchasing or behavior as expected. 38%

highlight uncertainty caused by economic or geopolitical disruptions. 34%

point to a lack of data and technology to reduce or offset emissions.

33%

mention uncertainty surrounding new regulations.

32%

face challenges in hiring talent with climate change expertise.

19%

of companies have pledged to become carbon negative.

have committed to achieving net zero carbon emissions.

55%

of companies aim to reduce emissions by 2030.

27%

plan to cut emissions by 45% or more.



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Mergers and Acquisitions in the Chemical Sector are Increasing



The global management consulting firm Kearney has published the 10th edition of its 2024 report on mergers and acquisitions (M&A) in the chemical sector. According to the report, an increase in M&A activities is expected in the chemical sector following years of stagnation.

In recent years, M&A activities in the chemical sector have shown a volatile trend due to uncertainties and macroeconomic conditions. Although M&A activities in the sector have significantly slowed in recent years, Kearney's latest Chemical Industry Executive M&A Report highlights optimism for 2024. The challenges faced by the sector in recent years and the foundations laid during this period indicate signs of future recovery.

According to the report, the total value of global M&A deals in the chemical sector declined by 4% in 2023 compared to the previous year. Since 2019, deal values have generally decreased by 59% due to global economic uncertainties, high inflation, recession fears, and geopolitical tensions. Although deals announced in 2021 signaled a recovery, the sector was negatively impacted by factors such as the war in Ukraine affecting supply chains, COVID-19 restrictions in China, and rising operational costs. Despite this, there is strong hope for 2024.

OPTIMISTIC SIGNALS IN THE CHEMICAL SECTOR

Despite the challenges of 2023, the chemical sector is receiving promising signals for 2024. According to Kearney's survey, more than 50% of chemical executives expect an increase in M&A activities over the next 12 to 18 months. This optimism is primarily driven by government policies and shareholder pressures focusing on sustainability projects.

Developing new products, focusing on sustainability, and promoting low-carbon footprint projects are seen as major growth drivers for 2024. Additionally, the transition to innovative business models focusing on recycling, renewable energy, and specialty chemicals remains a significant agenda for industry leaders.

Furthermore, the acceleration of divestments of non-core assets will align with companies' strategies to narrow their portfolios and enhance supply security. The emphasis on re-localization will also play a

crucial role in this process.

GROWING INTEREST IN SPECIAL-TY CHEMICALS

Meanwhile, specialty sectors such as personal care, food, electronics, construction, and microbial control have shown solid growth potential, significantly increasing their market share between 2020 and 2023. Specialty chemicals, being less affected by cyclical economic fluctuations and offering high profit margins, will continue to drive future M&A activities. Surveyed executives highlighted specialty and fine chemicals as the strongest areas for growth in the sector.

In 2023, strategic investors gravitated towards safer investments, while financial investors adopted a more aggressive stance. Financial investors accounted for 26% of major M&A deals last year, compared to just 7% in 2022.

DECARBONIZATION TO SHAPE THE CHEMICAL SECTOR

Kearney's report predicts that 2024 will feature three key factors in the chemical sector: decarbonization, M&A activities in Europe, and the influence of strategic private equity (PE) investors. The report notes that while decarbonization has played a significant role in the chemical sector in recent years, activities in this area temporarily slowed in 2022. However, recovery signals emerged in 2023, and government regulations and shareholder pressures for low-carbon products are expected to boost investments in this area in 2024.

The report also highlights the stagnation of M&A activities in Europe due to the

29

Europe has become a challenging market for foreign investors due to geopolitical risks like the war in Ukraine, causing Europe-centered M&A transactions to drop from 58% in 2021 to 15% in 2023.



war in Ukraine and high-interest rates, although investor interest in the region has revived due to low valuations. Experts anticipate an increase in M&A deals in Europe's chemical sector in 2024.

The growing activity of PE investors in the sector is another trend emphasized in the report. With interest rates remaining low, PE investors are channeling large cash reserves into strategic acquisitions. Interest in projects aligned with ESG (Environmental, Social, and Governance) criteria has also increased. According to Kearney, these three factors will be among the most critical dynamics shaping the direction of the chemical sector in 2024.

CHALLENGING PERIOD FOR M&A ACTIVITIES IN EUROPE

The report points out that M&A activities in Europe have experienced a significant decline in recent years. Europe, which held 41% of global M&A transaction value in 2022, saw this share drop to 23% in 2023. In contrast, North America's M&A market share increased from 24% to 30%, while Asia's share remained stable at 29% and

More than 50% of chemical executives expect an increase in M&A activities over the next 12 to

18 months.

12 to 18 months, while growth is anticipated in North America and the Asia-Pacific regions. Due to geopolitical risks like the war in Ukraine, Europe has become a challenging market for foreign investors. This situation has caused Europe-centered M&A transactions to plummet from 58% in 2021 to 15% in 2023. However, experts believe that if the environment improves within the next two to three years, Europe could regain its appeal.

Meanwhile, the Kearney report indicates that new opportunities could emerge in the M&A market as major chemical players pursue restructuring plans. Nevertheless, current market conditions make it challenging to assess the rationale and benefits of each deal. As a result, particularly in the European market, investors will need to carefully analyze each transaction.

M&A OPPORTUNITIES IN A HIGH-INTEREST ENVIRONMENT

The low valuations in the chemical sector and the liquid positions of private equity (PE) investors have placed these players in a strong position in the M&A market. In 2023, 20% of M&A transactions were carried out by national oil companies (NOCs), and this ratio is expected to stabilize at 12% tain their market share.

In a prolonged high-interest environment, chemical sector executives anticipate that PE investors will continue investing faster than financial players. These high interest rates are expected to lead PE investors toward strategic moves such as asset sales and dividend distributions, while potentially slowing down M&A activities among financial players. NOCs, with their larger cash flows compared to PE investors, could execute strategic moves in the market.

Cost-reducing synergies and access to strategic assets are likely to sustain interest in M&A transactions even in a high-interest rate environment. According to the report, 67% of chemical companies achieved cost advantages and synergies through M&A, while 57% gained easier access to strategic assets. However, goals such as obtaining higher valuations and building a better market position have had relatively less impact. High exit valuations and strategies to strengthen market positions offer significant opportunities for PE investors in this process.

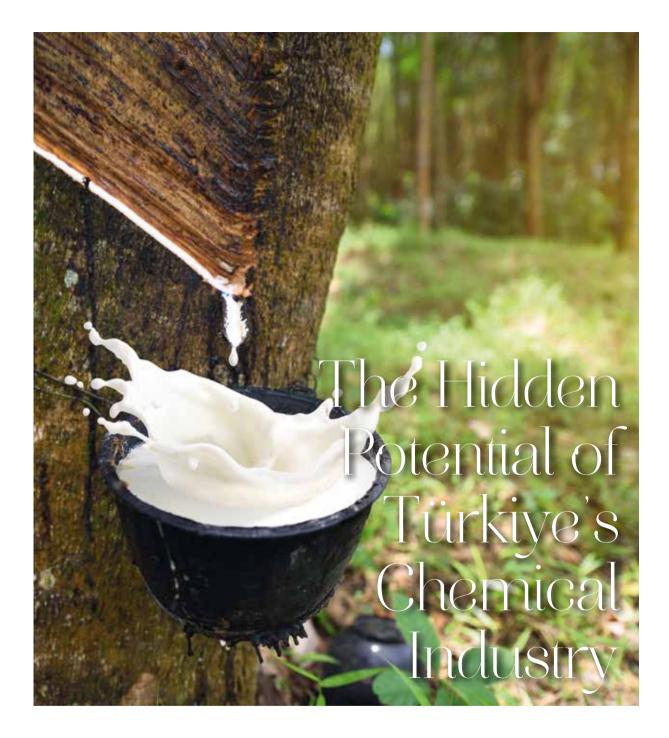
Developing new products and focusing on sustainability and low-carbon footprint projects are seen as major growth drivers for 2024

Okutur emphasized that developments in Europe present significant opportunities for nearly 5,000 chemical companies based in Türkiye. Okutur stated, "In addition to being an important logistics hub due to its geographic proximity to Europe and Asia, Türkiye's advantages in labor and energy costs, supportive government incentives, and its status as a major consumption center for chemicals make the Turkish chemical industry attractive for strategic investors. Sustainability demands from European markets, driven by industrial transformation efforts under the European Green Deal, offer a significant leap forward for Türkiye's chemical sector compared to its Far Eastern competitors. In this context, an increase in M&A activities in Türkiye's chemical sector is expected in the coming years."



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RUBBER SECTOR

With its broad range of applications and industrial significance, the rubber sector maintains a strategic position in the dynamic structure of global trade, both in terms of trade volume and growth potential.

s a critical component in various industries, the rubber sector plays a vital I Prole in areas ranging from automotive and construction to electronics and medical products. Rubber manufacturing, primarily focused on intermediate goods production, is a cornerstone of industrial activity. Rubber is categorized into two main types: natural and synthetic. Both types address the needs of various industrial fields. Natural rubber, a polymer obtained from rubber trees, is known for its elasticity and durability, making it indispensable in the tire industry. On the other hand, the development of the petrochemical industry has enabled synthetic rubber to overcome the limitations of natural rubber, making it suitable for producing products resistant to high temperatures and chemicals. Today, synthetic rubber accounts for the majority of global rubber production. The growth of the sector in the global market parallels the development of the automotive industry. While rubber is primarily known as a key raw material for tire production, it is also used in hoses, seals, cable coatings, and more. Additionally, rubber products are frequently utilized in flooring and construction materials in the building sector.

DOMINANCE OF SOUTHEAST ASIA IN NATURAL RUBBER EXPORTS

In 2022, the top 10 exporters of natural rubber accounted for 90% of global shipments. Following a recovery from the pandemic, natural rubber production, which had declined in 2020, returned to pre-pandemic consumption levels in 2021 and reached a record high of 14.6 million metric tons in 2022.

Southeast Asia leads natural rubber production, providing 80% of global output. In 2022, this figure rose to 85%, reaching approximately 13 million metric tons. Following Southeast Asia, Africa contributed 1.7 million metric tons, representing 11% of global production. West Africa's warm and humid climate offers ideal conditions for rubber trees, and additional harvest areas are expected to reach 5.1 million hectares by 2030 to meet rising demand.

In 2023, Türkiye demonstrated remarkable performance in rubber and rubber product exports globally.





In 2022, Thailand retained its position as the leading exporter of natural rubber, accounting for approximately 32% of global exports. Thailand also emerged as the world's largest natural rubber producer, with 4.8 million metric tons. The extensive rubber plantations in southern Thailand, covering 20,000 square kilometers, solidify the region's production capacity. Outside Southeast Asia, Côte







Türkiye's rubber industry increased its exports in 2023, reaching an export value of \$3.55 billion.



d'Ivoire became the world's third-largest natural rubber exporter in 2022.

RUBBER TRADE GAINS TRACTION IN GLOBAL MARKETS

Data from 2022 highlights the significance of the rubber sector in global trade. The sector achieved a trade volume of \$18.4 billion, ranking as the 239th most traded product worldwide and accounting for 0.078% of global trade.

Thailand led as the largest exporter with \$5.47 billion in exports, followed by Indonesia (\$4.17 billion), Côte d'Ivoire (\$2.11 billion), Malaysia (\$1.29 billion), and Vietnam (\$1.23 billion).

China emerged as the largest importer of rubber in 2022, with imports worth \$3.82 billion. The United States followed with \$2.06 billion, Malaysia ranked third with \$1.42 billion, and Japan (\$1.4 billion) and India (\$969 million) were also notable importers.

TÜRKİYE'S RUBBER EXPORTS GAIN MOMENTUM IN 2023

Türkiye's rubber products manufacturing industry is a key sector within the chemical and manufacturing industries, exporting to various sectors, especially automotive, and contributing over \$4 billion annually to the economy directly and indirectly. While the sector maintains its exporter status, it is also dependent on imports for raw materials and finished products. Despite high dependency on imported raw materials, Türkiye's rubber manufacturing industry processes raw materials into finished goods and exports them to many countries.

In 2023, Türkiye's rubber industry demonstrated remarkable performance in rubber and rubber product exports, achieving a total export value of \$3.55 billion. Compared to the \$3.51 billion export figure in 2022, this represents a 1.3% increase. However, the sector experienced quarterly declines in 2024. According to data from the Turkish Statistical Institute (TÜİK), the export volume of the rubber industry in the second quarter of 2024 amounted to \$798 million, marking a 9.73% decrease compared to \$884 million in the same

period of 2023. Additionally, this reflects a 9.97% drop from the \$887 million recorded in the first quarter of 2024.

According to İKMİB (Istanbul Chemicals and Chemical Products Exporters' Association) data, notable changes occurred in the export performance of the rubber and rubber goods product group by country during the January-September period of 2022 and 2023. In 2022, Germany ranked first with \$251.8 million in exports, accounting for 21.68% of total exports. The United States followed with \$117.4 million and a 10.11% share, while Poland ranked third with \$61.7 million and a 5.32% share.

FROM FOSSIL FUELS TO RECYCLING

While the rubber sector plays a significant role across various industries, it is at the center of sustainability discussions due to its environmental impacts. Both natural and synthetic rubber are widely used in industries ranging from automotive to construction. However, the

need to reduce the environmental impact of production processes is becoming increasingly critical.

The production of synthetic rubber, derived from petroleum products, has heightened dependence on fossil fuels. Nevertheless, significant progress has been made in recent years in using recycled materials and developing more environmentally friendly production processes. Recycling technologies enable waste rubber to be reused and reintegrated into production, which not only conserves energy and raw materials but also significantly reduces waste.

Rubber production is an energy-intensive process, contributing to an increased carbon footprint. Therefore, efforts to enhance energy efficiency represent one of the industry's key steps toward sustainability. Transitioning to renewable energy sources, adopting low-energy production technologies, and implementing projects aimed at reducing carbon emissions offer significant opportunities to minimize environmental impact.





Dr. S. ARMAĞAN VURDU

ubber is a critical raw material with a wide range of applications, from automotive sector to medical products. Natural rubber is obtained from the Hevea brasiliensis tree, which forms extensive forest areas in tropical regions. However, with the increase in rubber production, issues such as deforestation and environmental sustainability have come to the forefront. Deforestation refers to the conversion of forests into agricultural lands, whether caused by human activity or not. Globally, deforestation is primarily driven by the expansion of agricultural land for the production of various commodities.

The European Union took a significant step by enacting the Deforestation Regulation in 2023. This regulation aims to reduce the EU's contribution to deforestation and forest degradation caused by agricultural production and to lower greenhouse gas emissions stemming from such activities. Rubber, along with soy, beef, palm oil, wood/timber products, cocoa, and coffee, is included under the scope of the regulation. Additionally, products that use these commodities as inputs in their production, such as chocolate, furniture, tires, and leather, are also covered.

It is important to note that relevant products are included under the regulation

only if derived from specified commodities. For instance, rubber obtained from Hevea brasiliensis is within the scope, whereas rubber derived from balata, gutta-percha, guayule, chicle, and similar gums is excluded. Likewise, synthetic rubber products are not covered under this regulation.

The regulation imposes due diligence requirements on parties intending to place products on the EU market. These obligations include providing information, conducting risk analysis, and minimizing potential risks. As such, rubber producers will need to document their supply chains transparently and prove that their products do not contribute to deforestation. In this context, the rubber industry may need to adopt sustainable agricultural practices and forest management standards.

Sustainable rubber production is of great importance both environmentally and economically. Preventing deforestation helps protect biodiversity and reduce carbon emissions. At the same time, sustainable produc-

tion methods can offer long-term economic advantages to rubber producers. However, compliance with the regulation could also pose challenges for the covered industries, including the rubber sector. Restructuring production processes, increased costs, and auditing procedures are among the key challenges that producers may face.

In conclusion, the European Union's Deforestation Regulation will necessitate changes across relevant sectors, including the rubber industry. The regulation's implementation date is set for December 30, 2024, for non-SMEs and June 30, 2025, for SMEs. However, on October 2, 2024, the European Commission submitted a proposal to the EU Council and the European Parliament to grant a 12-month extension for implementing the regulation, a request also made by Türkiye's industry stakeholders. Within this framework, the new implementation dates are expected to be December 30, 2025, for large operators and July 30, 2026, for SMEs.



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"WE ARE IN CONSTANT PURSUIT OF INNOVATION IN SKINCARE"

"At The Purest Solutions, we are steadfastly moving forward as a brand capable of meeting not only today's needs but also the needs of the future."

Iim Ozan Evliyaoğlu, Co-Founder of The Purest Solutions, explains how they have brought a fresh perspective to skincare through minimalist yet effective formulations, adhering to the philosophy of "less is more" since their inception.

Can you tell us about the founding story of The Purest Solutions?

The Purest Solutions began with the desire to offer pure, effective, and sustainable skincare solutions. Our foundation was built on developing minimal yet powerful formulations that users can confidently apply to their skin. Every product we create combines the purest ingredients with maximum performance, addressing real skin needs while respecting nature. Since our founding, we have embraced the philosophy of "less is more," believing that skin achieves the best results with simple yet effective solutions.

Your brand was established in 2020 but achieved rapid growth in a short time. What do you attribute this success to?

The rapid growth of The Purest Solutions can be attributed to several key factors. First and foremost, we focused on listening to our users' real needs and delivering effective, simple, and reliable solutions. Our strong commitment to sustainability attracted conscious consumers and fostered loyalty. Another significant driver of our rapid growth is our strong connection to the digital world and our effective use of social media. The quality and performance of our products have also been recognized with awards, further solidifying our success.

How do you assess the export potential of The Purest Solutions? Are there any new target markets you aim to reach?

Since its inception, one of our strategic goals has been to establish a presence in international markets and connect with global users. We are particularly well-received in markets such as Europe, the Middle East, and the Far East. These regions have high demand for clean ingredients and sustainability, and we meet these needs comprehensively. Looking ahead, we aim to expand into Latin America, the Middle East, and the Far East, which are both current and future target regions. Additionally, the U.S. market is a priority for us, and we are developing specific marketing strategies for this region. In the short and medium term, we have already completed our preparations and partnerships for entry into the Latin American

How do you evaluate the recent growth of the



solutions.



Turkish cosmetics sector? What are the key milestones contributing to this development?

The Turkish cosmetics sector has experienced significant momentum in recent years, becoming a major player both locally and globally. This growth has been shaped by several factors and milestones. First, the increasing demand for clean and natural products has encouraged brands to develop more innovative and eco-friendly products. Sustainability has become an important value for Turkish cosmetics brands.

Another key development has been the widespread adoption of e-commerce and digital marketing. Particularly during the pandemic, changes in consumer habits made online sales platforms and social media critical for Turkish brands to reach wider audiences. This digital transformation has enabled local brands to gain global recognition in a short time, paving the way for their success in international markets.

Additionally, increased support for local production and investments in R&D have allowed brands to offer more innovative products. Government incentives for domestic brands have also played a significant role in the growth of the Turkish cosmetics sector. Turkish brands with high export potential have become more competitive in the global market, positioning Türkiye as a strong actor in the cosmetics wor-

Consumers today expect more than just products or services; they also seek sustainability, inclusivity, digitalization, and innovation. How do you adapt to these expectations?

Sustainability is one of the cornerstones of our brand. We aim to reduce plastic use and minimize our carbon footprint by offering eco-friendly packaging and refill options. Additionally, we encourage sustainable lifestyles through social responsibility projects and campaigns. We

recognize that skincare needs vary for each individual, so we expand our product portfolio accordingly, offering solutions tailored to different skin types and age groups. Our communication strategies emphasize diversity and inclusivity, ensuring representation across various skin types, ethnic backgrounds, and age groups. in our growth. Through e-commerce platfor-

> lutions. We continuously update our product portfolio with science-based and innovative formulations, integrating the latest technologies into our offerings. By prioritizing R&D investments, we continue to develop solutions that effectively and safely address our users' skincare needs. This innovative approach enables us to quickly adapt to industry changes and make a difference. With these strategies, we are determined to be a brand that meets not only today's needs but also the demands of the

Digital transformation plays a critical role

ms and social media, we engage with our users

directly, responding quickly to their feedback.

By actively utilizing digital channels, we reach

wider audiences and enhance our brand recog-

Innovation is at the core of The Purest So-

nition globally.

What strategies do you follow in digital channels as e-commerce grows? How significant is online shopping for your brand?

E-commerce is at the heart of our strategic plans. In addition to our website, we collaborate with strong e-commerce platforms to expand our reach. As a brand that was born and grew in the e-commerce space, we contribute to these platforms' development by providing feedback for improvement projects. Our online shopping platforms are designed to best meet the needs of our users, offering an easy-to-use interface and detailed product descriptions, ingredient information, and usage guides to help users choose the right product. We also aim to provide personalized shopping experiences.

Social media is one of the most important platforms for directly interacting with users, sharing our brand story, and introducing our products. Our strategy centers on maintaining constant communication with users, listening

Ultimately, online shopping is not just a

users on social media.

sales channel for The Purest Solutions but also a platform where we deepen relationships with our users, expand our global reach, and better understand their needs. That's why we continue to invest in digital strategies to further grow in this area.

to their feedback, and strengthening our com-

munity. Through influencer collaborations and

comprehensive digital campaigns, we increase

product awareness and actively engage with

online strategy. By analyzing user shopping

behaviors, we offer personalized campaigns

and product recommendations, developing

more effective marketing strategies as a result

Data analytics plays a critical role in our

What innovations and projects await The Purest Solutions in the future? What are your goals for the brand's evolution?

In the future, we aim to strengthen our eco-friendly approach by introducing more sustainable packaging and refill options. We plan to establish facilities powered by renewable energy and take further steps to reduce our carbon footprint. By using sustainable raw materials, we intend to deepen our strategy of offering products that benefit both users and the environment.

We are constantly seeking innovation in skincare. In the future, we will develop new formulations and technological ingredients that better address users' needs and provide targeted solutions for skin problems. Additionally, we aim to offer digital solutions in personal care, creating more interactive and personalized experiences for our users.

> We are particularly excited about our AI-based skin analysis project, which has been in progress for two years. By closely monitoring global production technologies and trends, we are working on projects and products that solidify our position as a "Trend Maker" in our category.

> > 41

We believe that skin achieves the best results with simple yet effective



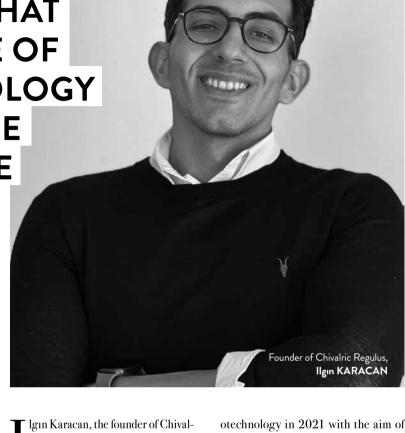
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"WE WANTED
TO PROVE THAT
THE FUTURE OF
BIOTECHNOLOGY
CAN EMERGE
FROM THESE

Chivalric Regulus was established in 2021 by Ilgin Karacan to prove that the future of biotechnology can emerge from these lands. The company focuses on integrating microbial resources found in natural environments into industrial problem areas.

LANDS"



Igin Karacan, the founder of Chivalric Regulus, aims to use the unique microbial diversity present in Türkiye's rich natural structure to solve industrial problems. We discussed their sustainability-focused approach and the potential of biotechnology with her. Emphasizing that there are various ways to prevent exposure to carcinogenic substances in food, Karacan says, "Our short- and medium-term plan is to develop the patent we have obtained, acquire additional patents, integrate into the supply chains of various manufacturers, and improve production processes so that people can access healthier food."

Could you introduce Chivalric Regulus, a biotechnology initiative? What are your areas of focus?

We established Chivalric Regulus Bi-

proving that the future of biotechnology can emerge from these lands. Since our founding, our goal has been to integrate the microbial resources found in this country's natural environments into industrial problem areas. We firmly believe that the only way to secure our place among strong countries is to process this endemic diversity, which cannot be found anywhere else in the world, integrate it into industry, and minimize imports while promoting exports by entering international markets.

What methods do you use to eliminate carcinogenic substances in food safety? What results have you achieved, and what are your future goals in this field?

There are various ways to prevent expo-



sure to carcinogenic substances in food. These include preventing this exposure in the human body and removing these substances during the food production process. Each process has its own market and product development requirements.

Our short- and medium-term plan is to develop the patent we have already obtained, acquire additional patents, integrate into the supply chains of various manufacturers, and enhance product production processes to help people access healthier food. Another plan is to bring our patent to consumers in the form of supplements and pharmaceutical formulations.

How has the industry responded to your microorganism-based biotechnological solutions? Can you share insights about how your products and solutions have been received and their adaptation to the market?

It is possible to say that the industry is familiar with microbial solutions. There have been previous studies on the integration of microorganisms and their metabolic products into industry. However, our goal is not to enter sectors where these solutions are already integrated but rather to introduce microorganisms to new sectors.

This approach brings certain challenges. Integrating these solutions into supply and production chains requires new planning, which brings costs for businesses. As a result, we encounter difficulties in convincing the sector of the value of our solutions.

Can you tell us about your R&D activities?

The main focus of our R&D activities is to integrate microorganisms into various areas of industry. As the first step, we carried out research to make microorganisms resistant to difficult conditions and obtained our patent.

Following that, we conducted studies to eliminate carcinogenic substances in food to contribute to society. With the outputs of these studies, we plan to focus on agriculture and livestock to improve crop yields and animal health

What are your future plans as Chivalric Regulus Biotechnology? What new areas do you aim to work in?

In the short and medium term, our goal is to advance our patent, which focuses on eliminating carcinogenic substances in food, and ensure that all segments of society can access healthy food.

In the next phase, we plan to turn all the data we have obtained into products for both B2B and B2C markets. We aim to introduce these products to markets in Switzerland, Norway, and the United Kingdom, generating foreign revenue for our country.

"We can strengthen Türkiye's position in the global economy by processing and integrating our country's endemic diversity, which cannot be found anywhere else in the world, into industry."



"YOU CAN MAKE DISCOVERIES THAT WILL MAKE A DIFFERENCE WITH CHEMISTRY"



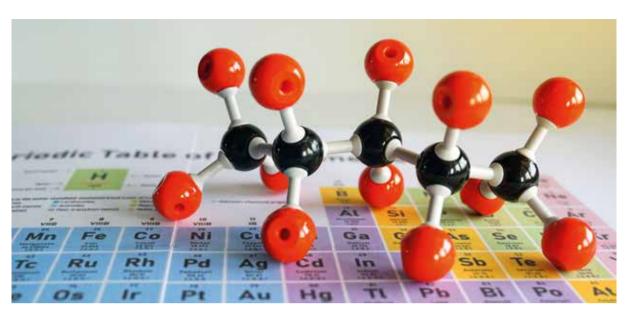
"Chemistry offers truly limitless possibilities, from diagnosis to treatment, and holds great potential to develop new solutions that benefit society."

Prof. Dr. Amitav Sanyal, a faculty member of Boğaziçi University's Chemistry Department, has achieved significant success in the scientific community by being elected as a "Fellow" of the Royal Society of Chemistry (RSC) in the United Kingdom. Prof. Dr. Sanyal, who stands out with his research in areas such as organic, polymer, and materials chemistry, not only achieves remarkable success in the laboratory but also inspires young scientists. We had an engaging conversation with Sanyal about his passion for chemistry, his career journey, and the innovations he has brought to the world of science.

What does the science of chemistry mean to you? What are the factors that motivate you the most in this field?

Chemistry forms the foundation of everything. Understanding the structure of molecules, how they interact and communicate with each other, and ultimately build the building blocks of life profoundly impacts me. Behind seemingly simple aspects of daily life, such as speaking, thinking, and seeing, lies chemistry. Molecules are the key to life, and being able to understand complex processes at a molecular level excites me.

Chemistry allows you not only to work on molecules but also to design molecules that do not occur naturally and produce new things for specific needs. It enables you to develop a drug that patients need or a product that facilitates diagnosis. With chemistry, you can make discoveries that can make a difference in the world. Moreover, discovering what we can achieve through chemistry is a personal passion for me. Just as an artist creates an artistic design, we also work to develop new and useful products by understanding the structure and interactions of molecules. Molecules may seem like simple arrangements of atoms, but for a chemist, there is profound creativity and aesthetics behind these arrangements.



"Chemistry forms the foundation of everything. With chemistry, you can make discoveries that will make a difference in the world."

What does being elected as a "Fellow" of the Royal Society of Chemistry (RSC) mean for your scientific career? What advantages and responsibilities does this title bring?

Chemists usually carry out their work within the technical infrastructure of laboratories, confined within four walls. It requires additional effort to connect with the rest of the world. That's why recognition by esteemed organizations like the Royal Society of Chemistry is a great source of motivation not just for me but also for the young scientists in my team. The international acknowledgment of our work and support from such prestigious organizations help us create a broader impact. Seeing this success also inspires young scientists to proceed with more determination and motivation in their career paths.

What role does the Royal Society of Chemistry play in shaping the future of chemistry? What impact does this platform have on young scientists?

The greatest impact of organizations like the RSC is the support they provide to researchers and their contribution to the expansion of the chemistry ecosystem. The fact that such a prestigious organization appreciates our work and selects me as a Fellow provides us with a significant global reference in the research community. This situation serves as both inspiration and motivation for young researchers, helping them overcome concerns they may face and focus on their work with greater passion. By supporting researchers at the start of their careers, such organizations guide them to move forward with confidence and make their voices heard in the scientific world.

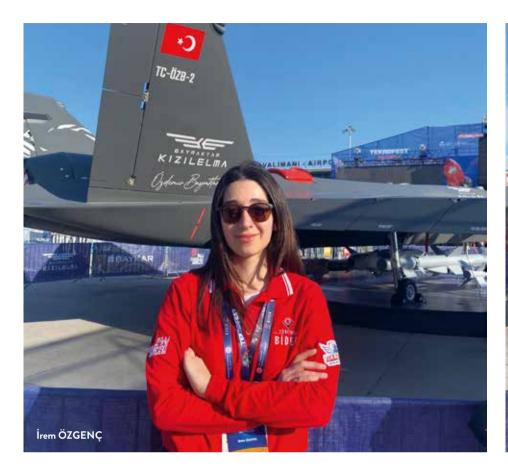
What kind of impact do you aim to create with your research in the fields of organic, polymer, and materials chemistry?

The focus of my work is to develop more efficient, sensitive, accessible, and easily producible biomedical materials compared to those currently in use. By spreading these new technologies and cost-effective solutions, we aim to improve patients' quality of life. For example, with a patented technology we developed in our laboratory, we designed a bandage that can be easily removed from sensitive tissues. Removing bandages from open wounds and burns can damage the tissue and delay the healing process. By eliminating such issues, we aim to accelerate patients' healing processes and improve their quality of life. From diagnosis to treatment, the possibilities chemistry offers are truly limitless and hold great potential to develop new solutions beneficial to society.

You have received prestigious awards such as TÜBA-GEBİP and TÜBİTAK Incentive Awards. How do you evaluate the motivational impact of such awards on researchers?

In the early stages of their careers, it is extremely important for researchers to have their work recognized by esteemed institutions in our country. Knowing that a researcher working in a laboratory is acknowledged by a broader scientific ecosystem gives them strength. Such awards increase the researcher's desire to maintain their work above a certain quality standard and play an important role in shaping their future steps. After receiving these awards, I continued my work with the same enthusiasm and motivation. Today, as I talk about my acceptance as a Fellow at the RSC platform, I believe that the support I received in the early stages of my career played a crucial role.









University-Industry collaborations are

a two-way win-win relationship

Students from Ondokuz Mayıs University, Faculty of Engineering, Department of Chemical Engineering—Vuslat İrem Şimşek, İrem Özgenç, and Rabia Halezeroğlu—state that chemical engineering is a constantly evolving field where the process of learning and discovery never ends.

tudents from Ondokuz Mayıs University, Faculty of Engineering, Department of Chemical Engineering—Vuslat İrem Simsek, İrem Özgenc, and Rabia Halezeroğlu-achieved second place in the Energy and Environment category of the TÜBİTAK 2242 University Students Research Project Competitions. Their project, which examines the use of glycerol, a by-product of biodiesel production, as a low-cost solvent and hydrogen source for bio-aviation fuel production, aims to contribute significantly to sustainable energy solutions. By developing an innovative approach to the use of biofuels in the aviation sector, the young engineers aim to take a major step forward in exploring environmentally friendly alternatives. They shared the details of their project and future goals with our magazine.

What does chemistry mean to you? How would you describe your passion for this field?

Strengthening university-industry collaborations will unlock the potential of the country's young talents and bring significant benefits to the industry.

For us, chemistry is one of the fundamental building blocks of science and the key to understanding how nature operates. This field not only examines the structure and properties of substances but also provides the opportunity to use this knowledge to create solutions that benefit humanity. Through chemistry, we have the chance to contribute to numerous areas, from energy efficiency to environmental sustainability, from the health sector to advanced technologies.

Our passion for this field stems from the desire to solve complex problems and develop innovative approaches. Since chemical engineering is a constantly evolving field, the process of learning and discovery never ends. This keeps us motivated and deepens our commitment to the field. For us, chemistry is both a passion and a powerful tool to contribute to society's progress.

Congratulations on achieving second place





in the TÜBİTAK 2242 University Students Research Project Competitions' finals in the Energy and Environment category. Can you tell us about your project and its goals? What advantages and opportunities has this award provided for you and your project?

The aim of our project, titled "Investigation of the Use of Glycerol, a Low-Cost Solvent and Hydrogen Source, in Bio-Aviation Fuel Production," is to transform waste oils into valuable hydrocarbon fuels through various deoxygenation reactions and to explore their use in the aviation sector. By reducing the amount of fossil fuels used in aviation, we aim to decrease environmental impacts and achieve sustainable aviation activities.

This award has greatly contributed to the promotion and development of our project. Achieving second place in the TÜBİTAK 2242 competition drew significant attention from ac-

Looking ahead, we believe that the Turkish chemical industry must evolve into a more innovative, environmentally friendly structure that produces high value-added products.

ademic and industrial circles, and we received positive feedback from experts in the field. This recognition helped us highlight the potential of our project to a broader audience and raised awareness about local biofuel production in the aviation sector.

Additionally, this award has opened up opportunities for new collaborations and funding to take the project to the next level. It has become a significant reference point in both our academic and professional careers. This success has motivated my team and me to undertake larger projects and inspired us to take our work in this field further. Competitions like these are crucial steps for young engineers to develop themselves and create solutions for their country's needs. Lastly, we would like to thank TEI, a leading company in the defense industry, for hosting us and showing interest in our project, as well as Hande Akbaş and her team. We would also like to extend our gratitude to our professors, Prof. Dr. Selim Ceylan and Asst. Prof. Dr. Gülce Çakman, for their unwavering support throughout the process.

What are your thoughts on the current state and future of the Turkish chemical industry?

The Turkish chemical industry has shown significant progress in recent years, playing a strategic role in the country's industrial production and exports. The sector has great potential, especially in subfields such as petrochemicals, plastics, paints, and pharmaceuticals. However, alongside this growth, certain challenges, such as raw material dependency and environmental sustainability, need to be addressed to enhance the sector's competitiveness.

Looking ahead, we believe that the Turkish chemical industry needs to evolve into a structure that is more innovative, environmentally friendly, and produces high value-added products. AR-GE (R&D) investments, encouragement of domestic production, and adoption of sustainable production processes will help the sector achieve a stronger position in the global arena. Furthermore, integrating digitalization and automation, such as Industry 4.0 applications, will increase the efficiency and competitiveness of the Turkish chemical industry.

In this transformation process, government incentives and support, university-industry collaborations, and the cultivation of a skilled workforce are of great importance. The future of the Turkish chemical industry will be brighter and more sustainable with strategic steps in these areas.

What are your thoughts on university-industry collaborations? What benefits do these collaborations provide for students and the industry? What suggestions do you have for making these collaborations more effective? University-industry collaborations offer significant opportunities for both students and the industry, forming a two-way win-win relationship. These collaborations allow students to reinforce their theoretical knowledge through practical applications, understand current industry needs, and enter the workforce after graduation with better preparation. On the industry side, businesses can benefit from fresh perspectives, innovative ideas, and the energy brought by young minds to accelerate their AR-GE processes and enhance their competitiveness.

Turkish youth, as a highly determined, eager-to-learn, and technology-oriented generation, play a key role in these collaborations. Their dynamism and creativity hold the potential to bring the innovations needed by the industry to life. Strengthening university-industry collaborations will not only pave the way for the country's young talents but also make significant contributions to the industry.

At this point, we would like to extend our sincere thanks to Selçuk Bayraktar and the Teknofest team for the inspiration and opportunities they provide to young people. Teknofest is not just a technology festival but also a unique platform for young people to discover their potential, bring their projects to life, and build the future of technology in Türkiye. The Bayraktar family and their team are leading Türkiye's progress in science and technology with their belief in and support for the youth. The continuation of such initiatives is of great importance for the development of our country and the stronger global presence of our youth.

What are your future goals in the field of chemical engineering?

In chemical engineering, working on jet fuels, rocket fuels, and biofuels offers a significant opportunity to reduce Türkiye's energy dependency and enhance local production capacity. Our future goals include developing more innovative and environmentally friendly fuel technologies in these areas and leading projects that meet Türkiye's strategic energy needs.

Producing domestic jet and rocket fuels is of great importance both economically and for national security. By developing local solutions in the defense and aviation industries, Türkiye can not only reduce its dependency on foreign energy but also strengthen its position on the global stage. In the field of biofuels, we aim to work on sustainable and environmentally friendly alternatives to contribute to Türkiye's energy diversity.

Our goal is to advance our work in this area, actively contribute to projects that support Türkiye's energy independence, and inspire young engineers.



The aim of our project is to transform waste oils into valuable hydrocarbon fuels through various deoxygenation reactions and explore their use in the aviation sector, reducing fossil fuel usage and promoting sustainable aviation practices.



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