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Production-Linked Incentives Catalyzing India's Green Revolution..pg 49

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6	CPhI Korea	Aug 27 - 29, 2024	COEX, Seoul, Korea
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MECS (Coating Show)			
1	Asia Pacific Coatings Show	Sept 11-13, 2024	Indonesia
2	Saudi Arabia Coatings Show	May 13-15, 2025	Dammam Saudi Arabia
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DYE+CHEM			
1	Dye+Chem Morocco International Expo	Nov 7-9, 2024	Morocco
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4	44th Dye+Chem Brazil International Expo	July 10-12 2024	Brazil
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1	Bangladesh Int'l Dyes, Pigments and Chemicals Expo	Oct 24-26, 2024	Dhaka, Bangladesh
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3	Paint Expo Eurosia	Oct 01-03, 2025	Istanbul Expo Center / Istanbul Fuar Merkezi
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3	CIPI	TBD	Mumbai, India
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6	American Coatings Show	2026	Indianapolis
7	China Coat China	Dec-24	China Import & Export Complex, Guangzhou
8	Interdye China	TBD	Shanghai, China
9	Paint Expo Germany	Apr 14-17, 2026	Messe Karlsruhe Germany
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12	Inacoating 2024	July 30-Aug 1, 2024	JlExpo Kemayoran, Jakarta - Indonesia
13	Expo Paint & Coating	Sept 19-21, 2024	ICC Dhaka, Bangladesh

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Parimal Parikh

Editor:
Rajiv Parikh

Content:
Pranisha P. Jadhav
Sonam Parikh

Designer:
Pranisha P. Jadhav

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CHEMICAL MARKET

A MONTHLY MAGAZINE DEVOTED TO THE DYES, CHEMICALS, PHARMACEUTICALS, TRADE & INDUSTRY SINCE 1982

The Green Shift: A Catalytic Challenge for the Chemical Industry

The chemical industry, a cornerstone of modern civilization, finds itself at an inflection point. The imperative for sustainable development, coupled with the escalating climate crisis, is forcing a radical transformation. This green shift presents both unprecedented challenges and extraordinary opportunities for the industry. Challenges are always going to be there, but what we want to focus on are the opportunities that which change the way we live, we earn and prosper in terms of health and finance.

Traditionally, the chemical sector has been synonymous with heavy energy consumption and the generation of substantial waste. The production of chemicals, from plastics to fertilizers, has often come at a significant environmental cost. However, the growing global consciousness about climate change and resource depletion has compelled the industry to re-evaluate its processes and products.

Transitioning to a sustainable model requires a multi-faceted approach. At its core lies the need for technological innovation. Research and development must be prioritized to develop cleaner, more efficient production methods. This includes exploring renewable energy sources to power chemical processes, reducing water consumption, and minimizing waste generation. Additionally, the industry must invest in technologies that enable the recycling and upcycling of chemical products, thereby closing the loop on resource utilization.

Another critical aspect of the green shift is the development of bio-based chemicals. Harnessing the power of biotechnology, the industry can create chemicals derived from renewable resources such as plants and microorganisms. This approach has the potential to significantly reduce the carbon footprint of chemical production. However, scaling up bio-based processes to commercial levels remains a challenge that requires substantial investment and research.

Furthermore, the chemical industry must collaborate with other sectors to drive sustainability. Partnerships with energy providers, policymakers, and environmental organizations are essential for creating a supportive ecosystem for green initiatives. By working together, stakeholders can develop and implement policies that incentivize sustainable practices and promote the adoption of clean technologies.

The transition to a sustainable chemical industry will undoubtedly involve significant costs. However, the long-term benefits are immense. Not only will it help mitigate climate change but also enhance the industry's reputation and competitiveness. Consumers are increasingly demanding environmentally friendly products, and companies that embrace sustainability will gain a competitive edge. Moreover, the development of new green technologies can create jobs and stimulate economic growth.

It is essential to acknowledge that the green shift is not without its challenges. Overcoming technical hurdles, securing adequate funding, and building a skilled workforce are some of the obstacles that the industry must address. However, with determination and innovation, these challenges can be overcome.

The chemical industry stands at a crossroads. It can either continue on its traditional path, risking irrelevance and environmental backlash, or it can embrace the green shift and emerge as a leader in sustainable development. The choice is clear. By investing in research, developing new technologies, and collaborating with partners, the chemical industry can not only mitigate its environmental impact but also create a prosperous and sustainable future.

The time for action is now. The green shift is not just an option; it is a necessity. The chemical industry must rise to the challenge and become a catalyst for a greener world

-Rajiv Parikh

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Corium 4040

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250 Other **Industrial**

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Construction Chemicals Market Set for Growth as Projects Surge, Aiming for USD 37.55 Billion by 2031 I SkyQuest Technology

WESTFORD, Mass., July 23, 2024 / PRNewswire/ -- According to SkyQuest, the global Construction Chemicals Market size was valued at USD 27.74 billion in 2022 and is poised to grow from USD 30.1 billion in 2023 to USD 37.55 billion by 2031, growing at a CAGR of 8.6% in the forecast period (2024-2031).

The construction market has always been the leader in the adoption of innovations, and construction chemicals being the top domain. Construction chemicals are specially made to play a key role in sustainability, durability, and performance and they are today prominently used in modern constructions. The past few years have shown many unique, strong, and appealing structures with the help of these chemicals. Also, with the growing population, the construction needs increase, and therefore, rising demand for better infrastructure is projected to impact industry growth.

Most emerging economies are undergoing several construction projects including bridges, buildings, highways, airports, and more. These chemicals are essential and highly demanded due to their durability and sustainability, making them highly tolerable to extreme temperatures and environmental factors.

Read the full report : https://www.marketsandmarkets.com/

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Dutch Hydrogen Market Shows Growth but Project Progression Remains Muted, Reports ICIS

DLONDON, July 23, 2024 / PRNewswire/ -- ICIS, a global source of commodity intelligence, has reported considerable Dutch hydrogen market growth across supply and demand between October 2023 and April 2024. Despite such growth, no projects in the Netherlands have progressed further in their development phases, including a lack of Final Investment Decisions (FIDs).

Data from the ICIS Hydrogen Foresight project database reveals that the announced low-carbon hydrogen production capacity climbed to approximately 17GW by 2040 as of April 2024, with 74% of this capacity expected to be online by 2035. On the demand side, ICIS Hydrogen Foresight shows future low-carbon hydrogen demand increasing by 13.8% over the six months to April 2024.

ccording to Jake Stones, Hydrogen Editor at ICIS, "The Dutch hydrogen market, recognised as a key location for the emergence of widespread hydrogen trade due to large-scale infrastructure potential, saw little in the way of progression of projects, with no currently announced projects advancing to FID. Despite the apparent growth, this lack of progression indicates underlying market challenges that must be addressed to fully capitalise on potential."

ICIS Hydrogen Foresight, which tracks the progression of hydrogen projects based on primary sources, noted updates across 38 supply-side projects and 21 demand-side projects, reflecting changes in nearly half of announced projects. Supply capacity grew by 777MW (4.8%), and demand increased from 22.7TWh to 25.7TWh (a 3TWh increase), with 90% of the 25.7TWh expected to be online by 2032.

ICIS notes that economic drivers such as industrial support mechanisms and increasing clarity on targets for decarbonising energy use encourage

market participants' investment proposals. However, financial challenges and regulatory uncertainties continue to dictate the pace of market development.

"Although there has been a mix of feedback from the market behind a lack in FID and project progression, a balance to this is that projects simply take time to reach such final decisions. While there are wider influences in the mix, there is also a strong level of activity and confidence in the market, as can be seen by new announcements on both supply and demand," says Daniyal Sheikh, Hydrogen Market Analyst at ICIS.

"Finally, in the case of the Netherlands, supply-side projects far outweigh currently announced demand, indicating that would-be producers could be hesitant amid high competition for securing offtake. Meanwhile, on the demand side, willingness to pay shows limited overlap with expected production costs, again a potential cause of hesitation," concludes Sheikh.

Read the full report : https://www.marketsandmarkets.com/

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Phenomenex broadens its "Designed for PFAS" Portfolio with the expansion of the Strata PFAS Solid Phase Extraction (SPE) offerings for Enhanced PFAS Sample Preparation

TORRANCE, Calif., Aug. 1, 2024 / PRNewswire/ -- Phenomenex Inc., a global leader in the research and manufacture of advanced technologies for the separation sciences, proudly announces the expansion of its Strata PFAS portfolio..

We launched the first stacked PFAS cartridge over seven years ago for our customers to expand on the ever-evolving nature of PFAS sample preparation. Recognizing that one size does not solve all challenges, our latest additions to the Strata PFAS portfolio include single and dual solid-phase extraction (SPE) phases, formats, and increased capacity. We believe these solutions will allow our customers to effectively address extraction, reproducibility, interference removal, clean-up, and efficient throughput of complex PFAS samples across diverse matrices. Phenomenex's PFAS SPE offerings are verified for low residuals of PFAS by independent and accredited laboratories to ensure low background contamination are below quantitation limits to provide accurate results, especially for labs requiring compliance monitoring.

The expanded Strata PFAS SPE portfolio offers a comprehensive range of formats that cater to various detection methods, including LC-MS/MS and combustion Ion Chromatography (CIC), empowering laboratories to tackle the complexities associated with PFAS analysis.

"Phenomenex remains committed to staying at the forefront of PFAS sample preparation and analysis. Knowing the PFAS workflow, we developed a "Designed for PFAS" portfolio and continued to expand its offerings with a Strata PFAS product line. Coupled with our extensive technical support, it reflects our dedication to meeting the evolving needs of our customers," said Dr. Richard Jack, Global Market

Development Manager at Phenomenex.

Read the full report : h https://www.phenomenex.com/pfas.

If you want your report abstract to be published please contact info@chemicalmarket.net

Advancements in PV Market Exploring the Future of Solar Energy

Introduction:

How often do you see solar panels on rooftops, they are made of PV cells working together to generate electricity. The emission of pollutants like sulphur dioxide, nitrogen oxides, and particulate matter, caused by using fossil fuels and other non-renewable resources has encouraged industries to generate energy from renewable resources. If you are interested in what the future holds for the renewable energy sector and photovoltaic cell industry, we have covered interesting facts, innovation in the industry and other aspects leading to the growth of the photovoltaic industry. We have also shared some insights on the impact it creates on the chemical industry. Let's get started.

Advancements in photovoltaic cell materials:

The advancements made in the photovoltaic cell materials from which they are fabricated made a significant difference in the pursuit of sustainable energy solutions. Therefore researches were conducted to explore the characteristics of the silicon-based photovoltaic cells, polycrystalline silicon cells and Gallium arsenide solar cells.

The research covers the challenges due to material stability, scalability and environmental impact and explores the types of PV cells such as silicon-based cells which are explored for their enduring relevance and recent innovations in their crystalline structures. The flexibility and potential for low-cost production of organic photovoltaic cells and remarkable efficiency gains and ease of fabrication of perovskite cells.

Silicon-based photovoltaic cells: The dominance of silicon in PV is due to several key factors such as silicon being the second most abundant element in the earth's crust. Therefore, they are readily available for solar cell production. The abundance has made widespread adoption and scalability possible. Secondly, the semiconductor properties of silicon make it an ideal material for converting solar energy into electricity. Additionally, the bandgap is quite appropriate for absorbing the broad range of the solar spectrum and maximizing energy conversion and efficiency.

Therefore, the recent research aimed at transcending the traditional efficiency limits and the structure of perovskite top cells, intermediate interconnection layers and crystalline silicon bottom cells were given additional focus.

Furthermore, the study by Xie Et al reported significant advancements in the efficiency of the silicon solar cells, that are derived from the thin crystalline silicon solar cells which are considered a promising alternative to the conventional thicker c-Si solar cells due to their cost-effectiveness and flexibility.

Although there are several advantages to the usage of silicon in photovoltaic technology, such as the abundance of silicon and well-established manufacturing processes, the limitations concerning the efficiency and complexities involved in the production processes have paved the way for the exploration of alternative materials.

Perovskites: Perovskites have gained momentum in photovoltaic technology due to their substantial power conversion efficiencies. They are known for their lower production costs, easier fabrication methods, economically attractive for the photovoltaic market players.

For instance, these materials can be produced using simple production techniques such as solution processing, they are less energy-intensive and cheaper compared to the conventional silicon methods. It is easier to optimize the light absorption by tailoring them at the molecular level which is considered very crucial in enhancing the solar cell efficiency.

Quantum dots: The quantum dots solar cells can be engineered to create solar cells with multi-junction and they utilize tiny semiconductor particles whose bandgaps are tunable based on the required size. This enables the cells to absorb different wavelengths of light more efficiently compared to traditional materials.

Gallium arsenide GaAs solar cells: at present GaAs cells are considered the most efficient solar cells available today. Since the direct bandgap of GaAs allows efficient absorption of sunlight and conversion into electrical energy, they are more efficient than silicon-based solar cells and they have surpassed 29%, which is the benchmark set in controlled laboratory conditions. Furthermore, the

Continued on Pg 43

OUTSTANDING DESIGN: AUTOMOTIVE COLOUR BY BASF RECOGNIZED WITH RENOWNED RED DOT AWARD

- **The only Red Dot for an automotive coating in this year's competition**
- **Coatings formulation is based on innovative polymer structure**
- **The interplay of aesthetics, sustainability and functionality fascinates the Red Dot jury**

The color ZENOMENON, designed by BASF's Coatings division, was the only automotive paint to be honored this year at the Red Dot Award: Product Design, one of the most prestigious design competitions in the world. The innovative technology and the special aesthetics of the coating have impressed the experts on the Red Dot jury in the "Materials and Surfaces" category.

ZENOMENON's coating formulation is based on polymer structures developed by the cooperation partner Cypris Materials from California. Instead of classic pigments, special polymer structures with a high proportion of renewable materials are used. This way, the color represents a more sustainable alternative in the area of surface aesthetics for automotive coatings. The result is a unique color effect that arises from self-assembled layered structures, reflecting light in the visible spectrum with a flop effect. This gives the surface of the paint layer a shimmering, strikingly iridescent shine. With a view to future mobility, these polymers are also suitable for LIDAR or radar sensor systems.

"Being awarded a Red Dot in product design is a very special honor for us – especially as a chemical company. The award underlines our design and technology expertise – and the trust in innovative solutions that our customers in the automotive industry place in us," said Mark Gutjahr, global head of Automotive Color Design at BASF.

At the Red Dot Design Award, all submissions are assessed based on the four basic principles of good design: the quality of function, the quality of seduction, the quality of use and the quality of responsibility. "The development of ZENOMENON is remarkably future-oriented. In particular, the interplay of aesthetics, sustainability and functionality is fascinating", said the independent Red Dot jury.

All award-winning products, including an exhibit painted with ZENOMENON, will be on display until May 2025 as part of the winners' exhibition at the Red Dot Design Museum at the UNESCO World Heritage Site Zollverein in Essen, Germany.

Source : BASF

LYB LAUNCHES NEW SCHULAMID GRADE TO EXPAND ITS ENGINEERED PLASTICS PORTFOLIO FOR THE AUTOMOTIVE INDUSTRY

Shanghai, China, July 26, 2024 -- LyondellBasell (NYSE: LYB), a global leader in the chemical industry, is proud to announce the launch of its new Schulamid ET100 product line – a revolutionary polyamide-based compound product. Designed for automotive interior structural solutions, such as door window frames, this new technology showcases LYB innovation capabilities in Engineered Polymers.

" We're committed to improve the state of the current technologies to shape the future of automotive interior applications by introducing new solutions to support our customers in addressing the new industry challenges," says Caroline Cathelin, Global Innovation director of Advanced

Polymer Solutions at LYB. "The Schulamid ET100 line exemplifies this dedication by delivering superior performance through differentiated solutions."

Key Benefits of Schulamid ET100:

- **Enhanced Surface Aesthetics:** Engineered with excellent melt flow characteristics, enabling easy injection molding and demolding of thin-wall complex parts with significantly reduced surface defects, stress marks and floating fibers on the part surfaces.

- **Improved Durability:** Enhanced toughness ensures parts perform well during both manufacturing and long-term use.

- **Suitable Rigidity**: Available with various glass fiber reinforcement for suitable rigidity, allowing firm assembly and eliminating noise even when the car is running at high speeds.

- **Customizable Style:** Allows for seamless integration into a wide range of colors and visual effects, enabling the creation of visually appealing automotive designs.

- **Sustainability Choice:** Features lower density compared to conventional structural materials, opening new possibilities for lightweight vehicle construction and reduced carbon emissions. Additionally, the solution eliminates the need for painting, consequently reducing volatile organic compound (VOC) emissions associated with the painting process.

The Schulamid ET100 GF15 grade has already been successfully implemented in window frames by renowned Chinese OEM brands. Considering the performance and versatility of the grade, LYB plans to expand the product line's development and promotion to encompass more automakers and applications.

By advancing innovation with Schulamid ET100, LYB is enhancing the capability of automakers to develop new sustainable high-performance applications, focused on automotive interiors combined with excellent aesthetics.

Source : LyondellBasell

WANHUA CHEMICAL PAINT-FREE PMMA/ASA ALLOY MATERIAL: ENHANCING BOTH TEXTURE AND CHARM

Wanhua Chemical introduces an innovative composite material that combines the best properties of Polymethyl Methacrylate (PMMA) and Acrylonitrile Styrene Acrylate (ASA). The PMMA/ASA alloy showcases its unique attributes and extensive applicability across various industries, including outdoor equipment, automotive parts, construction materials, and electronic devices. Particularly in the automotive sector, this paint-free material is setting a new trend by gradually replacing traditional painting processes.

In conventional methods, automotive parts such as exterior pillars, mirror housings, spoilers, and grilles are typically painted using materials like ABS, ASA plus PP, or PC/ABS, which involves high costs and environmental pollution. The PMMA/ASA alloy, as a paint-free alternative, addresses these issues by significantly reducing production costs and environmental impact, thereby supporting the sustainable development of the automotive manufacturing industry.

Leveraging Wanhua Chemical's comprehensive industry chain advantages in PMMA and strong R&D capabilities, the company has developed a series of paint-free PMMA/ASA alloy products. These products boast excellent weather resistance, impact resistance, and chemical corrosion resistance. They also feature vibrant colors and high glossiness, meeting the dual demands for aesthetics and performance in automotive exterior components. This innovation injects new energy into the automotive industry.

Key Advantages of PMMA/ASA Alloy:

-UV Resistance: The unique molecular structure of ASA provides excellent UV resistance. Compared to traditional painting materials, the PMMA/ASA alloy offers superior UV resistance, maintaining color and appearance stability over long periods in outdoor environments, thus extending its service life.

- Weather Resistance: The alloy resists the erosion of ultraviolet rays and can withstand various environmental factors such as climate changes, temperature fluctuations, and humidity variations. It remains resilient in harsh outdoor conditions, maintaining its appearance and performance stability.

- Chemical Corrosion Resistance: PMMA/ASA alloy exhibits excellent

resistance to certain acids, alkalis, and other chemical substances, making it highly durable in corrosive environments.

- Surface Glossiness: PMMA's high transparency and good surface glossiness, combined with ASA, result in a high surface brightness. The alloy can be easily processed into various appearance parts, providing a mirror-like effect that enhances visual appeal.

Wanhua Chemical is committed to driving product innovation and technological advancements. The company aims to continuously expand into new channels, support the high-quality development and green transformation of automotive materials, and provide a variety of innovative and comprehensive material solutions for the diversified development of the automotive industry.

Source Wanhua Chemical

BOREALIS INTRODUCES GLASS-FIBER REINFORCED PP WITH 65% PCR FOR DEMANDING AUTOMOTIVE APPLICATIONS

- Borealis introduces Borcycle™ GD3600SY, a glass-fiber reinforced polypropylene (PP) compound with 65% post-consumer recycled (PCR) polymer content.
- Its first application will be in center console carriers for the new Peugeot 3008, developed in partnership with Plastivaloire and Stellantis.
- EverMinds™ in action: This development proactively addresses the expected requirements of the forthcoming European End-of-Life Vehicles regulation and marks a significant step towards a circular economy for plastics.

Borealis is pleased to introduce Borcycle™ GD3600SY, a glass-fiber reinforced polypropylene (PP) compound with 65% post-consumer recycled (PCR) polymer content. It will first be used in automotive interiors in a landmark project delivered in partnership with Plastivaloire, a thermoplastic injection specialist and Tier 1 supplier to the automotive sector, and Stellantis, an OEM and the owner of 14 automotive brands.

Borcycle GD3600SY is part of the of mechanically recycled polyolefins for demanding applications. It contains 30% glass fibers, meaning that almost the entire polymer fraction of the product is made from post-consumer recycled PP. It will initially be used in center console carriers for the new Peugeot 3008, marking the first instance of a compound with 65% PCR PP being used in series production automotive applications.

This development addresses the requirements of European End-of-regulation. This 25% of the plastic used in new vehicles must come from recycled sources, with a clear focus on mechanical and post-consumer recycling. Given that polypropylene accounts for about one-third of the plastic in cars, compounds like Borcycle GD3600SY will play a critical role in achieving these circularity goals.

Historically, mechanically recycled plastics from post-consumer waste streams have been of low and inconsistent quality, making them unsuitable for demanding automotive applications. However, advanced

Shanila Baseley, Borealis Global Commercial Vice President, Advanced Products & Mobility, Commercial Excellence & Business Intelligence, states, "Accelerating the transition to a circular economy requires strong partnerships and innovative approaches. We are proud that our collaboration with Plastivaloire and Stellantis in the spirit of has resulted in this significant step towards sustainability in the automotive sector and is further evidence of our commitment to reinventing essentials for sustainable **market, Borcycle GD3600SY in Q4 2023. Stellantis is the leading OEM (Original Equipment Manufacturer) implementing this technology, deploying it in**

our center console carriers in vehicle interiors. This reinforces our commitment to sustainability by engaging our supply base in a shared journey towards circularity," explains Danielly Pierozan Cortes,

Global Head of Resins & Compounds at Stellantis.

Borealis and its partners have been recognized as finalists in the category "Automotive, Electrical & Electronic Product" in the for the center console carrier made from Borcycle GD3600SY. The product will be showcased at in Mannheim, Germany, 19–20 June, and at in Amsterdam, Netherlands, 19–20 June.

"Developed and manufactured in France, the center console structure of the new Peugeot 3008, produced with Borealis' new Borcycle M GD3600SY grade, is a major step towards a more sustainable automotive industry. Our participation in the 2024 Plastic Recycling Europe award underlines Plastivaloire's commitment to sustainability and circularity," says Dominique Manceau, Innovation Director at Plastivaloire.

The qualification of Borcycle GD3600SY for the Peugeot 3008 center console carriers marks another milestone in Borealis' EverMinds™ ambition to accelerate the transition to a circular economy. It also serves as an example of the company's spirit of partnership with the mobility sector, moving ahead together to a more sustainable future.

Moving ahead together with Borealis Mobility

For over 50 years, Borealis has been a leading supplier of innovative polyolefin solutions for the mobility industry. Our specialized compounds are engineered for a range of demanding applications, including vehicle Interiors and Exteriors, e-Powertrain systems, and Under-the-Hood components.

At the core of this portfolio is our proprietary Borstar® technology, which forms the foundation for our high-performance, cost-effective, and lightweight polypropylene materials that can substitute conventional materials like engineering plastics and metal.

Our EverMinds™ commitment to accelerating action on circularity is evident in our circular portfolios, which help reduce the carbon footprint of vehicles without compromising performance. This includes the Bornewables™, based on renewable feedstock, Borcycle™ M, derived from advanced mechanically recycled materials, and Borcycle™ C, based on chemically recycled feedstock The circular content in the Bornewables™ and Borcycle™ C materials is attributed using a mass balance approach, which is ISCC PLUS certified. This certification guarantees traceability throughout the supply chain, giving you and your customers confidence in their sustainability credentials.

As the mobility industry evolves, Borealis continues to deliver innovation where it counts – in compounds that make vehicles safer, more efficient, and more sustainable for everyone.

Source : Borealis

LG CHEM'S INNOVATIVE OBESITY TREATMENT LB54640 TO BE ADVANCED BY RHYTHM PHARMACEUTICALS AS A KEY DEVELOPMENT PROJECT

Initiation of First Patient Dosing in Phase 2 Clinical Trial for Hypothalamic Obesity

- Promising New Drug Candidate, LB54640, Achieves Highest Upfront Payment in Domestic Pharmaceutical Industry for First Half of the Year; Rhythm Pharmaceuticals to Focus on Active Development as a Next-Generation Growth Driver
- Expected to Improve Safety by Addressing Major Adverse Effects of Existing Treatments, such as Skin Pigmentation

LG Chem has granted global licensing rights for an oral treatment for rare obesity disorders to U.S.-based Rhythm Pharmaceuticals, which is now set to begin its active development.

On the 24th, LG Chem's partner, Rhythm Pharmaceuticals (hereinafter referred to as "Rhythm"), announced the initiation of the first patient dosing in a Phase 2 clinical trial for LB54640.

Rhythm plans to recruit 28 patients aged 12 and older with hypothalamic obesity (HO), a condition characterized by impaired hypothalamic function leading to difficulties in appetite control. The primary efficacy endpoint will assess changes in body mass index (BMI) after 14 weeks of treatment, with an extension study to evaluate long-term safety over 52 weeks of continued treatment.

LB54640 is an MC4R (Melanocortin-4 Receptor) agonist developed in-house by LG Chem, which was globally licensed to Rhythm in January. The drug has been recognized for its high potential, recording the highest upfront payment in the domestic pharmaceutical industry for technology exports in the first half of the year, amounting to $100 million.

In a corporate presentation to investors held in May, Rhythm identified the acceleration of LB54640 development as one of the three key initiatives to enhance company value, signaling a strong commitment to active investment. Rhythm is focusing on expanding the indications and global reach of its already commercialized MC4R agonist, IMCIVREE, which requires daily injections. Simultaneously, the company is accelerating the development of MC4R agonists such as LB54640 and RM-718, which offer improved dosing convenience.

David Meeker, CEO and President of Rhythm Pharmaceuticals, stated, "Based on preclinical and Phase 1 clinical data, we have confirmed the potential of LB54640 as an effective MC4R agonist without adverse effects such as skin pigmentation." He added, "are committed to providing a broad portfolWe io of treatment options, enabling patients worldwide who suffer from severe obesity to select the most appropriate therapy for their needs."

Source : LG Chem

SUN PHARMA'S HAIR LOSS DRUG IN THE CROSS HAIRS IN US

Mumbai: Sun Pharma's much anticipated US commercial launch of its specialty product Leqselvi (deuruxolitinib) is facing uncertainty due to a patent dispute.

Leqselvi is used for the treatment of alopecia areata, an autoimmune disease that leads to hair loss, and was approved by the US Food and Drug Administration (USFDA) last week. Sun Pharma has been making preparations for months to launch the drug in July, but an injunction motion by the American drugmaker lncyte Corporation in the US District Court for the District of New Jersey has put the brakes on the launch.

Incyte in its injunction motion alleged that Sun Pharma's pre-launch activities and its immediate post-approval commercial market launch plans have violated Incyte's rightful intellectual

property in the valid and enforceable '335 Patent' covering deuterated ruxolitinib analogs.

"The imminent or ongoing infringement by Sun will cause irreparable harm and

drastically devalue Incyte's related investments, including investments made into Jakafi (ruxolitinib) and multiple other products," the injunction motion said.

In August last year, the United States Court of Appeals for the Federal Circuit upheld a previous ruling by the Patent Trial and Appeal Board (PTAB) that invalidated US patent 149, which covered the deuruxolitinib compound.

"Currently, a patent infringement action and a motion seeking a preliminary injunction have been filed by lncyte," Sun Pharma said.

Source : Economic Times

LILLY, NOVO NORDISK BATTLE FOR WEIGHT-LOSS MARKET LANDS AT THE PHARMACY SHELF

LONDON/NEW YORK, Aug 5 (Reuters) – As Eli Lilly's (LLY.N) weight-loss drug Zepbound gains ground in the U.S. against Novo Nordisk's (NOVOb.CO) Wegovy, some doctors say their guiding principle for writing prescriptions is simple: which drug can my patients actually get at the pharmacy?

Lilly has quickly built a roughly 40% market share in the U.S. since it launched Zepbound in December, hitting 130,000 prescriptions for the week ending July 19, compared to 200,000 for Wegovy, according to IQVIA data published in analyst notes.

Data from separate clinical trials showed Zepbound leads to slightly higher weight loss on average than Wegovy, prompting some patients to seek the Lilly treatment. But both companies have been unable to produce enough of the medicines, taken weekly by injection, to meet unprecedented demand.

"The reality we live in right now is that we are beholden to these supply issues," said Dr. Eduardo Grunvald, an obesity medicine physician at University of California, San Diego.

Five U.S. doctors specializing in obesity told Reuters they prescribe whichever of the two drugs is more likely to be available at the time, even if that means a patient has to switch between them, to ensure continued treatment.
Investors will be focused on supply updates from Novo and Lilly when the two companies report quarterly results this week.

"While we will do our best to support those who want to start taking Wegovy, it is important to recognize that overall demand will continue to exceed supply and some patients may still have difficulty filling Wegovy prescriptions," Novo said in an update on its website.

Both companies have announced plans to spend billions of dollars to boost manufacturing by expanding factories, building or buying new ones and seeking more deals with contract drug manufacturers.

They are also launching the treatments in new countries, including Britain, Germany, Saudi Arabia and the United Arab Emirates for Lilly, and Australia, Canada and Spain for Novo. But the U.S. market, where more than 70% of adults are obese or overweight, is the most lucrative by far.

Source : PharmaLive

CLARIANT'S MEGAZONE™ TECHNOLOGY DELIVERS STRONG PERFORMANCE AT CNOOC'S METHANOL PLANT

- MegaZonE uses optimized layering of different catalyst grades to enhance methanol synthesis performance
- The drop-in solution increases cumulative methanol production, improved carbon conversion efficiency while reducing by-product formation
- The CNOOC plant reports significant economic and operational benefits due to higher carbon efficiency, lower pressure drop, and superior methanol quality

MUNICH, July 23, 2024 - Clariant, a sustainability-focused specialty chemical company, announced that its MegaZonE technology is delivering excellent performance on the methanol plant of CNOOC's China Blue Chemical Ltd. The innovative system uses several layers of methanol catalysts with different activity levels to optimize heat management and overall catalyst performance. MegaZonE was installed at CNOOC's methanol production plant in Hainan, China, in April 2021, and has been operating optimally for more than 36 months now. A joint venture with the KB Group, the CNOOC plant produces 600 KTA methanol from natural gas using Air Liquide's Lurgi process and Clariant's MegaMax® catalysts.

Since MegaZonE was implemented at the CNOOC plant, carbon conversion efficiency has improved considerably, with average makeup gas consumption decreased by 67 Nm^3 per metric ton of methanol compared with the previous charge. Pressure drop has also decreased significantly, eliminating the risk of bottlenecks on high pressure drop in the reactor. Furthermore, the plant is benefitting from a 20% reduction in by-product formation, which has greatly improved methanol quality. These factors combined have resulted in substantial economic benefits.

Georg Anfang, Vice President Syngas and Fuels at Clariant Catalysts, commented, "Clariant's efforts to continuously improve methanol production are not limited to catalyst formulation. We also focus on the overall process and how our catalysts can be optimally used in the complete reactor system. MegaZonE is a perfect example and has proven to be a major breakthrough for the methanol industry. We are honored to have CNOOC as our customer and delighted to witness the excellent performance and commercial results we promised."

China BlueChemical Ltd., a division of China National Offshore Oil Corporation (CNOOC), is a modern, large-scale enterprise engaged in deep processing of natural gas, manufacturing mineral fertilizers and chemical products. Its annual production capacity totals to 1.84M tons of urea, 1 M tons of phosphate and compound fertilizers, as well as 1.4 M tons of methanol and 270 K tons of acrylonitrile."

Jointly developed by Clariant and Air Liquide, MegaZonE technology makes optimum use of Clariant's high-performance MegaMax catalysts through a unique layering concept. Moderately active catalysts are loaded in

hotter zones of the converter to prevent hotspots and minimize thermal stress, thereby extending catalyst lifetime (by up to 2 years). In contrast, catalysts with enhanced activity are placed in the lower section of the converter to intensify reaction rates, increase cumulative methanol production (by up to 15%), and reduce by-product formation (by up to 30%).

MegaZonE technology is a drop-in solution that is suitable for virtually any methanol production facility. Existing plants benefit from tailored refill options for optimizing processes, while new

facilities can enjoy a more compact and resilient design. MegaZonE is also compatible with a variety of feed sources, including stranded gas, unused syngas, or CO_2-rich gases. This can help producers considerably reduce the CO_2 footprint of their facilities and meet their sustainability targets.

Source : Press Release Finder

ARCADIUM LITHIUM ACQUIRES LI-METAL'S LITHIUM METAL BUSINESS TO ENHANCE PRODUCTION CAPABILITIES AND MEET DEMAND FOR NEXT GENERATION BATTERY MATERIALS

PHILADELPHIA and PERTH, Australia, Aug. 2, 2024 / PRNewswire/ - Arcadium Lithium plc (NYSE: ALTM, ASX: LTM, "Arcadium Lithium") today announced it has acquired the lithium metal business of Li-Metal Corp. (CSE: LIM) (OTCQB: LIMFF) (FSE: 5ZO). The all-cash US$11 million acquisition includes the intellectual property and physical assets related to lithium metal production, including a pilot production facility in Ontario, Canada.

Key personnel from Li-Metal's lithium metal business will be joining Arcadium Lithium as part of the acquisition. Maciej Jastrzebski, Li-Metal's co-founder and Chief Technology Officer, has entered into a consulting agreement with Arcadium Lithium to facilitate the transfer of technology and integrate the team.

The acquisition is expected to strengthen Arcadium Lithium's position as a leading global producer of lithium metal by providing safer, lower cost and more sustainable processes for lithium metal production using various grades of lithium carbonate feedstock, which the company produces in Argentina. These new capabilities will complement the company's existing process technologies for producing lithium metal at its Bessemer City site in North Carolina, USA, using concentrated lithium chloride from its Güemes facility in Salta, Argentina.

"We are excited to welcome the team to Arcadium Lithium as we look to lead the way in developing cutting-edge lithium carbonate to lithium metal production technology. This small but important acquisition gives us a platform to advance new and better process pathways for manufacturing lithium metal," said Paul Graves, president and chief executive officer of Arcadium Lithium. "The ability to produce lithium metal from lithium carbonate will give us additional flexibility to utilize our vertically integrated network of assets while reducing the need for third-party lithium metal. This will further enhance the competitiveness of our butyllithium and lithium specialty chemicals business and help us create the scale needed to meet the growing demand for next generation battery materials developed from lithium metal."

Arcadium Lithium uses lithium metal to manufacture lithium specialty products,

including high purity lithium metal (HPM) and LIOVIX® – a proprietary printable lithium metal formulation, for primary battery applications and next-generation batteries. Arcadium Lithium also processes lithium metal into butyllithium, used in the manufacturing of lightweight "green" tires among other applications, as well as lithium specialty chemicals used in medicine, agriculture, electronics and other industries.

Source : Arcadium Lithium PLC

BASF INTRODUCES HAPTEX® 4.0: THE FUTURE OF SUSTAINABLE SYNTHETIC LEATHER PRODUCED WITHOUT ANY WASTE RESIDUE AS IT IS 100% RECYCLABLE

Shanghai, China – July 17, 2024 – BASF today launched Haptex® 4.0, an innovative polyurethane solution for the production of synthetic leather that is 100% recyclable. Synthetic leather made with Haptex 4.0 and polyethylene terephthalate (PET) fabric can be recycled together using an innovative formulation and recycling technical pathway without the need of layer peel-off process. This makes the reuse of the materials feasible.

For a long time, the industry faces a challenge to reuse or recycle end-of-life synthetic leather as it is a composite of multiple raw materials, including polyurethanes (PU), PET, etc. The bonding strength of each layer is very high, making it difficult to separate them layer by layer. This complexity has traditionally made the reuse or recycling of the synthetic leather a challenge, which this challenge can now be tackled by Haptex 4.0. Owing to its recyclability, Haptex 4.0 is also produced without any waste residue, and hence a more sustainable manufacturing process.

"Haptex 4.0 is a technical breakthrough and aligns with BASF's commitment to advancing circular economy principles and promoting the use of recyclable materials in various industries. With Haptex 4.0, BASF is setting a new benchmark in enabling the green transformation of our customers with sustainable, high-performance and durable materials." said Silvia Mok, Vice President, Business Management Polyurethanes Systems, Performance Materials Asia Pacific, BASF.

Like the earlier generations, Haptex 4.0 also complies with stringent volatile organic compounds (VOC) standards, as no organic solvents are used in the manufacturing process. This significantly simplifies and speeds up the production process of synthetic leather. Beyond its environmental benefits, Haptex 4.0 is both affordable and durable, making it an ideal choice for a wide range of applications. Rigorous testing has demonstrated Haptex 4.0's exceptional anti-yellowing properties, resistance to heat and resilience under autoclave conditions. From footwear and fashion to automotive interiors and furniture, Haptex 4.0 offers exceptional quality and longevity, providing consumers with a reliable and cost-effective alternative to traditional leather without compromising on performance or cost.

The first generation of Haptex was released in 2013 and has been widely adopted by different industries such as automotive, apparrels, footwear and furniture since then.

Source : BASF

CLARIANT'S OLEMAX™ 260 CATALYST DELIVERS STRONG PERFORMANCE FOR EQUATE PETROCHEMICAL COMPANY

- Clariant's innovative OleMax 260 catalyst provides smooth startup and successful operations for world-scale steam cracker in Shuaiba, Kuwait
- EQUATE is the first ethylene producer to adopt OleMax 260 in the Middle East
- Clariant continuously supports the seamless transition by providing ongoing catalyst training and monitoring with CLARITY™ digital solutions

MUNICH, July 25, 2024 - Clariant, a sustainability-focused specialty chemical company, announced today marks a milestone with the one-year successful operation of its novel OleMax 260 catalyst at EQUATE Petrochemical Company's world-scale steam cracker in Kuwait.

EQUATE is leading the way as the first Middle East ethylene producer to adopt OleMax 260 catalyst for the selective hydrogenation of acetylene. With new steam cracker projects driving capacity growth in the Middle East, the smooth startup and successful operations in Kuwait demonstrate the value of innovative catalysts for mitigating risk and maximizing performance in this industry.

Clariant launched its game changing OleMax 260 catalyst in 2016, and ethylene producers globally are quickly

adopting it to address longstanding operational challenges associated with 'front-end' plant configurations. The novel catalyst represents a breakthrough for these plants that struggle with difficult start-ups and operations, and it greatly reduces the risk of thermal runaway reactions, unplanned downtime, and flaring incidents. By driving exceptional selectivity and stability even at low CO conditions, OleMax 260 empowers plant operators to improve productivity, profitability, safety, and sustainability.

"We are thrilled to celebrate this important first year milestone with EQUATE," said Gene Mueller, Head of Ethylene at Clariant Catalysts. "With OleMax 260 delivering outstanding performance and superior technical service expertise driving ongoing improvements, we look forward to continuing our collaboration with EQUATE for many more successful years in Kuwait."

Source : Press Release Finder

EXXONMOBIL INTRODUCES ENABLE™ 1617 PERFORMANCE POLYETHYLENE : A COMPELLING POTENTIAL SOLUTION FOR HIGH-PERFORMANCE THIN-GAUGE HAND WRAP APPLICATIONS

HOUSTON, July 16, 2024 (GLOBE NEWSWIRE) -- ExxonMobil today announced the launch of its Enable™ 1617 performance polyethylene (PE) grade. Ideal for thin-gauge hand wrap applications, the new resin is designed to help provide high tenacity and consistent extrusion, as well as help enable the incorporation of high loading levels of post-consumer recycled (PCR) content.

Key Potential Benefits Include:

- Incorporation of PCR content: Can provide the performance boost to help enable the incorporation of high levels of PCR content.
- Efficiency: Can help to achieve high production speed, offering a cost-effective extrusion process that can maximize output while maintaining quality, making it ideal for high-volume production environments.
- Performance: Can help to deliver high tenacity, strong holding force, and reliable load stability, which can help wrapped products remain secure and intact during transportation and storage and help reduce the risk of damage.

An Enable™ performance polyethylene resin-based solution can help to deliver high tenacity, contribute to high holding force and great load stability. The new Enable 1617 performance PE resin can combine seemingly opposite features: high flow and high tenacity. This unique combination can result in great cast film processing, exhibited by fast line speed, low pressure and low motor load.

With its flow properties, Enable 1617 resins can be run in coextruded structures as discrete layers, contrary to some of the lower melt index high tenacity resins that require blending in order to be processed. The balanced properties can provide opportunities for stiff, thinner gauge film, while offering consistent extrusion and high throughput rates, up to 650 m/min for 8 µm film thickness.

To help support value chain participants' goals of reducing their use of raw materials, ExxonMobil has developed a solution for downgauged, tough hand wrap films that can include the incorporation of PCR content. In high-tenacity hand wrap applications, Enable 1617 resin can make the incorporation of 30+% PCR content possible, while maintaining high processability and good film quality. The incorporation of PCR content can make predicting gel content and quality consistency difficult. Enable™ 1617 performance polyethylene resin is especially well-suited as a blend partner for the incorporation of PCR content. The high melt strength of Enable™ 1617 can contribute to process stability, while the high flow attributes can help enable the processing of thin gauge film at high extrusion rates. Film properties can be affected by the quality of the incorporated PCR content, however, Enable 1617 resins can be instrumental in helping to maintain acceptable film properties for the application without need to up-gauge.

"ExxonMobil is committed to collaborating with our customers to understand their needs and to help them create compelling potential solutions for the industry. Our new resin not only can enhance performance but also can support the incorporation of recycled content," said Justin Schmader, Market Development Manager, ExxonMobil. "We believe this product will help our customers achieve their operational objectives more efficiently such as helping support their goals of reducing raw material use."

Source : ExxonMobil

NESTE AND MITSUBISHI CORPORATION AGREE ON STRATEGIC PARTNERSHIP TO DEVELOP SUPPLY CHAINS FOR RENEWABLE CHEMICALS AND PLASTICS

Neste and Mitsubishi Corporation ("MC") have agreed to establish a strategic partnership focusing on developing value chains for renewable chemicals and plastics for and with Japanese brands. The partners are targeting brands in industries such as food and beverage, apparel, and consumer electronics. Through the partnership, Neste and MC aim to accelerate their efforts to build defossilized supply chains for brand owners in Japan.

In the course of the cooperation, Neste will provide its expertise in sustainability and more sustainable materials, also in the form of renewable Neste RE™, a bio-based raw material for plastics production. MC will provide its strong experience in business development and supply chain management of petrochemical products and derivatives in the region. Together, the partners will offer comprehensive solutions for Japanese brands looking to reduce greenhouse gas (GHG) emissions and reliance on fossil resources in their supply chains.

Neste and MC have already cooperated on several individual projects in the past, including a collaboration with other partners to enable the production of renewable PET bottles for Suntory Holdings Limited as well as a multi-party collaboration to produce apparel from bio-based materials for Goldwin Inc.

"Through this partnership, we will be able to provide sustainability-minded companies in Japan with a full package to reduce their plastics-related GHG emissions," says Carrie Song, Senior Vice President, Commercial at Neste Renewable Products. "Together, we can provide the materials and the know-how. Together, we can also get the materials into the value chains, making it easier for companies to make the switch to more sustainable solutions."

"Our strength lies in our capability to establish supply chains and access a wide variety of brand owners in Japan," says Yoshiyuki Watanabe, Division COO, Business Development Div. at Mitsubishi Corporation. "We have cultivated this strength over many years through traditional trading and strategic investments in collaboration with trusted partners. Recognizing that these achievements cannot be made alone, we are eager to strengthen our relationship with Neste. We are thrilled to expand our network to include partners who share similar values, thereby generating economic, societal and environmental benefits to meet the needs of society."

Moving forward, Neste and Mitsubishi Corporation will accelerate the transition from fossil to renewable plastics under this strategic partnership, contributing to the early realization of a defossilized society in the materials sector.

Source : Mitsubishi Corporation

ARCHROMA AND VIVID CLM TEAM UP TO ADVANCE COLOR MATCHING FOR TEXTILE PRINTING WITH THE INDUSTRY'S LARGEST COLOR LIBRARY

Pratteln, Switzerland, July 18, 2024 - Archroma, a global leader in specialty chemicals towards sustainable solutions, is collaborating with Zydat

Inc. to bring the complete Color Atlas by Archroma® color library to the Vivid Color Library Management (CLM) color-matching platform for faster and more accurate inkjet digital printing of fashion and textiles

Archroma's Color Atlas is the textile industry's largest library of engineered color standards, with more than 5,760 color references formulated to comply with leading eco-standards and deliver consistent and accurate color reproduction.

With these colors available within Vivid CLM's online color palette optimization and correction tools, designers can more quickly and easily create and share their color palettes for more accurate inkjet printing. This can reduce the burden of pre-production color proofing and streamline the color management process to help deliver high-quality printed fabric and apparel in a fast and economical way.

Vivid CLM was launched by Zydat in February 2024. It offers a unique and designer-oriented solution to color matching with a proprietary algorithm that translates complex spectral data into a Red-Green-Blue workflow and allows the user to print, scan and check the color, with automatic adjustments to improve accuracy. The solution's palette storage system allows colorists to share palettes across the ecosystem.

"Digital workflows and inkjet printing present an opportunity for designers and brands to embrace both their creative vision and their sustainability principles," Chris Hipps, Global Head of Archroma Color Management, said. "Our partnership with Vivid CLM reflects Archroma's 'PLANET CONSCIOUS+' commitment to innovation and partnership that supports a more sustainable textile ecosystem."

Matthew Forman, President of Vivid CLM by Zydat Inc., said: "Archroma and Vivid CLM have come together to revolutionize color palette

selection, creation and inkjet printing for fashion designers. By integrating the Archroma Color Atlas into the Vivid CLM workflow, we are giving designers access to thousands of ready-made digital colors and enabling swift and seamless color matching for their particular inkjet printing system."

In addition to accessing all of the 5,760 colors in the Archroma Color Atlas portfolio as digital standards within Vivid CLM, users of the software may also choose to refer to Archroma's physical color library in multiple formats. They can also tap into Archroma's expertise around the world for technical support with sustainable coloration systems and achievability on alternate substrates.

The Color Atlas by Archroma® is part of the Archroma Color Management+ design and development solution for more sustainable textiles and fashion through fast color selection and creation, consistent and accurate color reproduction, and reduced environmental impact.

Source : Press Release Finder

TORAY PARTNERS WITH ELEVATED MATERIALS TO REPURPOSE CARBON FIBER PREPREG WASTE, ADVANCING SUSTAINABILITY EFFORTS

Toray Composite Materials America, Inc., a leading manufacturer and supplier of carbon fiber and prepreg materials, announces the execution of a memorandum of understanding (MOU) adding Elevated Materials as a provider of repurposing services for its Tacoma, Washington facility. Under the three-year agreement, Elevated Materials will repurpose Toray scrap prepreg materials, including slit-edge and full-width prepreg sheets.

Elevated Materials' mission is to eliminate carbon fiber waste in the aerospace industry. Since its founding, the company has successfully diverted 200,000 pounds of carbon fiber waste through its innovative upcycling process. Elevated Materials transforms this waste into press-cured carbon fiber sheets, plates, and blocks, which have applications in various industries, from sports equipment to manufacturing accessories and drones.

The agreement between the two

companies is a testament to their shared commitment to prioritize sustainable solutions in response to the planet's growing environmental challenges. Their focused efforts aim to make a positive ecological impact by reducing waste, conserving resources, and decreasing pollution.

"Collaborating with the Toray team on tough sustainability challenges has been a rewarding experience. Their expertise and collaborative spirit have been instrumental in pushing the boundaries of what we can achieve in sustainable composite

materials. Together, we are making significant strides towards a more sustainable future," said Ryan Olliges, founder and CEO of Elevated Materials.

The MOU is a significant and strategic step towards supporting Toray's sustainability vision. This vision includes achieving net zero emissions by 2050 and managing resources sustainably.

"Our commitment to repurposing waste material underscores our dedication to sustainability and innovation. With this initiative, we are reducing our environmental footprint and setting a new standard for responsible manufacturing," said Jeff Hawkey, senior vice president of operations at Toray.

Source : Toray

INTERNATIONAL NEWS

ARKEMA SHOWCASES ITS SUSTAINABLE OFFER AT 2024 LATIN AMERICAN COATINGS SHOW N AMERICAN COATINGS SHOW

Arkema Will Showcase A Wide Range Of Solutions And Technologies For More Sustainable Decorative Paints, Construction Coatings, Adhesives And Sealants; In Support Of Its Customers' Commitment To Decarbonization, More Circularity And Other Sustainability Goals At The Latin American Coatings Show (LACS), July 23-25, In Mexico City (Booths # 122-127).

Arkema Showcases Its Sustainable Offer At 2024 Latin American Coatings Show

At LACS, We Will Showcase How That Regional Footprint, Combined With Global Expertise And Unique Set Of Coating Technologies*, Will Enable Arkema To Bring More Sustainable Solutions To The Market, Helping Customers Meet Expectations And Advance Solutions Supporting Efficient Home And Indoor Well-Being, Insulation, Durability, Cooler Buildings And User-Friendly Application With Minimal Environmental Impact." Manuel Garcia - President Of Coatings Solutions Of Mexico

Renewable Based And Lower Carbon Footprint Materials

Bio-Renewable Based Offer, Including Waterborne Resins And Additives For Interior / Exterior Paints, Roof Coatings Featuring Up To 100% Bio-Content.

Reducing Energy Consumption Of Buildings

- Resins And Additives That Enable Cool Surface Coatings (Offering Up To 30% Saving In Air Conditioning) And Ultra-Durable Material For Building Facades Designed To Extend The Lifespan Of Coatings, Reduce Costs And Improve Carbon Footprint.
- Solutions For Better Insulation, Such As Sealants, Enabling Energy Savings In Buildings, Cool Roof To Improve Building Efficiency.

Focus On Decarbonize The Built Environment

Arkema Researchers Are Presenting Technical Papers Dedicated To Sustainability At This Year's Conference.

The Latest Innovations To Reduce TiO2 Consumption With ENCOR® 317 And CELOCOR® AF

Vinyl Acrylic Binders Provide Reliable Performance Like Good Touch Up Properties And Cross-Sheen Performance At Lower Formulation Cost Points, Yet There Is A Need For More Sustainable Offerings With Improved TiO2 Efficiency Since TiO2 Is CO2 Intensive. We Will Present The Characteristics And Key Benefits Of Our New Vinyl Acrylic Binder And How It Will Support Paint Formulation Development To Optimize TiO2 Usage.

Source : Arkema

MYCOWORKS UNVEILS NEW MATERIAL APPLICATION OF INNOVATIVE FINE MYCELIUM™ TECHNOLOGY

SAN FRANCISCO, July 30, 2024 / PRNewswire/ -- Biotechnology company MycoWorks, announced today that SOLLEI, Cadillac's latest concept vehicle, is the first automobile to incorporate a mycelium bio-based material developed in collaboration with General Motors. Used in the charging mats on the console and the door map pockets, the Fine Mycelium™ material reflects Cadillac's mission to pioneer renewable automotive resources. The forward-looking concept convertible was unveiled at Cadillac House at Vanderbilt, the state-of-the-art facility at GM's Global Technical Center campus in Warren, Michigan.

"SOLLEI concept reimagines the discovery of travel, innovative use of materials, and features an optimistic celestial-inspired design", said Erin Crossley, design director for Cadillac. "SOLLEI concept cultivates the vision for limitless expression and artful integration between travel and leisure."

In August 2022, GM Ventures—the investment arm of General Motors Co.—announced a strategic investment in MycoWorks to develop Fine Mycelium™ materials for sustainable automotive interiors. MycoWorks' breakthrough Fine Mycelium™ technology engineers mycelium, the infinitely renewable root structure of mushrooms, during growth to craft a range of innovative materials that can be used as bio-based alternatives to plastic-based products. Since launching its first product Reishi™ Fine Mycelium™ in 2020, MycoWorks has ushered in a new era of luxury materials with their technology, establishing joint development partnerships with luxury companies across fashion, footwear, furniture, and automotive. Grown-to-spec, Fine Mycelium™ has unlocked an unprecedented level of control over the supply chain of natural materials, allowing its clients to grow customized materials to the standards and needs of each industry.

"MycoWorks is grateful to be working with General Motors on co-developing a pioneering new category of mycelium materials with Fine Mycelium™," said MycoWorks' CEO, Matthew Scullin. "MycoWorks' collaboration with Cadillac and General Motors is the first in the automotive industry, demonstrating the enormous potential of Fine Mycelium™ in sustainable mobility and what it means for the future of clean, responsible automotive design."

Companies, brands, and creatives have been restlessly awaiting innovative and sustainable materials available at scale, with MycoWorks paving the way for wider mycelium material availability. The biotech company opened its first commercial-scale Fine Mycelium™ production facility in South Carolina last fall (October 2023) to continue supplying early adopters with its flagship material, Reishi™ , and to provide the infrastructure to continue developing and scaling additional materials made from Fine Mycelium™.

Source : PRNewswire

Continued on Pg 28

unique properties of GaAs solar cells make them appropriate for space applications. For instance, they are highly efficient when coupled with a resistance to radiation, which ensures long-term operation even in the harsh environment of space.

However, there are other materials added to the list of innovations in the photovoltaic cell technology which includes tandem solar cells, building-integrated photovoltaics and concentrated photovoltaic systems. Overall the outlook of photovoltaic materials is quite dynamic and very promising.

How the photovoltaic cell market is combating the challenges:

Challenges for the photovoltaic cell market arise due to the scarcity and production cost of the materials used. Now, the most efficient Gallium used in modern photovoltaic cells is a byproduct of the smelting of other materials such as aluminum and zinc. Therefore, the availability of Gallium is highly dependent on the production levels of these metals, and extraction processes of Arsenic which is more abundant yet poses environmental and health risks during extraction and processing, necessitating stringent handling and disposal measures.

Therefore the industry players are making efforts to address the cost and material scarcity challenges involved in the production of GaAs solar cells. They have come up with innovations in manufacturing techniques such as the development of thin-film GaAs solar cells that also aims to reduce the materials usage and production costs. The thin-film technology has enabled the deposition of GaAs layers on the inexpensive substrates which significantly lowers the amount of gallium and arsenic required for the production.

New chemical synthesis method to improve organic solar cell efficiency:

Organic solar cells are steadily improving in their efficiency and affordability due to the new advances in technology. One specific promising approach is boosting the performance by using specialized polymers that are called "Polyelectrolytes". Although these materials have proven difficult to produce with the expected levels of purity required for the production of OSCs, new research was conducted in South Korea, by colleagues of Pukong National University at Busan, South Korea. They have worked in synthesizing high-purity polyelectrolytes and applying them to OSCs.

The unique electronic structure of polyelectrolytes enables the boost in efficiency which is performed by collecting the electrons generated in the active layer while lowering the resistance of the flow of electrons from the active layer to the cathode. However, the challenge involved is that during the polyelectrolyte production that is deployed presently, the removal of excess starting materials remains a laborious and time-intensive task. Therefore this new chemical synthesis proposes a simpler purification method eliminating the requirements of excess starting materials.

The research is conducted by Joo Hyun Kim and his colleagues, and he describes that they have introduced an ion exchange technique for modifying the polymers and then utilizing them as cathode interlayers in OSCs. Therefore the results of these researches suggest that polyelectrolytes exhibit greater potential and eliminate time-consuming purification process, thereby being applied more widely and accelerating the rolling out of renewable solar energy and reducing the reliance on fossil fuels.

New photovoltaic leaf (PV-leaf) technology:

Chemical engineers at Imperial College London have come up with photovoltaic cell technology that lowers the cost yet generates a 14% increased amount of electricity compared to conventional solar panels.

This technology has addressed the core problem that exists in photovoltaic cell technology, which is the capability of converting only 10-25% of incident solar energy that is captured by a PV is converted into electricity. What happens to the rest of the unusable solar energy then?
it is dissipated as waste heat in PV cells and increases the operating temperature. The challenge arises just there when the operating temperature rises above 65°C, then it significantly decreases the electrical efficiency.

The chemical engineers at Imperial College in London, have tried to mimic the movement of water through the veins of any plant leaf. The technology encompasses the idea of transpiration and developed the device made of a biomimetic transpiration layer that contains bundles of bamboo fibres and packets of hydrogel cells.

The fibre layer is about 1mm thick which is sandwiched between a steel wire mesh on a base and 10cm x 10 cm solar cells on the top. Then the root of the fiber bundles are let to soak in a water tank. Now these bamboo cells act as plants siphoning water up from the tank and spreading it across the underside of the

solar cells. As the water evaporates, the heat is drawn away from the solar cells allowing the leaf panels to cool down without needing any additional energy. The team in their research paper mentioned that the technology is capable of removing about 75% of heat from the system and decreasing the operating temperature by approximately 26°C. Thus these two factors combined to give an improved output in the electricity by approximately 14%.

In addition to that the system is capable of utilizing saline water instead of fresh water as a coolant, which contributes to an advantage in the areas where freshwater is scarce. Thus the innovative design holds great potential in improving the electricity efficiency while keeping up the performance of the panels.

Countries embracing abundancy, sustainable and clean solar energy:

A recent report by the International Energy Agency declared that renewable energy capacity is expected to grow by nearly 95% by 2026 and solar energy is expected to be a dominant contributor with its cumulative capacity set to almost triple, growing by nearly 1500 gigawatts by 2027. The substantial contribution from solar energy highlights the importance of upgrading photovoltaic technologies and every effort to transition away from fossil fuels.

Photovoltaic cell markets taking turns, lows and shifts:

The photovoltaic cell market was looking for a good solar material whose crystal structure is appropriate for solar absorption. Perovskite cells are the ones that work better than silicon even at lower light intensities, on cloudy days, indoors and thereby increasing conversion efficiency to a remarkable level.

Presently the top-tier N-type solar panels have dropped to 0.1- 0.114 USD per watt and the price of P-type PERC solar panels has dropped to 0.106 USD per watt from 0.1. The leading companies that produce solar panels have halted their production lines for P-type solar panels and the product inventories have dropped as well. So the PV market is witnessing significant price reductions across the globe. Also presently the price for these modules is around 0.11 USD per watt.

The supply side has also slowed down a bit and the production is reduced as well. Even some of the leading global companies have dropped their production by about 50%. But the demand side is at the mid-level too as the buyers are playing wait-and-see cards till then they will consider making their purchases once the prices hit the bottom.

China dominates the global production and other aspects of the PV market:

China owns the largest hub of panel manufacturing and has several solar farms. They are also known for the world's largest floating farm that generates 40MW of electricity. Currently, China's share in the manufacturing stages of solar panels such as polysilicon, ingots, wafers, cells and modules exceeds 80% and thus the country owns a share double the time of that of global PV demand. Since the country Homes world's top 10 suppliers of solar PV manufacturing equipment, they have been working towards bringing the costs worldwide for solar PV.

The Chinese industrial policies and strategies focus on growing domestic demand and have supported continuous innovation throughout the supply chain. These effective policies have reduced the cost by over 80% and have helped solar PV electricity generation most affordable among sustainable energy solutions. However, some factors have created supply-demand imbalances in the PV supply chain and

Innovations and market trends:

Since 2022, ground-mounted solar PVs have dominated the industry with countries like China, the United States, Germany and India which is also leading the market growth. This is because of the declining costs of solar PV installations, solar energy targets and the growing rate of utility-scale projects. There are significant investments and agreements made for the development of

photovoltaic power plants. Some of such incidents are:

In May 2023, Savannah Energy Niger Solar Ltd., the British independent power company Savannah Energy Plc, had signed a memorandum of Agreement with the Niger government for the development of two solar photovoltaic power plants. These facilities are expected to have an installed power capacity of up to 200 MW. These projects are expected to receive sanctions next year and get into operational status in the next two to three years.

China's solar PV installed capacity has reached 392.436GW which is a 28.08% growth as of 2022 compared to the year 2021.

The New Delhi government has approved the draft of the ambitious solar policy 2022 that revises the installed capacity of 6000MW from 2000MW in two years. In addition to that, the policy unifies the single-window state portal that is managed by the Delhi Solar Cell to provide information on the benefits of solar PV systems.

Jinko Solar Holding Co. Ltd. Has improved its efficiency of N-type Top Con solar cells which helped it achieve a conversion efficiency of 25.4%. Likewise, they have expanded their manufacturing facilities to keep up with the growing demand for high-efficiency modules and they have been involved in large-scale solar projects across the globe.

Overall there are several upcoming solar PV projects and supportive government policies, the situation combined with the declining costs of solar PV modules and associated systems. These factors contribute to the growth of the solar PV market.

Advancements continue…

The PV market is witnessing spurring innovations in chemical materials, higher efficiency and durability in PV cells. The companies are developing new semiconductor materials, coatings, and materials and striving to enhance the performance and lifespan of PV cells. Also, due to the incorporation of perovskite materials and new silicon-based compounds, the market is experiencing significant improvements in cell efficiency. Likewise, the advent of durable and weather-resistant encapsulants to protect PV cells from environmental damage and the innovation of polymers such as ethylene-vinyl acetate and other advanced encapsulants are attributing to the longevity and overall performance of solar panels. On the other hand, the push for green practices and sustainability is propelling the industry to adopt greener production processes and celebrating the less toxic solvents, materials recycling and reduction of waste in the manufacturing sector.

Source : Vinodini Harish

Vipul Organics Announces Q1 Results For FY 2024-2025

Revenues: YoY up marginally on a standalone and consolidated basis;
Profits: YoY PAT Up 120.27% on standalone basis; Up 119.38% on Consolidated basis

Vipul Organics Limited, the BSE listed (VIPULORG / 530627) leading Specialty Chemicals company in the pigments and dyes segment, announced their Q1 results for FY 2024-25.

Some of the key highlights are:

Year on Year Results:

Total Revenues in Q1 of 2024-25 stood at Rs. 3,819.94 Lakh, marginally up from Q1 of 2023-24
PAT for Q1 of 2024-25 stood at Rs. 113.90 Lakh on a standalone basis, up 120.27% from Q1 of 2023-24 and Rs. 113.44 Lakh on a consolidated basis, up 119.38% from Q1 of 2023-24
Standalone EPS stood at 0.88 per share, up 120% from Q1 of 2023-24 and up 117.5% on a consolidated basis from Q1 of 2023-24.

Quarter on Quarter Results

Total Revenues in Q1 of 2024-25 stood at Rs. 3,819.94 Lakh, marginally down from Q4 of 2023-24
PAT for Q1 of 2024-25 stood at Rs. 113.90 Lakh on a standalone basis, up 6.5% from Q4 of 2023-24 and Rs. 113.44 Lakh on a consolidated basis, up 5.5% from Q4 of 2023-24
Standalone EPS stood at 0.88 per share, up 3.5% from Q4 of 2023-24 and up 5.65% on a consolidated basis from Q4 of 2023-24.

Financials at a glance:

Quarterly results (YoY)
(Rupees in Lakhs except EPS)

	Q1, 2024-25		Q4, 2023-24	
	Standalone	**Consolidated**	**Standalone**	**Consolidated**
Total Income	**3819.94**	**3819.94**	**3623.8**	**3623.8**
PBT	158.67	158.21	70.08	70.07
PAT	113.9	113.44	51.71	51.71
EPS	0.88	0.87	0.4	0.4

	Q1, 2024-25		Q4, 2023-24	
	Standalone	**Consolidated**	**Standalone**	**Consolidated**
Total Income	**3819.94**	**3819.94**	**4054.31**	**4054.31**
PBT	158.67	158.21	156.22	155.62
PAT	113.9	113.44	106.92	107.37
EPS	0.88	0.87	0.85	0.84

Commenting on the results, Mr. Vipul P Shah, Managing Director, Vipul Organics Limited, says: "Our thrust into value added products and newer verticals has seen an expansion in Margins over the last year. This is visible from the over 100 percent growth in our profits from the last year. Our topline is still to see the benefits of the green shoots in the Chemical sector, this was primarily due to the overhang of the General Elections and full budget. International markets are still to see full recovery. We are hopeful that with completion of US and other Major European economies elections by the 4th quarter of F.Y. 2024-25, the Global economic recovery should begin and we should be in a sweet spot with our expansion and addition of capacities".

Source : Chemical Market

Driving Forces Industrial Enzymes And Sustainability In The Bulk Chemicals Industry

Introduction:

Bulk chemicals are there in your kitchen, and in your household products such as ammonia in your cleaning supplies, the fertilizers used in your garden, and sulphuric acid used in your batteries. The plastic items you use every day. These are manufactured in large quantities and thus you can call bulk chemicals, building blocks for creating a wide range of products. They are manufactured in bulk quantities as they are needed in large amounts and utilized across several industries. Since they are

cheaper to make or their cost of production is low, it enables you to buy things like plastics, and cleaning products at affordable prices. Since now you have understood the importance of bulk chemicals, we have tried to explore them in other aspects as well. In this article, we have brought you the latest trends followed, the fluctuations, economic impacts, and the overall outlook of the industry. Let's begin.

Most predominant bulk chemicals:

Ethylene:

Ethylene serves as a fundamental building block for various industrial applications and they are utilized in the production of polyethylene production, specifically the low-density polyethylene which is used in the production of plastic bags, films, containers, and other packaging materials. Then they are also used in high-density polyethylene which includes sturdy plastic bottles, pipes, household goods, and industrial containers.

Some of the key applications of ethylene include:

Ethylene glycol: Ethylene glycol is intensively used as an antifreeze in automobile engines as it has a lower freezing point and is appropriate to keep the radiator of the vehicles cool throughout the winter. Increasing advancements in the automobile industry are paving the way for the demand for ethylene glycol. Similarly, several end-user industries use ethylene glycol as their feedstock. They are widely used in the production of PET and polyester fibres, textile and apparel industries garment manufacturing, home furnishings, carpets and rugs. However, the regulations imposed on the food industry forbid the usage of ethylene glycol in PET due to its toxicity. However there are no substitutes for the production of PET containers and bottles, therefore the demand for ethylene glycol is expected to increase in the future.

Butyl Glycol:

Butyl Glycol is known for its opportunities and its characteristic as a low-volatility solvent helps it serve various commercial and industrial uses. The majority of the chemicals are utilized in the paint and coatings industry as it helps to improve the flow of the paints and coatings.

Then they are utilized in the printing ink industry where they are utilized as a solvent in textile dyes and printing inks, they are also used as a key component of hydraulic fluids.

Meanwhile, its contribution to the cutting and drilling functions of the oil extraction processes is huge and it is recognized as the most appropriate compound as an oil spill dispersant product.

The contribution and role of 4- Butyl glycol in the chemical industry has been further explored and several applications and innovations are emerging as well.

Butyl glycol is renowned in the production of inks and the related industry, as it helps in achieving the desired viscosity and drying time. These factors ensure the inks adhere well to various substrates, especially in the high-speed printing processes where quick drying and consistencies are crucial.

Recent studies have demonstrated that they could play a significant role in pharmaceutical formulations, especially as a solvent for Active Pharmaceutical Ingredients (API). Its compatibility with varied compounds and low toxicity profile have made it a promising compound for drug delivery systems. Meanwhile, they are also expected to play a crucial role in the personal care industry as solvents, and stabilizers for specific formulations such as lotions, creams, and perfumes.

Recent revenue analysis stated that the sales of butyl glycol is expected to surpass USD 4 billion by 2030 and the market players and manufacturers are making required attempts to adopt several market strategies, such as mergers, collaborations and partnerships. Leading companies across the globe are making vigorous efforts such as acquisitions, mergers and collaborations to widen their production capacities and raise to meet the demand.

Some of the key instances are:

In July, BASF SE, a multinational company that belongs to Germany declared their plan to expand its tert-butylamine capacity. This has created an opportunity for them to increase their production capacity by up to 30%.

In August 2021, Sinopec and BASF decided to collaborate which has also created space to increase the production capacities and numerous chemical manufacturing units that boosted the product scope in the market.

Bulk chemicals industry outlook:

The key factor in the chemical industry or any sector is sustainability. Talking about sustainability in the chemical production processes filters down to the feedstock since it contributes about 70-80% of the production costs. The bulk chemical production processes define their feedstock requirements into three basic factors:

- The feedstock must be renewable and the release of CO2 release should be reincorporated into growth to produce future feedstock
- The feedstock must be cheap to keep

up the competitiveness.

- The feedstock must be readily available should not compete with food or feed chains and should not suffer price variations due to market disturbances.

Consider some of the common feedstocks and their associated challenges. Glucose is considered the most appropriate feedstock for several bulk-chemical products, however, refined glucose is limited in stock even though they are renewable and relatively cheap.

Vegetable oils of different types may look attractive, but they are available in small quantities.

Presently, the industry is expecting changes that include using cheaper reagents or supplying the reagents from an alternative platform, the biological improvements using metabolic engineering or protein engineering.

For the production of bulk chemicals, the manufacturers invest in the development of industrial enzymes, as they help target specific reactions without producing unwanted by-products. These specific reactions eliminate the requirement of purification steps and increase the overall yield of the desired product. Meanwhile, the enzymes are capable of operating under mild temperatures cutting down the cost of energy consumption and reducing the need for harsh chemicals, thereby making the production processes more environmentally friendly and cost-effective.

Nevertheless, the development of industrial enzymes has always been a costly affair and with time it has grown overly costly. Likewise, the average development time for the industrial enzyme comes close to seven years which involves screening, yield improvement, safety testing, stabilization, cloning and immobilization development. Therefore it would be fair to draft a thumb rule that an enzyme should be able to yield an annual turnover of a minimum of 5 million USD to pay back the development cost of the enzymes. Similarly, the enzyme costs fall between 0.5 and 5% of the total production costs of the given production for a specific product. On the other hand, enzymes can be sensitive to changes in temperature, pH, and other environmental conditions. Additionally, the enzyme specificity acts as an advantage and limitations as well. They require multiple industrial processes to act on a variety of substrates or require under diverse conditions necessitating extensive engineering and optimization.

Case studies:

Case study 1: Novozymes and DuPont-developed cellulases and amylases :

To produce a renewable energy source, bioethanol from biomass such as corn stover, sugarcane bagasse and other agricultural residues the manufacturers utilize avid hydrolysis to break down the biomass into fermentable sugars, which are then fermented by yeast to produce ethanol.

This method requires a large amount of energy and generates harmful by-products. Therefore Novozymes and DuPont developed a suite of cellulases and amylases that convert cellulose and starch into fermentable sugars.

The benefits include an increased yield of fermentable sugars from biomass that leads to higher ethanol production and operating at lower temperatures and pressures that significantly reduce the energy requirements. Correspondingly the utilization of renewable biomass feedstocks has impacted the reduction of greenhouse gas emissions that aligns with the sustainability goals, thereby providing a greener alternative to fossil fuels.

Case study 2: Novozymes produced acrylamide using nitrile hydratase:

Polymers production is majorly dependent on the important chemical called acrylamide, and they have applications in water treatment, paper manufacturing, and other industries. The conventional production process of acrylamide involves hydration of acrylonitrile using sulfuric acid which is considered a hazardous procedure and environmentally damaging as well.

Thus, Novozymes developed Nitrile Hydratase, an enzyme that catalyzes the conversion of acrylonitrile to acrylamide under milder conditions and avoids sulfuric acid.

This enzyme production has paved the way for some benefits that include: higher specificity which leads to increasing process efficiency with minimal by-products. Similarly, mild conditions are required for the reaction

to occur thus making the process highly cost efficient and safer. This process has also eliminated the environmental impact, where it reduced the risk of chemical spills, which contributed to a cleaner production process.

Case study 3: Procter and Gamble come up with the idea of combining proteases, lipases, amylases and cellulases into their laundry detergents.

Procter and Gamble have incorporated the combination of proteases, lipases, amylases and cellulases into the laundry detergents. These enzymes have a richer capacity to target types of stains, and dirt and break them down effectively at lower temperatures. The enzymes are added to the detergent formulation and during the washing, the proteases break down the protein-based stains and lipases focus on fats and oils. The amylases target the carbohydrate stains and cellulases focus on removing the microfibrils and enhancing the fabric smoothness.

Therefore the overall end product gives the result of enhanced cleaning and the enzymes blend effectively and remove a wide range of stains which improves the overall cleaning performance of laundry.

Bulk chemicals market trends:

The key market players are bringing in advancements that focus on product quality, and energy usage. The advanced technologies accentuate optimization when the processes are carried out in batches and continuous operations.

Aspen Plus®: Process Simulation for Chemicals – Aspentech:

One of the leading software industries which has expanded itself in 60 locations across the globe has developed Aspen Plus®. Aspen Plus is an advanced process simulation technology that is highly beneficial for bulk chemicals, specialty chemicals and the pharmaceutical industry. The powerful modelling technology streamlines engineering and improves the overall performance of the plant by drafting an accurate representation of the design and operations.

The technology creates a solution to model the processes of the plant thereby developing insights to improve their designs and further optimize the performance.

The software helps the chemical manufacturers to reach their ambitious production goals and net zero targets while reducing the operation costs, and maximizing the performance, safety, sustainability and overall plant efficiency.

Takeaway:

The advancements in biotechnology and genetic engineering impart greater influence in the bulk chemical industry thereby making the outlook for the bulk chemicals industry more promising. The continued development and application of industrial enzymes are expected to drive innovation and growth. These are all backed up by the push and increasing prioritizing of sustainability and efficiency in the chemical production processes. Like the case studies presented examples right from bioethanol to laundry enzymes, they highlight the transformative impact of enzyme technology across diverse sectors, especially in the bulk chemicals industry.

Source : Vinodini Harish

Production-Linked Incentives Catalyzing India S Green Revolution

India's ambitious strides towards a sustainable future are underpinned by its Production-Linked Incentive (PLI) schemes, designed to ignite domestic manufacturing in green energy sectors. This comprehensive analysis delves into the intricate details of these schemes, examining their impact, showcasing real-world business examples, and projecting the government's future plans for a greener India.

Global Context:

In a global context, several countries are implementing similar incentive programs to boost domestic manufacturing of clean technologies. China's aggressive PLI schemes have been instrumental in its dominance of the solar PV market. The United States and the European Union are also introducing policies to incentivize domestic production of electric vehicles and batteries. India's PLI schemes, while relatively new, are demonstrating promise in attracting investments and fostering a robust green ecosystem. However, India's unique approach of targeting specific sectors and prioritizing high-efficiency technologies sets it apart. The government's emphasis on creating a complete domestic supply chain, from raw materials to finished products, is also a distinguishing feature.

Electric Vehicles (EVs): Powering a Cleaner Future

The Indian EV market, projected to be a US$206 billion opportunity by 2030 if India maintains steady progress to meet its ambitious 2030 targets (according to an independent study by the CEEW Centre for Energy Finance), is experiencing accelerated growth fueled by the government's Production-Linked Incentive (PLI) schemes.

- PLI Scheme for Automobile and Auto Component Industry : This scheme, with a budgetary outlay of ₹25,938 crores from FY23 to FY27, is designed to incentivize the production of advanced automotive technology vehicles and components, including electric vehicles. It aims to create a complete domestic supply chain, from battery manufacturing to vehicle assembly.

- **Key Features:**

  - **Financial Incentives** Manufacturers receive incentives based on incremental sales of eligible products over a base year.

  - **Eligibility:** Includes manufacturers of electric vehicles, hydrogen fuel cell vehicles, and advanced automotive technology components.

  - **Investment Threshold:** Manufacturers need to meet minimum investment criteria to be eligible for incentives.

- **Challenges and Solutions:**

  - Supply Chain Bottlenecks: Ensuring a steady supply of critical components like batteries and semiconductors is crucial for the success of the PLI scheme. The government could consider additional incentives for component manufacturers to attract investments and create a robust local ecosystem
  - Skilling and Training: A skilled workforce is essential for the growth of the EV industry. The government could invest in training programs and partnerships with educational institutions to bridge the skill gap.

- **Sustainability Impact:**

  - Reduced Emissions: By promoting the adoption of electric vehicles, the PLI scheme contributes to reduced greenhouse gas emissions and improved air quality in cities

  - Energy Security: Shifting towards EVs reduces India's dependence onimported fossil fuels, enhancing energy security.

- **Benefits:**

  - Driving Domestic Manufacturing- The PLI scheme has spurred major automakers like Hyundai, Ola Electric, and Mahindra & Mahindra to invest heavily in expanding their EV manufacturing capabilities within India. This localization not only reduces import dependence but also paves the way for job creation and cost reduction.

  - Charging Infrastructure- To complement the growth of EVs, the government is actively considering extending PLI benefits to electric buses and commercial vehicles, as well as bolstering charging infrastructure through additional incentives. This holistic approach aims to address range anxiety and promote the widespread adoption of EVs for both personal and public transportation.

Real-World Impact

- Ola Electric, a prominent Indian electric vehicle

manufacturer, has emerged as a trailblazer in the country's EV revolution, bolstered by the government's PLI schemes. The company's two megafactories in Tamil Nadu are not only driving domestic EV production but also contributing significantly to job creation and technological innovation

- FutureFactory: World's Largest Two-Wheeler Plant: Ola's FutureFactory, located in Krishnagiri, Tamil Nadu, boasts the title of the world's largest two-wheeler manufacturing facility. With a staggering annual production capacity of 10 million units, this fully operational plant has significantly boosted India's EV production capabilities. The factory utilizes advanced automation and robotics, ensuring high efficiency and quality control.

- Gigafactory: Pioneering EV Innovation: Ola's ambition doesn't stop at two-wheelers. The company is currently constructing a state-of-the-art Gigafactory in Tamil Nadu, dedicated to manufacturing electric car batteries. This facility, aimed for a 2024 launch, will be crucial for Ola's entry into the electric car market. It's a testament to Ola's commitment to driving innovation in the EV space and reducing India's dependence on imported battery technology

- PLI Scheme's Impact: The PLI scheme has played a pivotal role in enabling Ola Electric's rapid expansion. The financial incentives provided by the scheme have helped the company to invest in cutting-edge technology, scale up production, and create a robust supply chain. Ola's megafactories are a shining example of how PLI schemes can catalyze the growth of the EV sector in India.

- Beyond Manufacturing: Ola Electric's impact extends beyond manufacturing. The company is actively involved in building charging infrastructure and promoting the adoption of EVs across India. Its ambitious plans to launch electric cars and expand its charging network are poised to further accelerate the transition towards electric mobility.

- Ola Electric's success story underscores the transformative power of PLI schemes in fostering a vibrant EV ecosystem in India. By combining innovation, government support, and a focus on sustainability, Ola Electric is driving India's EV revolution and paving the way for a cleaner and greener future.

Solar Energy: Harnessing the Sun's Power through High-Efficiency Modules

The Ministry of New and Renewable Energy (MNRE) is at the forefront of India's solar revolution, implementing the Production Linked Incentive (PLI) Scheme for the National Programme on High-Efficiency Solar PV Modules. With a substantial outlay of ₹24,000 crore, this ambitious initiative is driving the growth of a domestic manufacturing ecosystem for high-efficiency solar PV modules, aiming to achieve gigawatt-scale production capacity and reduce import dependency.

- PLI Scheme for National Programme on High-Efficiency Solar PV Modules: With an outlay of ₹4,500 crores, this scheme incentivizes the manufacturing of high-efficiency solar PV modules in India. It aims to reduce import dependence and make solar power more affordable.
  - Aims and Objectives- The PLI scheme, divided into two tranches, focuses on building a robust manufacturing base for high-efficiency solar PV modules in India. The key objectives are:
    - Capacity Building: Establish gigawatt-scale manu-facturing capacity for high-efficiency solar PV modules.
    - Technology Adoption: Encourage the adoption of cutting-edge technologies to enhance module performance.
    - Integrated Manufacturing: Promote the establishment of integrated plants for better quality control and competitiveness.
    - Local Sourcing: Develop a comprehensive

ecosystem for sourcing local materials in solar manufacturing.

- Employment Generation: Create job opportunities and fostertechnological self-sufficiency.

- Tranche-I: Laying the Foundation- Under Tranche-I, with an outlay of ₹4,500 crore, the Indian Renewable Energy Development Agency Limited (IREDA) awarded Letters of Award to three successful bidders in November and December 2021. These bidders are set to establish 8,737 MW of fully integrated solar PV module manufacturing units

- Tranche-II: Scaling Up Manufacturing- Tranche-II, with a significantly larger outlay of ₹19,500 crore, aims to further scale up manufacturing capacity. The Solar Energy Corporation of India (SECI) issued Letters of Award to 11 bidders in April 2023, collectively committing to establish a massive 39,600 MW of fully or partially integrated solar PV module manufacturing facilities.

- **Challenges and Solutions:**

  - Raw Material Availability: India relies heavily on imported polysilicon, a key raw material for solar cell manufacturing. The government could incentivize the development of domestic polysilicon production to reduce dependence on imports.

  - Land Acquisition: Large-scale solar manufacturing facilities require significant land area. Streamlining land acquisition processes and promoting the use of wasteland for solar projects can address thischallenge.

- **Sustainability Impact:**

  - Clean Energy Generation: Solar energy is a clean and renewable source of power, helping to reduce greenhouse gas emissions and mitigate climate change.

  - Job Creation: The solar industry is a major source of employment, with opportunities across manufacturing, installation, maintenance, and research.

- **Benefits:**

  - Gigawatt-Scale Production- The PLI scheme is projected to add a substantial 10 GW of integrated solar PV manufacturing capacity in India, as highlighted in a report by JMK Research & Analytics. This surge in domestic production will alleviate reliance on imports, potentially leading to a 30-40% reduction in solar module prices, making solar power more affordable and accessible.

  - Technological Leapfrog- The emphasis on high-efficiency modules encourages manufacturers to adopt cutting-edge technologies like bifacial modules and PERC cells. This technological leapfrog is not only boosting India's solar manufacturing prowess but also contributing to global advancements in solar efficiency.

Real-World Impact

Reliance Industries 'Dhirubhai Ambani Green Energy Giga Complex: A Solar and Renewable Energy Powerhouse

Reliance Industries Limited (RIL) is spearheading India's green energy transformation with its ambitious Dhirubhai Ambani Green Energy Giga Complex, a sprawling 5,000-acre facility in Jamnagar, Gujarat.This PLI-supported project is poised to be a game-changer, encompassing a comprehensive ecosystem for solar and renewable energy production.

- Integrated Giga Factories: The complex houses five giga factories dedicated to photovoltaic panels, fuel cell systems, green hydrogen, energy storage, and power electronics. This integrated approach not only streamlines production but also creates synergies across different renewable energy technologies.

- Gigawatt-Scale Solar Manu-facturing: RIL aims to establish a world-leading solar PV

manufacturing capacity within the complex, with the goal of enabling at least 100 GW of solar energy by 2030. The solar factory will be a first-of-its-kind "quartz-to-module" facility globally, covering the entire value chain from raw materials to finished modules.

- Strategic Investments: RIL has strategically invested in ten global technology innovators with expertise across the new energy value chain. This includes partnerships with REC Solar, Suzhou Maxwell Technologies, and SC Solar for high-efficiency HJT cell and module production lines. These collaborations ensure that the complex leverages cutting-edge technology and global best practices.

- PLI Success: RIL has secured PLI incentives under both rounds of the solar module PLI scheme, with a total allocation of USD 0.7 billion for 10 GW of manufacturing capacity. Additionally, RIL is the only company, apart from Greenko, to win incentives under both the green hydrogen and electrolyzer PLI schemes, further solidifying its position as a leader in the green energy space.

- Renewable Energy MoU with Gujarat: RIL has signed a Memorandum of Understanding (MoU) with the Gujarat government to invest ₹5 lakh crore in setting up 100 GW of renewable power capacity in the state. This commitment demonstrates RIL's long-term vision for renewable energy development in India.

- Sustainability Impact: The Dhirubhai Ambani Green Energy Giga Complex is expected to have a significant positive impact on India's sustainability goals. It will not only contribute to reducing carbon emissions and

promoting clean energy but also create thousands of green jobs, boosting the local economy.

Reliance Industries' investment in the Dhirubhai Ambani Green Energy Giga Complex represents a monumental step towards India's clean energy future. By leveraging PLI schemes, strategic partnerships, and its own financial strength, RIL is setting a benchmark for integrated renewable energy manufacturing and positioning India as a global leader in the transition to a sustainable energy ecosystem..

Green Hydrogen: Fueling a Sustainable Future-

Green hydrogen, produced using renewable energy sources, is emerging as a key player in India's transition towards a sustainable energy future. Recognizing its potential, the government has introduced two PLI schemes to incentivize the development of this nascent sector:

- PLI Scheme for National Green Hydrogen Mission (NGHM): This scheme, with an initial outlay of ₹19,744 crores, aims to promote the production of green hydrogen and the development of a comprehensive green hydrogen ecosystem. It offers incentives for electrolyzer manufacturing and green hydrogen projects, fostering innovation and scaling up production.

- Strategic Interventions for Green Hydrogen Transition (SIGHT): This program specifically focuses on incentivizing domestic electrolyzer manufacturing, a critical component for green hydrogen production. With an allocation of ₹4,440 crores by FY30, SIGHT provides incentives ranging from ₹4,440 per kilowatt in the first year to ₹1,480 per kW in the fifth year.

- Challenges and Solutions: Despite the significant potential, green hydrogen production faces challenges:

  - High Costs: Currently, green hydrogen production is more expensive than traditional methods using fossil fuels. To address this, the government is providing financial incentives through PLI schemes and exploring other measures like carbon pricing to make green hydrogen more competitive.

  - Technological

Advancements: Further research and development are needed to improve the efficiency and reduce the cost of electrolyzers, a key component for green hydrogen production. The government is supporting research initiatives and promoting international collaborations to accelerate technological advancements.

- Sustainability Impact: Green hydrogen offers a multitude of environmental benefits:
  - Decarbonization: It can replace fossil fuels in various sectors, including transportation, industry, and power generation, reducing greenhouse gas emissions significantly.
  - Energy Storage: Green hydrogen can be stored and used as a fuel when renewable energy sources are not available, providing a reliable and sustainable energy solution.

Real-World Impact

The Adani Group, a leading Indian conglomerate, has pledged significant investments in green hydrogen as part of its ambitious $100 billion plan to transition its portfolio companies to clean energy sources. The group aims to leverage the PLI schemes to develop large-scale green hydrogen projects, contributing to India's goal of becoming a global hub for green hydrogen production and utilization.

The Road Ahead: Expanding the Green Horizon

While EVs and solar energy are at the forefront of the PLI revolution, the government's vision extends to other renewable energy sectors:

- **Wind Energy**- India's wind energy sector, with an installed capacity exceeding 43.7 GW as of June 2023, is a major player in the global landscape. While a dedicated PLI scheme is yet to be launched, the government is committed to fostering growth in this sector. Its ambitious target of achieving 500 GW of renewable energy capacity by 2030 includes a significant share for wind power, and the recent announcement of viability gap funding-based bids for offshore wind energy projects signals a strong push towards harnessing India's vast offshore wind potential.
- **Bioenergy**- Biofuels in India, primarily ethanol and biodiesel, are gaining traction as a means to reduce dependence on fossil fuels and promote cleaner transportation. The National Biofuel Policy, 2018, sets an ambitious target of 20% ethanol blending in petrol by 2030, although challenges like limited production capacity need to be addressed. Some states, like Madhya Pradesh and Rajasthan, have implemented their own ethanol policies, offering subsidies to producers.

While a dedicated PLI scheme for biofuels is yet to be launched at the national level, the introduction of such an incentive could significantly bolster the industry's growth, attracting investments and scaling up production. This, in turn, would contribute to achieving the ethanol blending target, reducing greenhouse gas emissions, and creating employment opportunities in the agricultural and bioenergy sectors. The expansion of biofuel production aligns with India's broader goals of sustainable development and energy security..

PLI schemes are not merely financial incentives; they are a testament to India's unwavering commitment to a sustainable future. By fostering a thriving ecosystem for green technologies, India is not only addressing its energy security concerns but also contributing to global climate action. The PLI-driven growth in domestic manufacturing is creating a ripple effect on employment, technological innovation, and export potential.

Source : Prashant Singh

Post-Budget 2024 Analysis Implications for India S Chemical Industry

India's chemical industry, a significant player on the global stage, has received substantial policy updates in the Union Budget 2024. This analysis examines the key policy changes and their anticipated impacts on various segments within the chemical sector.

1. Green Technology Focus

Policy Change: Increased emphasis on green technologies and sustainability.

Impact:

- Specialty Chemicals: The focus on green energy and storage solutions will likely boost demand for specialty chemicals involved in battery production and energy storage systems. Companies specializing in these areas may see growth opportunities.
- Fluorospar Reduction: The reduction in customs duty on Fluorospar from 5% to 2.5% will lower production costs for fluorochemicals used in pharmaceuticals, energy solutions, and agrochemicals, enhancing competitiveness and profitability.

2. Financial Support and Investment

Policy Change: Significant financial allocations and incentives.

Impact:

- Bulk Drug Parks: The allocation of ₹1,629 crore for Bulk Drug Parks under Production Linked Incentive (PLI) schemes aims to boost pharmaceutical manufacturing, indirectly benefiting the chemical sector through increased demand for raw materials.
- Department Funding: The ₹192.21 crore allocated to the Department of Chemicals and Petrochemicals is expected to support sectoral advancements and regulatory improvements.
- PCPIR Investment: The Petroleum, Chemicals, and Petrochemicals Investment Region (PCPIR) in Paradip, attracting ₹73,518 crore in investments, highlights the potential for regional growth and job creation, enhancing the local chemical industry's ecosystem.

3. Infrastructure and Manufacturing

Policy Change: Enhanced capital investment and infrastructure development.

Impact:

- Construction Chemicals: The 11% increase in capital investment outlay to ₹11.1 lakh crore, with additional focus on infrastructure, is likely to drive demand for construction chemicals. This includes materials for industrial parks and residential developments.
- Industrial Parks: The establishment of 12 new industrial parks under the National Industrial Corridor Development Programme will create investment-ready environments for chemical manufacturers.

Housing Projects: The development of three crore additional houses, supported by a ₹10 lakh crore investment, will stimulate demand for construction-related chemicals.

4. Research and Development

Policy Change: Introduction of the Anusandhan National Research Fund.

Impact:

EVENTS AND CONFERENCES

CPHI KOREA

Date : Aug. 27-29, 2024

City : COEX, Seoul, Korea

Country : Korea

Website : https://www.cphi.com/korea/en/home.html

Description : CPHI Korea provides an efficient platform where exhibitors can do business with decision makers from the domestic market, offering you the opportunity to accomplish months' of business and relationship-building over the course of just a few days.

ASIA PACIFIC COATINGS SHOW

Date : Sep. 11-13, 2024

City : Balai Sidang Jakarta Convention Center, Indonesia

Country :Indonesia

Website : https://www.asiapacificcoatingsshow.com/

Description : The Asia Pacific Coatings Show is the leading event in South East Asia and the Pacific Rim for the coatings industry. For three days, the exhibition offers the opportunity to meet new and existing customers from the region; gather insight on the latest technologies available in the market; and have meaningful, face-to-face business interactions. The event provides the perfect environment for the entire spectrum of the coatings industry to do business, from raw material suppliers to equipment manufacturers, to distributors and technical specialists like formulators. That's not all – the conference that is held alongside the event offers the opportunity to learn about the latest industry products, innovations and trends; exchange ideas with industry leaders; and build a strong network in the region.

EXPO PAINT & COATING - DHAKA

Date : Sep. 19-21, 2024

City : International Convention City Bashundhara (ICCB), Dhaka, Bangladesh

Country : Bangladesh

Website : https://10times.com/e1r1-5s3k-4dhg

Description : Expo Paint & Coatings - 2024 is a comprehensive Paint & Coatings Exhibition providing platform to the needs of every facade of the coating industry right from raw materials, formulation, application, technology, finishing, quality assurance, recycling and disposal. The Exhibition will feature a wide range display of products, Raw Materials, Application systems, Machines, Tools, current trends, development & innovations shaping future of coating industry. Expo Paint & Coatings - 2024 will bring together leading local and international manufacturers, formulators, buyers, industry professionals, consultants, enthusiasts and prospective entrants from the Paint & Coatings, surface finishing & allied industry presenting unrivaled opportunities to network, exchange best practices, do business, unveil new products and source cutting-edge products, technologies and solutions.

45TH DYE+CHEM BANGLADESH INTERNATIONAL EXPO

Date : Sep. 04-07, 2024

City : Bangabandhu Bangladesh–China Friendship Exhibition Center, Purbachal, Dhaka

Country : Bangladesh

Website : https://www.bd.cems-dyechem.com/

Description : 1. The DyeChem Bangladesh 2024 is a Comprehensive International Exhibition featuring Worldwide Dyestuffs & Fine & Specialty Chemical Manufacturers, focusing on the entire Textile & Apparel Industry of Bangladesh and South Asia. 2. In 2023, DyeChem attracted industry leaders, textile manufacturers, suppliers, visitors from Bangladesh and around the world, reaffirming Bangladesh's position as an emerging Global Textile Hub. 3. In the fiscal year 2021-2022, Bangladesh exported Apparels worth US $45 billion, maintaining the crown as the second-largest apparel exporter in the world and a highly potential buyer of Textiles and Apparel Trims, Accessories. 4. DyeChem Bangladesh is the Oldest, Biggest & Only International Exhibition of Bangladesh serving the Textile & Apparel Industry of Bangladesh for the past 23 years. 5. The DyeChem 2023 saw diverse global participation and visitors from across South Asia and Europe, who used the event as a Triangle-Trade platform where they could connect with Textile, Accessories Manufacturers in the Show as well as Garment factories in Bangladesh. 6. DyeChem has provided a unique platform for the Global Textile Industry for networking, discovering, collaborations, business development and highlighted the immense potential of Bangladesh's textile and apparel dyestuff industry on a global scale. 7. Participate in DyeChem Bangladesh 2024. Meet and connect with potential buyers from Bangladesh and beyond through the Expo.

INDIA CHEM

Date : Oct. 17-19, 2024

City : Bombay exhibition centre, Goregaon, Mumbai

Country : India

Website : https://indiachem.ficci.in/

Description : Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India, jointly with FICCI is organising the 13th Edition of “India Chem 2024” from 17th - 19th October 2024 at Bombay Exhibition Centre, Mumbai, India. India Chem, the flagship event of the Department, is one of the largest composite events of the industry in the Asia-Pacific region and comprises of an International Conference and Exhibition. India Chem 2024 will showcase tremendous potential and supportive government policy for sustainable growth in the sector and will be a single platform for investors, both domestic and international and other stakeholders to interact and forge alliances, thereby providing immense potential for trade and investment, in a mutually beneficial way. The concurrent sessions as part of conference includes Global CEOs Round Table as well as conclaves on different industry segments (e.g., Chemicals, Petrochemical, Agrochemical Industry, Process and machinery) and regional exchanges between India and the counties.

BANGLADESH INT’L DYES, PIGMENTS AND CHEMICALS EXPO

Date : Oct. 24-26, 2024

City : Dhaka, Bangladesh

Country : Bangladesh

Website : https://10times.com/dyes-pigments-and-chemicals

Description : "DyeChem Expo - Branded Int'l Expo on Dyes, Dyestuff, Pigments and all kind of Chemicals" 8th Edition of Bangladesh Int'l Dyes, Pigments and Chemicals Expo, to be held from 24 to 26 October 2024 at International Convention City Bashundhara - ICCB, Dhaka - Bangladesh. Dyes, Dyestuffs, Pigments and all kind of Chemicals - Manufacturer, Suppliers & Exporters from Home & Abroad will participate at this mega exhibition. This expo will help Foreign Manufacturer, Dealers & Suppliers to Showcase their products, where Bangladeshi Factory Owners & Exporters can get in touch with them. This Event will obviously encourage local manufacturers & producers to export their goods in foreign markets. Foreign buyers will also visit to check new trends & quality Dyes, Dyestuffs, Pigments and allied Chemicals.

- Innovation Boost: The ₹1 lakh crore allocated to R&D will support innovation in chemical processes and product development. This funding will facilitate advancements in chemical technology and process optimization, potentially leading to more efficient production methods and new product lines.

5. Employment and Skilling

Policy Change: New schemes for employment-linked incentives and internships.

Impact:

Workforce Expansion: Employment incentives, including wage subsidies and EPFO contributions, will help chemical companies manage labor costs and expand their workforce. The comprehensive internship scheme will provide training opportunities, addressing skill shortages in the sector.

6. Taxation and Regulatory Changes

Policy Change: Adjustments in indirect taxes affecting chemicals.

Impact:

- Increased Costs: The increase in BCD rates for Ammonium Nitrate and PVC Flex films will raise production costs for these chemicals. Similarly, the higher BCD rate for laboratory chemicals could impact pricing structures.

- Reduced Costs: Conversely, the reduction in BCD for critical minerals and specific components used in manufacturing will lower costs for certain chemical products, potentially enhancing competitiveness in these areas.

The Budget 2024 introduces several significant policy changes for the chemical industry. The green technology focus, financial incentives, and infrastructure investments are set to drive growth, innovation, and competitiveness in the sector. However, increased taxation on some chemicals may impact production costs. Overall, these developments will reshape the chemical industry's landscape, fostering opportunities for growth and advancement while presenting new challenges to navigate.

Source : Team Chemical Market

Air Liquide innovative CO2 liquefaction technology selected by Stockholm Exergi for a world-scale carbon capture and storage project

Air Liquide's innovative large scale CO_2 liquefaction technology, Cryocap™ LQ, has been selected by Stockholm Exergi, Stockholm's energy company, to contribute to its Bio-Energy Carbon Capture & Storage (BECCS) project. This new technology is an important additional brick in Air Liquide's portfolio of proprietary technologies that paves the way to developing large-scale Carbon Capture & Storage (CCS) value chains. The CO_2 liquefaction solution allows to transport CO_2 over long distances to carbon sinks for permanent storage, contributing to the viability of CCS projects and emergence of a low-carbon industry.

Under the framework of the agreement, Air Liquide will provide the CO_2 liquefaction technology and equipment for the BECCS project to be built at an existing heat and power biomass (bio-cogeneration) plant in Stockholm. The Cryocap™ LQ CO2 liquefaction unit supplied by Air Liquide will be one of the largest in the world with a capacity of 3,500 tonnes per day. After liquefaction, the CO_2 will be transported for permanent storage. The BECCS facility aims to liquefy and store around eight million tonnes of biogenic CO_2 over the first 10 years of operation. The BECCS project is supported by the European Innovation Fund, one of the world's largest programs for promoting innovative low-carbon technologies.

Air Liquide's innovative Cryocap™ LQ technology, leveraging Air Liquide's mastery and expertise in cryogenics, stands out with its chemical free, non-flammable process and compact design. This cutting-edge setup will also enable

the recovery and reuse of heat generated from the process in order to supply Stockholm's district heating network. These features allow enhanced sustainability and safety as well as best-in-class energy efficiency compared to traditional liquefaction solutions.

Philippe Merino, Group Vice President supervising Engineering & Construction at Air Liquide stated:

We are pleased that Air Liquide's technology has been selected for the Stockholm Exergi innovative CCS project. Cryocap™ LQ CO_2 liquefaction technology is a new addition to Air Liquide's portfolio of low-carbon technologies, and is particularly suited to large scale CCS projects. In line with Air Liquide's strategic plan ADVANCE, Air Liquide's ambition is to contribute actively to the emergence of a low-carbon society. Drawing on our innovative capabilities and expertise we are able to help our customers achieve their decarbonization goals and forge a sustainable future.

Source : Air Liquide

Coloring a greener future: BASF powers up its Automotive OEM Coatings operations with 100% renewable electricity in China

- Enabling customers to benefit from products with reduced carbon footprint to achieve their sustainability targets
- Pursuing carbon reduction measures in production, demonstrates commitment to net-zero target of BASF Group

Shanghai, China – July 22, 2024 – BASF's Coatings division has successfully renewed its agreement to procure 100% renewable electricity at its automotive OEM coatings manufacturing operations in Shanghai, China. Through a combination of Renewable Direct Power Purchase (R-DPP), International Renewable Energy Certificates (I-REC), and other measures, the company will continue to power its BASF Shanghai Coatings Minhang and Caojing sites, as well as the BASF Coatings' resin plant in Caojing, solely with green power.

The agreement underscores BASF Coatings' dedication to empowering its automotive OEM customers to improve their environmental footprint and reinforces its aspiration to be a responsible, forward-thinking partner for automotive manufacturers. "BASF Coatings' unwavering commitment to sustainability is reflected in every drop of coating we produce. By harnessing 100% renewable electricity in our manufacturing process in China, we are helping the Chinese automotive industry reduce the product carbon footprint (PCF) of its vehicles and aiding each customer in reaching their sustainability targets. We are not just a high-quality automotive coatings provider; we are the automotive industry's preferred partner in its sustainability journey in China," stated Jack Zou, Vice President, Global Key Account Management Asia Pacific OEMs, Global Automotive OEM Coatings at BASF.

With an ambition to lead the industry's transformation towards a more sustainable future, BASF's Coatings division is dedicated to making significant and impactful contributions to the UN Sustainable Development Goal "Climate Action", and China's carbon reduction ambitions. The company takes pride in being one of the industry leaders to adopt renewable electricity throughout its operations. Beyond using renewable electricity, BASF Coatings implements a broad range of initiatives. These include developing eco-efficient paintshop solutions, utilizing renewable raw materials, and continuously improving energy and resource efficiency in its production. With this, BASF Coatings is not only meeting the demands of today but also laying the groundwork for a sustainable tomorrow.

Source : BASF

Powering Industries of India The Crucial Role of Battery Chemicals in Modern Manufacturing

Introduction:

The battery chemicals market is driven by the acceleration of this global transition from ICE vehicles to EVs. The global economy and major industries increasingly rely on the battery chemicals market. Considering the impact created by the battery chemicals in varied industrial sectors, it is important to consider various factors like product pricing, market dynamics, application industries and consumer preferences. Therefore in this article, we have explored different takes and facets of the battery chemicals market and let's

Battery chemicals industry outlook:

Battery chemicals market value was at USD 77 billion in 2022 and is expected to surpass the market value of USD 170 billion by 2032 with a growth rate of 8.3%. Although the East Asian market and China have shown a significant growth rate in recent years, India is emerging as a significant player in the battery chemicals market with a substantial growth rate. The growing CAGR reflects the increasing investments in electric vehicles, renewable energy storage and local manufacturing capabilities.

The demand for battery chemicals is driven by the increasing use of consumer electronics and electronic devices such as smartphones, tablets, laptops and gaming consoles. In India, the collaboration between the miners and battery makers is rapidly evolving as the country is pushing towards growth and becoming a significant player in the global battery supply chain. The collaboration has led to securing raw materials, sourcing them from foreign suppliers, utilizing and investing in advanced battery technologies and catering to the growing demand for electric vehicles.

Some of the key initiatives and collaborations:

National Mission on Transformative Mobility and Battery Storage Initiative:

Governmental initiatives are promoting and supporting the development of battery storage and EVs. The governmental initiatives encourage partnerships between the mining companies and battery makers, for instance, the National Mission on Transformative Mobility and Battery Storage initiative has objectives of promoting clean and sustainable mobility solutions. This has encouraged the adoption of electric vehicles to reduce carbon emissions and dependency on fossil fuels. The initiative also helps in the development of advanced battery technologies for EVs and renewable energy storage. They also develop a stable and efficient supply chain for battery materials and components.

The policies are boosting the demand for EVs in the country and renewable energy solutions and thereby they are increasing the overall market for batteries. The subsidies and incentives for consumers are stimulating the purchases of EVs and they are indirectly benefiting battery manufacturers.

Meanwhile, the country is also promoting the local manufacturing industries, and they leverage their mission and regulations to reduce the dependencies on imported batteries and raw materials thereby enhancing energy security. The global advancements of the industry are further encouraging the Indian industries to invest and work to accentuate the global advancements in battery technologies.

On the other hand, the economic growth of the country is reinforcing the manufacturing sector and contributing to the overall economic development thereby focusing on the advancements of the battery industry.

Likewise, the conscious efforts of consumers and increasing consumer base are leading the transition to cleaner energy solutions reducing carbon emissions and promoting environmental sustainability.

PLI scheme for ACC battery storage:

The Production Linked Incentive PLI scheme incentivizes domestic manufacturing of ACC batteries and fostering collaborations between the miners and battery manufacturers. This has created a robust local supply chain. Companies like National Aluminium Company Limited (NALCO) and Hindustan Copper Limited are looking for growth opportunities and partners for sourcing the required raw materials such as aluminum and copper for battery manufacturers.

Demand drivers in India (other than the governmental initiatives and policy support):

Rising renewable energy demand: India's ambitious renewable energy goals are considered the primary drivers of advanced energy storage solutions. Lithium-ion batteries play an important role in balancing supply and demand and they carry out the seamless integration of solar and wind power into

the grid.

A growing number of industrial applications:

An increasing number of industrial applications keep EVs and renewable energy storage solutions aside and project itself as a major driver for the battery chemicals market. Telecommunications, healthcare, grid stability and power backup systems are driving the battery market and powering diverse applications.

Increasing consumption of consumer electronics:

The industrial sectors are working towards automation and are heavily relying on electronics like computers, TVs, phones and other devices. The consumer electronics market is projecting the technological advancement and gaming industry. These factors are pushing the need for batteries, meanwhile, companies are devoting efforts to creating innovative battery technologies.

Likewise, the demand for lithium-ion technologies is bolstering innovation concerning portable power supplies and mobile phones. These are some of the significant factors that are stimulating the overall growth of the battery chemicals market.

Market transition and demand shift:

With the governmental push and transition in consumers' choices that prioritize the reduction of carbon emissions, there has been a significant shift from ICE vehicles to EVs. This transition is impacting the overall value of the battery chemicals market. This is because the EVs rely on lithium-ion batteries that require specific chemicals such as lithium, cobalt, nickel, manganese and graphite.

The decline in ICE vehicle production reinforces the production facilities and operations related to EVs thereby driving the demand for battery chemicals. This demand is expected to grow since there is a significant increase in the number of automotive manufacturers who have pledged to phase out ICE vehicles.

Impact due to raw material supply and respective prices:

The impact on raw material supply has created a cascading effect on other industries that use these raw materials. The growing demand for EV batteries has increased the pressure on the supply chain for battery chemicals thereby causing a continuous fluctuation in the prices of these raw materials like lithium and cobalt.

The reduction in the price of electric vehicles is not as easy as it may sound, as it requires careful planning by manufacturers. In addition to that, they have to manage the supply chains and long-term contracts. The difficulty lies in when their production costs match what the market expects.

The regional battery price dynamics are an important factor in the coming years. In China, the prices of battery chemicals are pretty low which is about USD 126/ kWh. Whereas in the United States, and Europe the costs are 11% to 20% more comparatively. Therefore, the geographical location of the manufacturing influences the prices and thereby the overall Battery chemicals market outlook.

The demand shift from ICE vehicles to EVs has spurred investments in R&D for better battery technologies. This has led to the development of batteries with high energy densities, longer lifespans, and reduced dependency on scarce or expensive materials. These factors are creating better growth opportunities for the industries that exist in the battery chemicals market in India.

Meanwhile, the battery chemicals industry is focusing on sustainability which starts from recycling the used batteries. The recycling process encourages recovering valuable materials that mitigate the environmental impact thereby reducing the waste of virgin resources.

In future, the battery chemicals market is more likely to experience slight volatility due to supply chain adjustments due to new demand levels and the influence of geopolitical factors over the availability of raw materials.

Impact due to change in the behaviour of prominent industry – automotive industry:

The battery manufacturers and OEMs are closing their long-term supply contracts and the majority of them were signed in 2021 and 2022. The majority of the contracts are set to start supplying in 2026 and the timing has pushed the prices up and it reinforces the fact that the industry is expecting supply to become harder to secure in the long term as the demand grows.

For instance, in October 2022, Mercedes- Benz has announced their supply agreement with "Rock Tech Lithium" which agreed to supply an average of 10,000 tonnes of lithium hydroxide per year. Post this announcement, Benz announced their agreement with five other companies to ensure stability in the supply of raw materials.

The goal of the company is to position itself competitively in the EV market and thereby avoid potential disruptions that impact production timelines and product availability. These decisions give the company an edge over competitors that supply chain challenges.

The company is also aligning itself with global sustainability trends and reducing carbon footprints. Overall, these

Booking price as on 11/06/2024

Current Exchange rate-$1= 83.50 INR

Chemicals	Current Prices	Location
Acetic Acid	410	CFR India
Acrylonitrile	1300	CFR India
Benzene	1055	CFR India
Phenol	1150	CFR India
Acetone	1210	CFR India
Butyl Acrylate Monomer	2300	CFR India
C9	990	CFR India
LAB	1650	CFR India
IPA	1210	CFR India
Methanol	290	CFR India
VAM	860	CFR South Asia
Toluene	1055	CFR India
Styrene Monomer	1210	CFR India
N-Butanol	1200	CFR India
Octanol	1490	CFR India
Isobutanol	1200	CFR India
MEG	615	CFR India
Mix Xylene-Solvent Grade	1030	CFR India
Gycerine	850	CIF India
DMF	850	CFR India
Acrylic Acid	1300	CIF India
Formic Acid	650	CFR India
Adipic Acid	1450	CIF India
Ethylene	940	CFR India
PTA	880	CFR India
Propylene	815	CFR India
THF	1600	CIF India

Mumbai Market Price as on 12/08/2024

Name of Chemical	Current Price	Location
Acetic Acid-Imported Repack	46	Mumbai
Acetic Acid-Domestic Intact	54	Mumbai
Acetic Acid-Domestic Repack	46	Mumbai
Acetone-Imported Repack	107	Mumbai
Acetone-Domestic Intact	117	Mumbai
Acetone-Domestic Repack	107	Mumbai
Acetonitrile-Imported Intact	155	Mumbai
Acetonitrile-Domestic Intact	170	Mumbai

Acetonitrile-Domestic Repack	140	Mumbai
Acrylonitrile-Imported Intact	160	Mumbai
Acrylonitrile-Imported Repack	140	Mumbai
Aniline-Imported Intact	175	Mumbai
Aniline-Domestic Intact	175	Mumbai
Benzene-Domestic Repack	95	Mumbai
Cyclohexane-Imported Intact	135	Mumbai
Cyclohexane-Domestic Intact	123	Mumbai
Cyclohexane-Domestic Repack	115	Mumbai
Cyclohexanone-Imported Intact	153	Mumbai
Cyclohexanone-Imported Repack	135	Mumbai
Cyclohexanone-Domestic Intact	150	Mumbai
Cyclohexanone-Domestic Repack	137	Mumbai
C9 Solvent (99.99% purity)-Imported Repack	102	Mumbai
C9 Solvent (Arham Petrochem)-Imported Repack	101.75	Mumbai
Dibutyl Phthalate-Domestic Intact	136	Mumbai
Dioctyl Phthalate-Domestic Intact	138	Mumbai
Ethyl Acetate-Domestic Intact	80	Mumbai
Ethyl Acetate-Domestic Repack	76	Mumbai
Formaldehyde(37%)-Domestic Repack	19.5	Mumbai
Methanol-Imported Repack	34	Mumbai
Methyl Ethyl Ketone-Imported Intact	135	Mumbai
Methyl Ethyl Ketone-Imported Repack	118	Mumbai
Methyl Isobutyl Ketone-Imported Intact	169	Mumbai
Methyl Isobutyl Ketone-Imported Repack	162	Mumbai
Methyl Methacrylate-Imported Intact	215	Mumbai
Mixed Xylene-Imported Repack	91	Mumbai
Mixed Xylene-Domestic Repack	91	Mumbai
Monoethylene Glycol-Imported Repack	58	Mumbai
Monoethylene Glycol-Domestic Intact	65	Mumbai
Monoethylene Glycol-Domestic Repack	58	Mumbai
Iso propyl Alcohol-Imported Repack	122	Mumbai
Iso propyl Alcohol-Domestic Intact	138	Mumbai
Iso propyl Alcohol-Domestic Repack	123	Mumbai
nButanol-Imported Repack	113	Mumbai

International market prices as on 12/08/2024

Products	Regions	Current prices
	Feedstock Prices $/unit	
Crude Oil ($/barrel)	WTI CRUDE	77.21
	BRENT CRUDE	79.9
	MARS US	75.97
	OPEC BASKET	77.84
Natural Gas	New York	2.21
Gasoline	RBOB	2.39
Heating Oil	US	2.34
Ethanol	US	1.78
Naphtha	FOB Singapore	665
	European	665
	CFR Far East Asia	665
Propane	New York	0.76
	Aromatics prices $/MT	
Benzene	FOB Korea	1010
	CFR Japan	1025
Styrene	CFR Japan	1120
	CFR South East Asia	1170
	CFR China	1120
	FOB Korea	1110
Toluene	CFR China	870
	CFR South East Asia	930
	FOB Korea	880
	CFR Japan	870
Iso-Mix Xylene	CFR South East Asia	860
	CFR Taiwan	865
	FOB Korea	850
MEG	CFR China	540
	CFR South East Asia	545
Methanol	CFR China	286
	CFR Korea	345
	CFR South East Asia	346
	CFR Taiwan	338

Solvent-MX	CFR South East Asia	915
	FOB Korea	850
	CFR China	885
Ortho Xylene	CFR South East Asia	1035
	FOB Korea	1025
	CFR China	1040
Para Xylene	CFR South East Asia	980
	FOB Korea	960
	CFR Taiwan	980
Propylene	FOB Japan	835
	FOB Korea	845
	CFR China	860
	CFR South East Asia	915
Propylene Glycol	FOB Korea	835
	CFR China	870
Ethylene	CFR North East Asia	865
	CFR South East Asia	925
	FOB Japan	825
	FOB Korea	346
EDC	CFR Far East Asia	305
	CFR South East Asia	335
Butadiene	CFR China	1515
	CFR South East Asia	1405
	FOB Korea	1515
Benzene	FOB Rotterdam	1000
Methanol	FOB Rotterdam	322
Ortho Xylene	FOB Rotterdam	1260
Para Xylene	FOB Rotterdam	1110
Solvent-MX	FOB Rotterdam	890
Styrene	FOB Rotterdam	1520
Toluene	FOB Rotterdam	960
Benzene C/G	FOB US Gulf	361
Toluene C/G	FOB US Gulf	321
Styrene C/LB	FOB US Gulf	57.8
Para Xylene $/MT	FOB US Gulf	1040

Mix Xylene C/G	FOB US Gulf	317
Methanol C/G	FOB US Gulf	100
	Intermediates prices $/MT	
Acrylonitrile	CFR Far East Asia	1215
	CFR South East Asia	1215
	CFR South Asia	1335
VCM	CFR Far East Asia	660
	CFR South East Asia	725
MTBE	FOB Singapore	740
	FOB US Gulf	998
Phenol	CFR China	965
	CFR South East Asia	1060
	FOB US Gulf	1146
	FOB Rotterdam	1191
Acetone	CFR China	930
	CFR South East Asia	985
	CFR Far East Asia	825
	FOB US Gulf	1367
	FOB Rotterdam	1147
Caprolactum	CFR Far East Asia	1700
	CFR South East Asia	1720
Caustic Soda	FOB North East Asia	375
	CFR South East Asia	465
Ethyl Acetate	FOB US Gulf	1521
	FOB Rotterdam	1115
	FD North West Europe(Euro/mt)	1120
Butyl Acetate	FOB US Gulf	1808
	FOB Rotterdam	1497
	FD North West Europe(Euro/mt)	1470
MEK	FOB Rotterdam	1442
	FD North West Europe(Euro/mt)	1420
IPA	FOB US Gulf	1383
	FOB Rotterdam	1257
	FD North West Europe(Euro/mt)	1250
NBA	CFR China	1110

	CFR South East Asia	1005
	CFR Far East Asia	1005
Octanol	CFR China	1320
	CFR South East Asia	1215
	CFR Far East Asia	1145
DOP	CFR China	1365
	CFR South East Asia	1285
	CFR Far East Asia	1225
Phthalic Anhydride	CFR China	1110
	CFR South East Asia	1120
	CFR Far East Asia	1060
PTA	CFR Far East Asia	735
	CFR South East Asia	755
Acetic Acid	CFR Far East Asia	450
	CFR South East Asia	455
	CFR South Asia	412
	FOB China	350
VAM	CFR China	845
	CFR South East Asia	805
	CFR South Asia	845

Shipping term		Description
FOB	Free on Board	The seller quotes a price including the cost of delivering goods to the nearest port. The buyer bears all the shipping expenses and is responsible to get the products from that port to its final destination. In simple terms, FOB price means the buyer has to bear the shipping costs completely. This is one of the most used shipping terms by international buyers and sellers.
EXW	Ex-Works	The seller has no involvement with the transportation costs and risks. The buyer has to collect the goods from the seller's site and get them to the final destination. All the costs and risks are borne by the buyer. It is advisable that the buyer purchases insurance since the goods can get damaged in transit. EXW is ideal when the buyer and seller are in the same country or region.
CFR	Cost and Freight	The seller pays the loading and freight costs from his premises up to the destination port. Then, the buyer has to arrange for the goods to be transported from the port to his premises. The seller is only responsible for the cost of shipping the products to the destination port. CFR is used for products transported by sea or inland waterways only. The seller does not bear the risk of loss or damage during transit.
CIF	Cost, Insurance, and Freight	If the buyer opts for CIF price, the seller pays for the loading and freight costs right from his premises up to the destination port as well as insurance. In the case of damage or loss, the seller bears the risk completely. The buyer has to arrange for

		transportation of the goods from the port to his premises. CIF is a safer option than CFR since the goods are insured by the seller up to their arrival at the destination port.
DAP	Delivered at Place	It was previously known as DDU, Delivery Duty Unpaid. In this case, the seller is responsible for getting the goods from his own factory up to the premises of the buyer. He also bears the risk in the case of loss or damage of the goods right until the products are delivered to the buyer. The buyer only has to pay the import duties or custom clearance charges.
DDP	Delivery Duty Paid	The seller is responsible for shipping the goods from his factory to the destination address provided by the buyer, usually his factory or warehouse and is also liable for any damage or loss of goods during transit. The seller also takes care of the customs, VAT, or import duties levied on the products. The buyer only has to receive the products at the destination. In most cases, most sellers only offer DDP for small shipments.
FD North West Europe	Free Delivered	Free Delivered North West Europe

Countries Groups	Southeast Asia is composed of eleven countries: Brunei, Burma (Myanmar), Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.	Far East Asia:The following countries are considered to be located in the Far East: China, Hong Kong, Macau, Japan, North Korea, South Korea, Mongolia, Siberia, Taiwan, Brunei, Cambodia, East Timor, Malaysia, Laos, Indonesia, Myanmar, Singapore, Philippines, Thailand, and Vietnam.	South Asia: The region consists of the countries of Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, the Maldives, and Sri Lanka	Northwestern Europe usually consists of the United Kingdom, the Republic of Ireland, Belgium, the Netherlands, Luxembourg, Northern France, Northern Germany, Denmark, Norway, Sweden, and Iceland.

Opening Ports Price (Rs/kg) of Chemicals as on 12/08/2024

USD Exchange Rate: 83.96 INR			
Products	**Current Prices (INR/kg)**	**Prices in USD/mt Equivalent to INR/kg**	**Location**
Acetic Acid	**38.25**	**455.57**	**Ex-Mumbai**
Acetic Acid	**37**	**440.69**	**Ex-Kandla**
Acetonitrile-imported intact	**160**	**1905.67**	**Ex-Bhiwandi**
Acetone	**99**	**1179.13**	**Ex-Mumbai**
Acrylic Acid	**87**	**1036.21**	**Ex-Mumbai**
Acrylonitrile	**106**	**1262.51**	**Ex-Kandla**
Adipic Acid	**128**	**1524.54**	**Ex-Bhiwandi**
Aniline Oil	**156**	**1858.03**	**Ex-Kandla**

Benzene	88.4	1052.88	Ex-Vizaz
Butyl Acetate	93	1107.67	Ex-Kandla
Butyl Acrylate Monomer	145	1727.01	Ex-Kandla
Butyl Glycol	126	1500.71	Ex-Kandla
C10	88	1048.12	Ex-Kandla
C9	83	988.57	Ex-Kandla
Carbon Black-regular grade	60	714.63	Ex-Mumbai
Caustic Soda Lye	34.75	413.89	Ex-Dahej
Chloroform	22	262.03	Ex-Dahej
Citric Acid-ANHYD	72	857.55	Ex-Bhiwandi
Citric Acid-Mono	65	774.18	Ex-Bhiwandi
Cyclohexane	107.5	1280.37	Ex-Hazira
Cyclohexanone	122	1453.07	Ex-Kandla
DMF Drum	76	905.19	Ex-Bhiwandi
DEG	60	714.63	Ex-Hazira
EDC	65	774.18	Ex-Kandla
Epoxy Resin	190	2262.98	Ex-Nhava Sheva
Ethyl Acrylate	122	1453.07	Ex-Kandla
Formic Acid	65	774.18	Ex-Bhiwandi
Glycerine	67	798.00	CIF Nhava Sheva
N-Heptane	210	2501.19	Ex-Bhiwandi
Hexane	97	1155.31	Ex-Kandla
Hydrogen Peroxide-50%	30	357.31	Ex-Bhiwandi
Isobutanol	94	1119.58	Ex-Kandla
IPA	111	1322.06	Ex-Kandla
IPA	112	1333.97	Ex-Mumbai
LAB	136	1619.82	Imported
Maleic Anhydride-Drum	96	1143.40	Ex-Mumbai
MDC	33.5	399.00	Ex-Dahej
MEG	54	643.16	Ex-Mumbai
MEK	107	1274.42	Ex-Kandla
Melamine	85	1012.39	Imported
Methanol	26.25	312.65	Ex-Kandla
Methanol	26	309.67	Ex-Mumbai

MIBK	**155**	**1846.12**	**Ex-Hazira**
Mix Xylene-Solvent Grade	**82.5**	**982.61**	**Ex-Kandla**
Mix Xylene-Solvent Grade	**83.5**	**994.52**	**Ex-Mumbai**
MMA	**215**	**2560.74**	**Ex-Hazira**
N-Butanol	**102**	**1214.86**	**Ex-Kandla**
N-Propanol	**108**	**1286.33**	**Ex-Kandla**
Octanol	**107.5**	**1280.37**	**Ex-Kandla**
Ortho Cresol	**160**	**1905.67**	**Ex-Bhilai**
Ortho Xylene	**98**	**1167.22**	**Ex-Kandla**
Phenol	**99.5**	**1185.09**	**Ex-Kandla**
Phenolic Resin	**160**	**1905.67**	**Ex-Indore**
Phthalic Anhydride	**116**	**1381.61**	**Ex-Mumbai**
Propylene Glycol	**89**	**1060.03**	**Ex-Kandla**
Sodium Nitrate (50Kg Bag)	**61**	**726.54**	**Ex-Make-Lasons**
Soda Ash Light	**35**	**416.87**	**Ex-Bhiwandi**
Styrene Monomer	**99**	**1179.13**	**Ex-Kandla**
Styrene Monomer	**104**	**1238.69**	**Ex-Mumbai**
Sulphuric Acid	**4**	**47.64**	**Ex-Vapi**
Tio2 (Anatase Grade)	**190**	**2262.98**	**Ex-Bhiwandi**
Tio2 (Rutile Grade)	**220**	**2620.30**	**Ex-Bhiwandi**
Toluene	**83**	**988.57**	**Ex-Kandla**
Toluene	**83.5**	**994.52**	**Ex-Mumbai**
VAM	**71**	**845.64**	**Ex-Kandla**
VAM	**72**	**857.55**	**Ex-Hazira**

Producer Prices (Rs/kg) of Chemicals as on 12/08/2024

Producers	Current Price (Rs/kg)	Import parity price in USD/MT	Location	Production capacity
Accord-Ethyl Acetate	68	809.91	Ex-Maharashtra	
Arham Petrochem-C9	82.75	985.59	Ex-Kandla	69,000 tonnes /year
Arham Petrochem-C9	83.75	997.50	Ex-Ahmedabad	69,000 tonnes /year
Arham Petrochem-C10	87.5	1042.16	Ex-Kandla	30,000 tonnes /year
Arham Petrochem-C10	87	1036.21	Ex-Ahmedabad	30,000 tonnes /year
Arham Petrochem-C10 (Imported Repack)	100.75	1199.98	Ex-Bhiwandi	30,000 tonnes /year
Arham Petrochem-	59.65	710.46	Ex-Kandla	75000 tonnes / Year

MTO/White Spirit (KL)				
Arham Petrochem-MTO/White Spirit (KL)	60.65	722.37	Ex-Ahmedabad	35,000 tonnes /year
Arham Petrochem-De-Aromatised D40	130	1548.36	Ex-Kandla	75000 tonnes / Year
Arham Petrochem-De-Aromatised D40	131	1560.27	Ex-Ahmedabad	35,000 tonnes /year
Arham Petrochem-De-Aromatised D60	139	1655.55	Ex-Kandla	75000 tonnes / Year
Arham Petrochem-De-Aromatised D60	140	1667.46	Ex-Ahmedabad	35,000 tonnes /year
Andhra Petrochemicals-Iso-Butanol	101.5	1208.91	Ex-Vishakhapatnam	4000 tonnes/year
Andhra Petrochemicals-N-Butanol	101.5	1208.91	Ex-Vishakhapatnam	30,000 tonnes/year
Andhra Petrochemicals-Octanol	116	1381.61	Ex-Vishakhapatnam	70,000 tonnes/year
BASF-Adipic Acid	135	1607.91	Imported	210,000 tonnes/year
BPCL-2-Ethyl Hexanol (B)	106.5	1268.46	Ex-Kochi	47000 tonnes/year
BPCL-2-Ethyl Hexanol (P)	117	1393.52	Ex-Kochi	
BPCL-2-Ethyl Hexyl Acrylate (B)	162.5	1935.45	Ex-Kochi	10000 tonnes/year
BPCL-2-Ethyl Hexyl Acrylate (P)	172.5	2054.55	Ex-Kochi	
BPCL-Acrylic Acid (B)	93	1107.67	Ex-Kochi	47000 tonnes/year
BPCL-Acrylic Acid (P)	102	1214.86	Ex-Kochi	
BPCL-Benzene Refinery,	88.4	1052.88	Ex-Mumbai	90,000 tonnes/year, Mumbai
BPCL-Butyl Acrylate (B)	137.5	1637.68	Ex-Kochi	180000 tonnes/year
BPCL-Butyl Acrylate (B)	147.5	1756.79	Ex-Kandla	
BPCL-Butyl Acrylate (P)	140	1667.46	Ex-Kochi	
BPCL-Hexane (KL)	99.1	1180.32	Ex-Mumbai	35,000 tonnes/year, Kochi
BPCL-Hexane (MT)	149.32	1778.47	Ex-Mumbai	35,000 tonnes/year, Kochi
BPCL-Iso-Butanol (B)	91.5	1089.80	Ex-Kochi	7000 tonnes/year
BPCL-Iso-Butanol (P)	117.7	1401.86	Ex-Kochi	
BPCL-MTO (KL)	84.8	1010.00	Ex-Mumbai	19,000 tonnes/year
BPCL-N-Butanol (B)	97	1155.31	Ex-Kochi	38000 tonnes/year
BPCL-N-Butanol (B)	104	1238.69	Ex-Kandla	
BPCL-N-Butanol (P)	105.5	1256.55	Ex-Kochi	

BPCL-Paraffin Wax	110	1310.15	Ex-Delhi	
BPCL-Sulphur (Molten)	13.76	163.89	Ex-Mumbai	19,000 tonnes/year
BPCL-Toluene	83	988.57	Ex-Mumbai	16,000 tonnes/year
Deepak Phenolics-Acetone	96.5	1149.36	Ex-Dahej Gujarat	80.5
Deepak Phenolics-IPA	110	1310.15	Ex-Dahej Gujarat	30,000 tonnes/year
Deepak Phenolics-Phenol	99	1179.13	Ex-Dahej Gujarat	200,000 tonnes/year
GACL-Caustic Soda Lye	32.5	387.09	Ex-Dahej Gujarat	
GACL-MDC	34	404.95	Ex-Bharuch Gujarat	NA
GNFC-Acetic Acid	39	464.51	Ex-Bharuch Gujarat	160,000 tonnes/year
GNFC-Aniline Oil	154	1834.21	Ex-Bharuch Gujarat	
GNFC-Ethyl Acetate	69	821.82	Ex-Bharuch Gujarat	50000 tonnes/year
GNFC-TDI Drum	207	2465.46	Ex-Bharuch Gujarat	67000 tonnes/year
Grasim-MDC	34	404.95	Ex-Gujarat	33000 tonnes/year
GSFC-Cyclohexane	102.5	1220.82	Ex-Gujarat	NA
HOCL-Acetone	104	1238.69	Ex-Kochi	24640 tonnes/year
HOCL-Phenol	115	1369.70	Ex-Kochi	40,000 tonnes/year
IOCL-Banzene	92	1095.76	Ex-Vadodara Gujarat	
IOCL-DEG	62.6	745.59	Ex-Odisha(Paradip)	
IOCL-DEG	65	774.18	Ex-Panipat	
IOCL-LAB	142	1691.28	Ex-Gujarat	120,000 tonnes/year
IOCL-MEG	56	666.98	Ex-Odisha(Paradip)	
IOCL-MEG	57.6	686.04	Ex-Panipat	
IOCL-Paraffin Wax	110	1310.15	Ex-Delhi	
Jubilant-Ethyl Acetate	70	833.73	Ex-Maharashtra	280 tonnes/day
Laxmi-Ethyl Acetate	69.5	827.78	Ex-Maharashtra	100000 tonnes/annum
Meghmani-Caustic Soda Lye	32.5	387.09	Ex-Bharuch Gujarat	400000 tonnes/annum
Meghmani-MDC	34	404.95	Ex-Ankleshwar Gujarat	397500 kg/month
NIRMA-LAB	143	1703.19	Ex-Vadodra	120,000 tonnes/year
Reliance-Caustic Soda Lye	32	381.13	Ex-Gujarat	69500 tonnes/annum
Reliance-DEG	64.7	770.61	Ex-Jamnagar	65,000 tonnes/year
Reliance-LAB	144	1715.10	Ex-Vadodra	180,000 tonnes/year
Reliance-MEG	56.8	676.51	Ex-Jamnagar	750,000 tonnes/year

Reliance-Mix Xylene	82	976.66	Ex-Jamnagar	120,000 tonnes/year
Reliance-PTA	82.6	983.80	Ex-Dahej Gujarat	1,300,000 tonnes/year
Reliance-TEG	116.5	1387.57	Ex-Jamnagar	NA
Reliance-Toluene	80	952.83	Ex-Jamnagar	100,000 tonnes/year
SI GROUP-Phthalic Anhydride	115	1369.70	Ex-Navi Mumbai	11000 tonnes/year
TATA Chemicals-Soda Ash light	34	404.95	Ex-Bhiwandi	900,000 tonnes/year

Note-Above prices have been collected from experts and experienced outsources of the industry. Kindly verify from your end as well. Above prices are Exclusive of GST

Note- Last changed price means when it changed last whether its yesterday or 2 days ago or 5 days ago or depends on last changing.

All of the above prices are provided by chemicalsupdates.com.

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New Chemical Products Listed on Chemical Market Leads Platform

FERRIC CHLORIDE HEXAHYDRATE IRON / 10025-77-1 / 28273990

CAS-Number : 10025-77-1

Molecular Weight : mol/g

Package Size :- 25 KGS CARBOUYS

Markets :- Basic Chemicals |

Molecular Formula :-

Available Qty :- 1000.0000 Kgs

Price :- Available on Request

BUTYLATED HYDROXY TOLUENE / 128-37-0 / 29072990

CAS-Number :- 128-37-0

Molecular Weight :- mol/g

Package Size :-25 KGS CARBOUYS

Markets :- Basic Chemicals |

Molecular Formula :-

Available Qty :-1000.0000 Kgs

Price :- Available on Request

MANGANESE CHLORIDE TETRAHYDRATE / 13446-34-9 / 28273990

CAS-Number :- 13446-34-9

Molecular Weight :- mol/g

Package Size :- 25 KGS CARBOUYS

Markets :- Basic Chemicals |

Molecular Formula :-

Available Qty :-1000.0000 Kgs

Price :- Available on Request

TERPENTINE OIL / 8006-64-2 / 38059010

CAS-Number :-8006-64-2

Molecular Weight :-mol/g

Package Size :- 50kgs, 200kgs HDPE

Markets :-Basic Chemicals

Molecular Formula :-

Available Qty :-50.0000 Kgs

Price :- Available on Request

Antifoam Compound / 39100090

CAS-Number :- 497-19-8

Molecular Weight :- mol/g

Package Size :- 05/25/50 Kgs HDPE Carboy

Markets :- Basic Chemicals

Molecular Formula :-

Available Qty :- 250.0000 Kgs

Price :- Available on Request

strategies are gearing the companies towards promoting the EV market and thereby creating a huge impact on the battery chemicals market.

Automotive industry investing directly in mining projects:

One of the changes in the automotive industry is their direct investments in mining projects. Now, OEMs are changing their purchasing strategies by buying them directly from the suppliers. These factors have changed their purchasing behaviour from short-term spot market supply to long-term contracts.

Let's consider another automotive industry, Ford. Ford has recently invested in a nickel mining project and processing plant project that is located in Indonesia which gives it direct control over the procurement of the nickel it needs. This production facility is expected to begin its operations in 2026.

Therefore, the trend of OEMs like Ford investing directly in mining projects is expected to transform the battery chemicals industry by stabilizing the supply chains. Shifting market dynamics, driving innovations in refining, cost structures and acceleration to the transition to electric vehicles.

Different battery types and their modern applications:

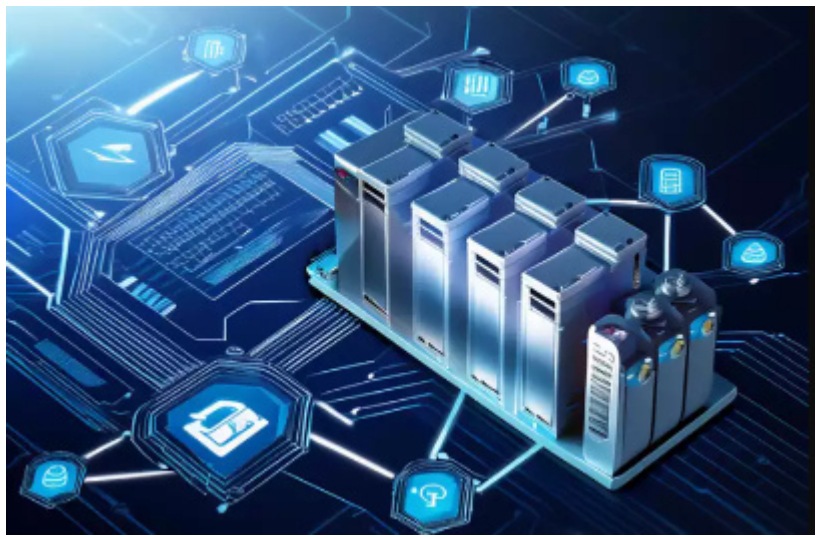
High-temperature Molten salt lithium batteries:

The high-temperature molten salt Lithium batteries are extensively used in high-end applications where the environment encounters extreme temperatures. NASA has utilized these batteries for deep space exploration as these batteries are capable of operating in very high temperatures.

The increasing investments in the aerospace and defence industries are driving the demand for this type of battery. Countries like the United States, China and India are heavily investing in space programs therefore impacting the demand for High-temperature molten salt lithium batteries.

Organic Electrolyte lithium batteries:

Organic Electrolyte lithium batteriesare extensively utilized in consumer electronics like smartphones, laptops and wearable devices. These consumer electronics heavily rely on these battery types due to their higher energy density and safety. Strong consumer base and market growth in countries like South Korea, Japan, and the United States and the transition due to 5G and IoT devices are impacting the overall growth of the battery chemicals market.



Solid-state batteries:

The solid-state battery development in the United States has led to the growth of higher energy density and safety. Companies like Quantum Scape in the United States are pushing the development of solid-state batteries for EVs. The solid-state batteries are catering to the expectations of these EV manufacturers who are seeking safer, more efficient battery solutions. Innovation and investment in countries like North America, Europe and Japan are driving the overall growth of this specific solid-state battery.

Developed countries like Australia, China, and European nations are exploring different facets of energy storage solutions. Especially in Australia, myriad wind energy solutions utilize grid storage applications which involve lithium water batteries.

The demand for these lithium water batteries therefore grows in these countries as they bring on strong renewable energy initiatives.

Advancements continue…

In this transformative era, the battery chemicals industry stands at the forefront and plays a pivotal role in the development of the Electric vehicle industry and driving other industrial processes. The EV adaptation has accelerated in recent times due to the advancements in battery technologies thereby spurring innovation across sectors such as renewable energy, consumer electronics, and manufacturing. The strategic importance of battery chemicals has already led to significant investments as discussed in the article that includes R&D, raw material sourcing, and sustainable practices. Overall battery chemicals sectors are reshaping the landscape of the modern industries and the trends are expected to continue their evolution. Thereby underscoring its integral role in shaping a cleaner and more electrified future of the world.

Source : Vinodini Harish

Indian Dyes and Pigments Industry Future Outlook and Opportunities

India has become a significant player in the global pigments and dyes industry. Some of the leading industries in India are focusing on producing eco-friendly pigments and adhering to stringent environmental regulations. Thereby enhancing their reputation in the international markets. The leading sectors are bringing up innovative approaches and committed to sustainability and therefore positioning themselves as predominant suppliers for several global companies in the coatings, plastics, and cosmetic industries. Since there is a growing number of primary consumers of the dyes and pigments industry, their growing demand for their products has increased the need for high-performance pigments and driving the overall pigments and dyes market.

Indian Dyes and Pigments Industry Outlook:

Indian Dyes and Pigments industry has attained a value of USD 65.70 billion in 2023 and is expected to reach USD 97.64 billion by 2032 with a CAGR of 4.5% during the period. The tremendous growth of the pigment market is due to the cosmetic industry. Global industrialization and urbanization have encouraged major sectors of the public to improve their lifestyles, living standards, and evolving lifestyles. These factors have increased the demand for cosmetic products, skincare, haircare, perfume, and personal hygiene products, thereby giving a big boost to the overall growth of the pigment industry.

Similarly, Indian dyes and pigments are exported to various countries such as the USA, Europe, and other Asian countries while providing them at very competitive production costs and at high-quality standards that make Indian products attractive in the global market.

The significant technological advancements and increasing investments in research and developments to innovate and produce eco-friendly and sustainable dyes and pigments are also impacting the overall growth of the dyes and pigments industry.

Prominent categories of dyes and pigments in India: Organic and inorganic pigments:

Organic pigments are gaining dominance in the pigments sector that is being produced in India, which accounts for about 58% of the overall pigment production in India. Meanwhile, the environmental crackdowns in countries like China have resulted in the shutdown of several domestic dye industries. India presents itself as a better place due to the availability of a better ecosystem, feedstock, technology and other factors such as compliance. Therefore, the consumer base in China is expected to shift to India in the future, thereby presenting great opportunities for the Indian dyes and pigments industry.

Current trends show that the demand and sales of organic pigments could outpace inorganic pigments because of the rising awareness about the benefits of natural pigments. Meanwhile, consumers are more aware of the health risks associated with synthetic pigments and therefore choosing natural alternatives for both their health and the environmental benefits. These factors have gained more traction on the concept of producing sustainable and eco-friendly products.

Since organic pigments are naturally sourced, the food industry intensively chooses these organic pigments although they are expensive. The organic pigments are safer and offer better vividness, superior colour quality and compatibility when combined with other food ingredients. Potential customers are willing to spend more when they are offered quality, safer and sustainable products. Therefore organic pigments are likely to gain more popularity in the upcoming years. It is expected that organic pigments are expected to surpass the market value of USD 6.5 billion by 2033 with a CAGR of 4.0%.

Investments paving the way to opportunities:

Indian pigments and dyes industries are spending on multiple aspects that are leading to overall growth.

Clariant Chemicals Ltd. are investing in developing non-toxic, bio-degradable pigments and sustainable technologies, they are also focusing on environmentally friendly dyes and pigments that comply with international standards. They have invested about USD 12 million in sustainable production practices and innovation and about USD 18 million in capacity expansion.

Atul Ltd. has invested about 12 million for the infrastructural developments, USD 24 million for the diversification and focusing on strategic alliances and joint ventures to expand their product offerings. They also form a joint venture with American Firm, Ciba specialty chemicals, thereby enhancing their capability to produce high-performance pigments.

Textile industries are creating ample opportunities:

The textile industry in China holds prominence due to its ancient roots, historical practices and contemporary strategies. Although both India and China have leveraged their resources and labour forces in the growth of textile industries, China has incredible expertise in silk production and modern textile trends. For instance, Shenzhou International Group Holdings Limited, a major manufacturer and supplier to brands like Nike and Adidas have begun to incorporate advanced production techniques and strategic partnerships. Additionally, they have also developed a strong focus on R&D. Post the economic reforms in China, there has been an increase in foreign investments and technological advancements in every sector. These factors have impacted the dyes and pigments industry in India. Since India has a well-established dyes and pigments industry coupled with a strong manufacturing base, it serves China with an abundant supply of raw materials required for textile production.

Some of the leading companies in India include:

Atul Ltd. Atul Ltd is considered as one of the leading companies in Indian Dyes and Pigments industry as they manufacture wide range of dyes that are utilized in textile industries. The dyes types include reactive, vat, and dispersed dyes. The company exports a substantial portion of their production to China.

Kiri Industries: Kiri Industries manufactures an extensive range of reactive and disperse dyes and the company also has established a strong presence in the market.

Heubach Color Pvt Ltd. Heubach ColorPvt. Ltd. is a prominent player in the pigments industry as they specialize in the production of both organic and high-performance pigments. The company has established a strong presence in their exports to China. Their specialization includes:

Azo Pigments: The pigments are widely utilized in printing inks, plastics, and paints.

Phthalocyanine pigments: They are known for their stability and vibrant blue and green colours and they are extensively used in coatings, inks, and plastics.

Quinacridone pigments: These are exceptional lightfastness and weather resistance, thereby making them suitable for automotive coatings and high-performance applications.

High-performance pigments: High-performance pigments are designed for applications that require superior properties such as enhanced durability, heat stability and resistance to the majority of chemicals and solvents. In which the inorganic pigments are categorized as Complex Inorganic Color Pigments (CICPs). They provide higher opacity and excellent lightfastness, and they are suitable for applications like automotive, and industrial coatings.

Specialty chemicals: The pearlescent and effect pigments offer unique visual effects and they are used in cosmetics, packaging and decorative coatings.

The market presence of Heubach ColorPvt. Ltd is strategically positioned and it possesses the potential to serve the growing demand for high-quality pigments in China. The company owns a strong and stable distribution network and has established a robust distribution network in the country and all over the world. They have also established strong relationships with local distributors and partners, thereby enhancing their market reach. They are further strengthened by the localized support. The industry complies with international standards and Chinese regulations that ensure the stability and suitability of the Chinese market.

Countries benefited from Indian pigment production and advancements:

The booming economy and large population of China have created an attractive market for pigment manufacturers. China has grown in GDP by 8.1% in 2021 and the demand for a specific range of products such as pigments, paints, coatings, plastics, textile products and printing inks is further amplifying the growth.

China is known as the center of pigment production and consumption:

China's booming economy and large population make it an extremely attractive market for pigment manufacturers. China's GDP grew by 8.1% in 2021 and is forecast to continue growing, driving increased demand for a range of products that require pigments, including paints and coatings, plastics, textile products, and printing inks. The National Bureau of statistics of China stated that the Chinese pigment industry

is witnessing significant growth and has reached a growth percentage of 18.6% in 2021. Their total sales revenue has grown over 23.5 billion yuan with an increase in growth percentage of 22.9% in 2022.

Brazil is showing growing demand in the pigments industry:

Brazil has a significant demand for pigments due to a large and diverse economy that encompasses a wide range of industries that require pigments. For instance, the country has a diverse industrial sector such as automotive, textile, construction and other industries that rely on pigments to produce their products.

Brazil is known for their agricultural products and they highly rely on pigments that are involved in the production of colour fertilizers, pesticides, and animal feed.

Sudharshan Chemical Industries is one of the prominent exporters of pigments to Brazil as they provide a wide range of pigments such as high-performance pigments for coatings, plastics, and inks, which are some of the widely used products in Brazil. The company is committed to quality and compliance with the international standards that are preferred by the Brazilian industries. The company also produces high-performance coatings which provide essential properties such as UV resistance, and colour durability and the plastics and packaging industries of the country are also gaining a huge benefit from the consistent quality and vibrant colours of Sudarshan's pigments, which help in enhancing the appeal of their products.

Case studies:

Heubach industries – trade dynamics:

Heubach industries have gained substantial impact as their partnership with major Chinese automotive manufacturers. The automotive coatings requirements in China are rising due to construction and automotive manufacturers and there have been significant requirements for the automotive coatings, therefore Heubach has contributed to the requirement to a greater degree to enhance the quality and durability of the vehicles that are produced in China.

Heubach's impact due to the partnership with the majority of Chinese automotive manufacturers has been well-established in terms of high-performance pigments. Overall the company has established itself as a leading supplier of organic and high-performance pigments with a significant presence in the market. They also continue to meet the demands of varied industries in China thereby reinforcing their position in the global pigments industry.

Atul Ltd. – trade dynamics:

Atul Ltd. is a prominent chemical company in India that exhibits a diverse portfolio, spanning multiple industries. They operate in varied segments that include life science chemicals, performance and other chemicals. The company has a significant focus on dyes and pigments and they are known for their robust infrastructure, innovative capabilities, and strong market presence which makes them a key player in the global chemical industry.

Their diverse portfolio of dyes includes reactive, acid and direct dyes that cater well enough to the textile industry. They also manufacture dye intermediates that are crucial for producing dyes.

The company produces organic pigments that are used in inks, paints, coatings, plastics and other substrates due to their quality, consistency and performance.

They are also involved in herbicides, insecticides and fungicides that serve significant sectors such as agricultural sectors. However they stand as a significant exporter to China and the textile industries of China, and the country heavily relies on imports to maintain their production capabilities.

The company is known for their sustainable practices such as green chemistry and environmentally friendly processes and also has collaborations with international distributors and agents that help the company to expand its market reach and improve the service delivery.

Atul Ltd. is known for its dyes that exhibit superior fixation properties, vibrant colours and environmental compliance that have made significant inroads into the Chinese textile market. They have also altered some of their properties according to the rapidly changing environmental regulations in China. Especially, their eco-friendly dues and intermediates help the Chinese manufacturers maintain their high production standards.

In summation:

Indian pigments industry is showcasing robust growth in organic and inorganic pigments as well as other types of dyes, thereby underscoring its dynamic and resilient nature. Indian manufacturers have navigated the complexities of the global market that delivering products catering to the needs of diverse sectors. Indian pigments and dyes industries are evolving and growing due to strategic investments in research and development. Environmental concerns are becoming very prominent and therefore Indian pigments and dyes industries are focusing on sustainable practices and international collaborations.

Source : Vinodini Harish

Chemical Market Lead Platforms The Catalyst for Your Business Growth

The chemical industry is a vast and dynamic landscape, where connecting with the right buyers and suppliers can be the difference between success and stagnation. Traditional methods of networking and lead generation are no longer sufficient to keep pace with the evolving market demands. Enter chemical market lead platforms – a revolutionary solution designed to streamline the trade process and unlock new growth opportunities.

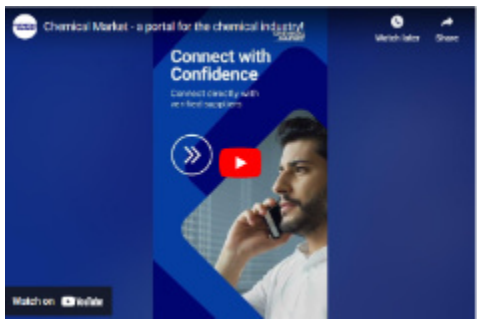
The Challenges of the Chemical Trade

Before we delve into the transformative power of lead platforms, let's acknowledge the common pain points faced by businesses in the chemical sector:

- Limited Reach: Reaching potential buyers and suppliers across diverse geographical locations and industry segments can be a daunting task, hindering business expansion.
- Time-Consuming Prospecting: Identifying and intensiqualifying leads manually is a labor-ve process that often yields limited results, diverting valuable resources from core business activities.
- Lack of Transparency: Evaluating the credibility and reliability of potential partners can be challenging, leading to risks and missed opportunities.
- Missed Opportunities: In a fast-paced market, missing out on potential deals due to inefficient networking can significantly impact growth.

How Chemical Market's Lead Platforms Revolutionize the Game

Lead platforms act as a centralized hub, connecting chemical buyers and sellers from around the world. It offers a comprehensive suite of features to address the challenges faced by



businesses globally:

- Targeted Lead Generation: Leveraging sophisticated algorithms and data analytics, lead platforms match your products or services with the right buyers, ensuring that your leads are highly qualified and relevant to your business.
- Efficient Networking: Connect with potential partners effortlessly through virtual meetings, direct messaging, and personalized recommendations, fostering meaningful relationships and facilitating collaboration.
- Verified Supplier Profiles: Access comprehensive profiles of verified suppliers, complete with product catalogs, certifications, and customer reviews. This eliminates the guesswork in supplier selection, mitigating risks and ensuring reliable partnerships.

Real-Time Market Insights: Stay ahead of the curve with up-to-date market trends, price comparisons, and industry news. Make informed decisions based on accurate and timely information, giving you a competitive edge.

- Streamlined Procurement: Simplify the sourcing process by requesting quotes, negotiating terms, and tracking orders directly through the platform. This streamlined approach saves time and resources, allowing you to focus on core business activities.

Key Benefits of the Leads Platform:

- Increased Sales Leads: Expand your customer base and drive revenue growth.
- Streamlined Procurement: Source raw materials and technology efficiently.
- Enhanced Brand Visibility: Showcase your expertise and attract new business opportunities.

Ready to Grow?

You're here because you're ready to tackle chemical market challenges head-on. Our platform connects you with qualified buyers and streamlines procurement, ensuring your business thrives. Don't miss out – join today and unlock your business's potential.

Take the Next Step

Contact us now to discover how our platform can transform your operations. Schedule a personalized demo and elevate your presence in the chemical market.

Source : Prashant Singh