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DYES & CHEMICAL MARKET

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4	CPhI China- Virtual CPhI	June 19-21, 2024	Shanghai, China
5	CPhI Japan	Apr 17-19, 2024	Tokyo, Japan
6	CPhI Korea	30 Aug - 1 Sept, 2023	COEX, Seoul, Korea
7	CPhI India	Nov 28-30, 2023	Noida, India
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4	Chemspec Europe	May 24-25, 2023	Messe Basel, Switzerland
5	ChemUK Expo	May 15-16, 2024	NEC, Birmingham, UK
6	American Coatings Show	April 30-2 May 2024	Indianapolis
7	China Coat China	Dec 2024	China Import and Export Fair Complex, Guangzhou
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CHEMICAL MARKET

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Hydrogen: A Clean, Flexible Energy Carrier? Yes? No?

Hydrogen is the simplest and most abundant element on earth, it consists of only one proton and one electron. Hydrogen can store and deliver usable energy, but it doesn't typically exist by itself in nature and must be produced from compounds that contain it.

Hydrogen can be produced from diverse sources. Hydrogen can be produced from Natural Gas which is a fossil fuel. However, electricity from the grid or from renewable sources such as biomass, geothermal, solar and wind is also used to produce hydrogen. In the longer term, solar energy and biomass can be used more directly to generate hydrogen as new technologies make alternative production methods cost competitive. This is the new revolution and enterprises are investing to produce this green hydrogen.

Ways to Produce Hydrogen

Most hydrogen can also be produced through steam methane reforming, a high-temperature process in which steam reacts with a hydrocarbon fuel to produce hydrogen.Another common hydrogen production method takes water, and separates the molecule H2O into oxygen and hydrogen through a process called electrolysis. Electrolysis takes place in an electrolyzer, which functions much like a fuel cell in reverse—instead of using the energy of a hydrogen molecule, like a fuel cell does, an electrolyzer produces hydrogen from water molecules.
Biological processes can also produce hydrogen through biological reactions using microbes such as bacteria and microalgae. In these processes, microbes consume plant material and produce hydrogen gas. There are many ways to produce hydrogen using sunlight, including photo biological, photo electrochemical, photovoltaic-driven electrolysis, and solar thermochemical processes.

Hydrogen is an energy carrier, not an energy source and can deliver or store a tremendous amount of energy. Hydrogen can be used in fuel cells to generate electricity, or power and heat. Today, hydrogen is most commonly used in petroleum refining and fertilizer production, while transportation and utilities are emerging markets. Hydrogen is a clean fuel that, when consumed in a fuel cell, produces only water, electricity, and heat.

The greatest challenge for hydrogen production, particularly from renewable resources, is providing hydrogen at lower cost. For transportation fuel cells, hydrogen must be cost-competitive with conventional fuels and technologies on a per-mile basis. Reliance Industries is one such enterprise looking to produce green hydrogen and aims to bring down production cost to just $1 per kg by 2030. According to one report from the Times of India, Reliance has secured 74,750 hectares of land in Gujarat on a 40-year lease for its green hydrogen project. It is also working with equipment manufacturers to secure green hydrogen supply chain and distribute the same through it Jio-BP outlets. Currently, producing green hydrogen production costs comes to be around $8-$9 per kg, compared to less than $4 per kg from traditional fuels and feedstock. Several companies are working on producing Hydrogen Internal Combustion Engine (H2ICE) technology. For this to work, the supply chain for Hydrogen fuel cells are required. The group state that these Hydrogen powered vehicles have an impressive travel range of around 400 km on a single fill.

Elon Musk from Tesla have already rejected the idea of hydrogen as tool for energy storage. Musk may be dismissive about Hydrogen's role in the energy transition but many other influential voices are optimistic for hydrogen for H2ICE. Musk was asked if he thought hydrogen had a role to play in accelerating the transition away from fossil fuels. "No," he replied. "I really can't emphasize this enough — the number of times I've been asked about hydrogen, it might be … it's well over 100 times, maybe 200 times," he said. "It's important to understand that if you want a means of energy storage, hydrogen is a bad choice." Expanding on his argument, Musk went on to state that "gigantic tanks" would be required to hold hydrogen in liquid form. If it were to be stored in gaseous form, "even bigger" tanks would be needed, he said. In 2019, the IEA said hydrogen was "one of the leading options for storing energy from renewables and looks promising to be a lowest-cost option for storing electricity over days, weeks or even months."

The Paris-based organization added that both hydrogen and hydrogen-based fuels were able to "transport energy from renewables over long distances — from regions with abundant solar and wind resources, such as Australia or Latin America, to energy-hungry cities thousands of KM's away." In June 2020 he tweeted "fuel cells = fool sells," adding in July of that year: "Hydrogen fool sells make no sense."
"It does not naturally occur on Earth, so you either have to split water with electrolysis or crack hydrocarbons," he told the Financial Times.
"When you're cracking hydrocarbons, you really haven't solved the fossil fuel problem, and the efficiency of electrolysis is poor."
"The efficiency of electrolysis is … poor," he told the Financial Times. "So you really are spending a lot of energy to ... split hydrogen and oxygen. Then you have to separate the hydrogen and oxygen and pressurize it — this also takes a lot of energy."
"And if you have to liquefy … hydrogen, oh my God," he continued. "The amount of energy required to … make hydrogen and turn it into liquid form is staggering. It is the most dumb thing that I could possibly imagine for energy storage."
"Whether we do it with electrolysis or we do it with carbon capture, we need to generate hydrogen in a clean way," DellaVigna said. "And once we have it, I think we have a solution that could become, one day, at least 15% of the global energy markets which means it will be over a trillion-dollar market per annum."

-Rajiv Parikh

MUMBAI PRICE TREND – 12.08.2023	
Organic & Inorganic Chemicals	Price (Rs/Kg)
PMA	114+
SOLVENT C9 -BARRELS	107+
TOLUENE - BARRELS	92+
NBA - BARRELS	98+
EDC	45+
NPA	116+
CL	37+
MDI	18+
PHOESPHORIC ACID	98+
MEALIC ANHYDRIDE	85+
NIETRO BENZENE	100+
DMF	88+
ACITIC ACID	45+
MEK	117+
CYCLO	144*+
ETHYLE ACETATE	85+
FORMAL	19+
BUTYL ACETATE	107+
CAUSTIC POTASH	113+
ALPHOX	161+
TE4	98+
POTASSIUM CARBONATE	128
ACRYLIC ACID	96+
EAM	138+
DCDA	160+
P. G	131+
IPA	94+
ACETONE	87+
MIX XYLEN	95*+
O. XYLENE	103+
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MEG	54+
DEG	85+
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SORBITOL	47.50
SODA ASH	1715+
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CHENNAI PRICE TREND – 12.08.2023

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Alum- Ferric	50 Kgs	20.00
Ammonium Bicarbonate	25 Kgs	32.00
Ammonium Bi Fluoride [sugar-grade]	50 Kgs	178.00
Ammonium Carbonate	50 Kgs	90.00
Ammonium Chloride	50 Kgs	48.00
Ammonium Nitrate	50 Kgs	30.00
Ammonium Phosphate (Mono)	50 Kgs	135.00
Ammonium Sulphate	50 Kgs	25.00
Antimony Trioxide	50 Kgs	1050.00
Barium Chloride	50 Kgs	58.00
Bleaching Powder (33% Cl)	25 Kgs	14.00
Borax (Granular)	50 Kgs	86.00
Boric Acid (Tech.)	50 Kgs	118.00
Calcium Carbonate (Activate)	50Kgs	18.00
Calcium Carbonate (Precipitated)	50 Kgs	17.00
Calcium Chloride Lump 70%	50 Kgs	14.00
Calcium Chloride-Anhydrous	50 Kgs	24.00
Camphor Oil	200 Litres	135.00
Caustic Potash (Flakes)	50 Kgs	120.00
Caustic Soda (Flakes)	25 Kgs	40.00
Caustic Soda (Prills)	50 Kgs	98.00
Chromic Acid Flakes	50 Kgs	325.00
Chlorinated Xylene	25 Kgs	85.00
Copper Sulphate	180 Kgs	220.00
Di ammonium Phosphate	50 Kgs	34.00
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Litharge	50 Kgs	220.00
Lithopone B301(China)	25 Kgs	112.00
Magnesium Carbonate (Indian)	50 Kgs	130.00
Magnesium Sulphate	50 Kgs	18.00
Mercury	34.5 Kgs	7800.00
Napthaline Balls	50 Kgs	130.00
Nickel Chloride	25 Kgs	725.00
Phosphoric Acid (85% Tech)	50 Kgs	105.00
Potassium Carbonate (Powder)	25 Kgs	178.00
Potassium Carbonate (Granules)	25 Kgs	130.00
Potassium Nitrate	50 Kgs	150.00
Potassium Permanganate [Tech]	50 Kgs	280.00
Potassium Permanganate [Pure]	50 Kgs	310.00
Potassium Phosphate (Di)	50 Kgs	158.00
S.L.E.S	50 Kgs	60.00
Soda Ash Light	50 Kgs	36.00
Sodium Bicarbonate	50 Kgs	40.00
Sodium Bichromate	50 Kgs	190.00
Sodium Bisulphite	50 Kgs	42.00
Sodium Chlorite 50% (India)	50 Kgs	240.00
Sodium Chlorite 80% (India)	50 Kgs	280.00
Sodium Cyanide	50 Kgs	650.00
Sodium Fluoride	50 Kgs	150.00
Sodium Formate	50 Kgs	63.00
Sodium Hexameta Phosphate 68%	50 Kgs	132.00
Sodium Hydrosulphite [China]	50 Kgs	180.00
Sodium Metabisulphite	50 Kgs	38.00
Sodium Nitrate	50 Kgs	80.00
Sodium Nitrite (China)	50 Kgs	80.00
Sodium Silicate	Noted	28.50
Sodium Sulphate (Anhydrous)	50 Kgs	16.00
Sodium Sulphide 50-52% (Flakes)	50 Kgs	58.00
Sodium Sulphide 58-60% (Flakes)	50 Kgs	52.00
Sodium Sulphite 92%	50 Kgs	56.00
Sodium Tri polyphosphate	50 Kgs	112.00
Titanium Dioxide Anatase	25 Kgs	195.00
Titanium Dioxide (Rutile - R-902)	25 Kgs	256.00
Trisodium Phosphate	50 Kgs	42.00
Zinc Chloride Powder (Tech.)	50 Kgs	80.00
Zinc Oxide White Seal	50 Kgs	235.00
Zinc Stearate [Pure]	25 Kgs	195.00
Zinc Sulphate (Tech.)	50 Kgs	58.00
Organic Chemicals	**No of Units Per Pack**	**Price (Rs/Kg)**
Acetic Acid Glacial	35 Kgs	61.00
Acetone	160 Kgs	85.00
Benzene	196 Ltrs.	92.00
Benzyl Alcohol	200 Kgs	200.00
Bisphenol-A (Russian)	25 Kgs	180.00
Bisphenol-A (Russian)	170 Kgs	197.00
n-Butyl Acetate	165 Kgs	120.00
Butyl Cellosolve	195 Kgs	120.00
Camphor	25 Kgs	500.00
Cellosolve –Ethyl	195 Kgs	160.00
Chloroform	300 Kgs	44.00
Citric Acid (Anhy)	25 Kgs	90.00
Citric Acid (Mono)	25 Kgs	70.00
Cresote Oil	50 Kgs	64.00
Cyclohexanone	190 Kgs	142.00
D D Turpentine	200 Ltrs.	145.00
Diacetone Alcohol	195 Kgs	135.00
Diethylene Glycol	230 Kgs	85.00
Dimethyl Formamide	195 Kgs	105.00
Dioctyl Phthalate	200 Kgs	140.00
Di-Pentene	200 Kgs	92.00

EDTA Acid	25 Kgs	288.00
EDTA Disodium	25 Kgs	248.00
EDTA Tetrasodium	25 Kgs	248.00
Ethyl Acetate	185 kgs	96.00
Ethylene Dichloride	200 Kgs	54.00
Ethylene Glycol-mono	230 Kgs	63.00
Formaldehyde	65 Kgs	26.00
Formic Acid	35 Kgs	65.00
Formic Acid	250 Kgs	63.00
Hexamine – Tech	50 Kgs	100.00
n-Hexane	160 Litrs	68.00
Hydroquinone (Imported)	25 Kgs	850.00
Isopropyl Alcohol	160 Kgs	124.00
Isopropyl Alcohol (Refill)	160 Kgs	104.00
Maleic Anhydride	25 Kgs	120.00
Methyl Ethyl Ketone	166 Kgs	120.00
Methyl Isobutyl Ketone	160 Kgs	180.00
Methyl Isobutyl Ketone (Refill)	160 Kgs	170.00
Methylene Dichloride	250 Kgs	52.00
Methylene Dichloride (Refill)	250 Kgs	42.00
Mineral Turpentine Oil	50 Kgs	120.00
Monochloro Phenol	50 Kgs	120.00
Nitrobenzene	200 Kgs	116.00
Octanol (2-ethylhexanol)	160 Kgs	130.00
Oleic Acid	50 Kgs	140.00
Oxalic Acid (Punjab)	50 Kgs	65.00

Paraffin Wax (White)	50 Kgs	125.00
Para formaldehyde 91%	25 Kgs	100.00
Perchloroethylene	320 Kgs	120.00
Phenyl Liquid	230 Kgs	105.00
Phthalic anhydride	25 Kgs	115.00
Pine Oil 22%	200 Litrs	110.00
Pine Oil 40%	200 Litrs	190.00
Polyethelene Glycol 400	230 Kgs	118.00
Polyethelene Glycol 600	230 Kgs	140.00
Propylene Glycol	215 Kgs	128.00
Poly Aluminium Chloride	25 Kgs	34.00
Red Lead	50 Kgs	220.00
Renine	180 Kgs	72.00
Rosin	17 Kgs	115.00
Sodium Acetate	50 Kgs	34.00
Sodium Benzoate	50 Kgs	105.00
Sorbitol	250 Kgs	52.00
Stearic Acid (cosmetic)	50 Kgs	125.00
Styrene Monomer	185 Kgs	115.00
Terpeneol Perfumery	25 Litrs	260.00
Thiourea	25 Kgs	400.00
Toluene	200 Ltrs	96.00
Trichloroethylene	280 Kgs	120.00
Triethanolamine	210 Kgs	125.00
Vinyl Acetate Monomer	185 Kgs	105.00
Xylene Mixed	185 Kgs	98.00
O-Xylene	185 Kgs	120.00

Above prices are given in good faith by : **MR. SUBHASH GHORAWAT**

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Web : www.chemicalsindiacompanychennai.com

Market Prices given in this Magazine is to know market trend only.
We assume no responsibility for availability of products at quoted prices.

Government working on a policy to establish Chemical Parks: Dr Mansukh Mandaviya

New Delhi: Union Minister of Health and Family Welfare and Chemicals and Fertilisers, Dr Mansukh Mandaviya has said that the ministry is undertaking detailed work on establishing chemical parks. He was speaking at the valedictory session of the Summit on Global Chemicals and Petrochemicals Manufacturing Hubs in India.

Dr Mandaviya mooted the idea that the industry can form an association or SPV and partner with the central and state governments. The private player can have a 51 per cent stake in the entity and develop the park on a turnkey basis, he added.

The Minister emphasised the vision of transforming India into the world's manufacturing hub. To fulfil this ambition, he stressed the necessity of an industry-friendly environment to bolster manufacturing, according to FICCI.

Dr Mandaviya pointed out that the government's holistic approach towards industry promotion has positioned India as the preferred investment destination globally. The Minister highlighted the government's commitment to continuous stakeholder consultation, inviting the industry to collaborate and help enhance quality, thereby gaining a competitive edge in the global market.

"Brainstorming is a continuous exercise, both with the government and within the industry," stated Dr Mandaviya, underlining the importance of mutual collaboration.

Speaking at the Summit, Arun Baroka, Secretary (Chemicals and Fertilisers), Department of Chemicals and Fertilisers, detailed the new features of the Summit's third edition, which include innovative financing measures designed to assist India in its aspiration to become a global manufacturing hub.

Also present was Deepak C Mehta, Chairman, FICCI National Chemical Committee and Chairman and Managing Director of Deepak Nitrite. Mr Mehta reiterated the significant contributions of the chemical industry to the Indian economy, adding that the industry's challenges and opportunities have become more evident than ever. "Our recent engagements with policymakers and finance ministers show their increasing investment in understanding this vital sector," he shared.

In addition, Prabh Das, Chairman of the FICCI Petrochemicals Committee and MD & CEO of HPCL – Mittal Energy, praised the supportive role of the state government in the summit. He emphasised that the industry is receiving significant support on standards.

Source : Chemical Market

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Product Name	Qty	Grade
Soda Ash	5000 Kgs	Any
Details : Please quote the best price with lead time & COA		

Product Name	Qty	Grade
Cyclopentyl Chloride Cas no: 930-28-9	5000 Kgs	Industrial
Details : Cyclopentyl Chloride Cas no: 930-28-9		

Product Name	Qty	Grade
Sodium Nitrate (By-Product)-60% Cas no: 7631-99-4	30 Tonnes	Industrial
Details : Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Sertraline IP grade Pigments Chemicals	5 Tonnes	Industrial
Details : IP Grade, Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Methacrylic Acid // 79-41-4	1 Drums	None
Details : Leads Fro : BHUMICHEM		

Product Name	Qty	Grade
Concentrated Nitric Acid 98% Cas no: 7697-37-2	10 Tonnes	Industrial
Details : Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Nitroethane Cas no: 79-24-3	100 Kgs	Industrial
Details : Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
2-Bromo Benzoic Acid Cas no: 88-65-3	3 Tonnes	Industrial
Details : Regular every Month. Please quote the best price with lead time & COA.		

Product Name	Qty	Grade
Gemcitabine HCL IP Cas no: 122111-03-9	13 Kgs	Industrial
Details : quote the best price with lead time & COA.		

Product Name	Qty	Grade
DEFOAMER // 126-86-3 // 38111900 // LL 9900	1 Tonnes	Chemical
Details : Leads for : LUBRICANTS ADDITIVES		

Product Name	Qty	Grade
Ethyl 3-(2-(((4-cyanophenyl)amino)methyl)-1-methyl-N-(pyridin-2-yl)-1H-benzo[d]imidazole-6-carboxamido) propanoate CAS#:- 211915-84-3	5 Kgs	None
Details : Need this Dabigatran intermediate for trial purpose.		

Product Name	Qty	Grade
Bromoacetaldehyde Dimethyl Acetal CAS NO:- 7252-83-7	500 Kgs	Industrial
Details : We have the following requirement kindly send your best offer for the same with the lead time and specifications.		

Product Name	Qty	Grade
Allyl Chloride 99% // 107-05-1 // A43930	1 Can	Virgin-Pure
Details : We need the material		

Product Name	Qty	Grade
Aminomethane CAS#:- 77-86-1	4 Tones	None
Details : Pharma application		

Product Name	Qty	Grade
TALL OIL	1 Tones	Industrial
Details : Please inform best price, also please share it's GC & lab analysis report & it's COA.		

Product Name	Qty	Grade
Methacryloyl Chloride CAS# :- 920-46-7	500 Kgs	Industrial
Details : Please share your best offer on basis FOR Ahmedabad along with the COA, delivery time, packing detail and payment terms.		

Product Name	Qty	Grade
Methacryloyl Chloride CAS# :- 920-46-7	500 Kgs	Industrial
Details : Please share your best offer on basis FOR Ahmedabad along with the COA, delivery time, packing detail and payment terms.		

Product Name	Qty	Grade
Succinic Acid 99%-food grade chemical	80 Kgs	Industrial
Details : Food Grade Chemical		

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Product Name	Qty	Grade
Sodium Thiosulphate Powder	5 Kgs	Industrial
Details : Photo cleaning		

Product Name	Qty	Grade
Nateglinide API [ENA16381]	20 Kgs	Industrial
Paroxetine HCl Hemihydrate API	700 Kgs	Industrial
Flurbiprofen API	5 Tonnes	Industrial
Purified Water (Cas no:- 7732-18-5)	200 Ltrs	Industrial
Methanol (Cas no:- 67-56-1)	200 Ltrs	Industrial
HCL (Cas no:- 7647-01-0)	50 Ltrs	Industrial
Di-methyl Formmide (Cas no:- 68-12-2)	2 Kgs	Industrial
Copper(II) Acetate Mono Hydrate (Cas no:- 142-71-2)	5 Kgs	Industrial
Sodium Carbonate (Cas no:- 497-19-8)	25 Kgs	Industrial
Toluene (Cas no:- 108-8-3)	200 Ltrs	Industrial
2,3 Xylidine (Cas no:- 87-62-7)	25 Ltrs	Industrial
Ortho Chloro Benzonic Acid (Cas no:- 118-91-2)	50 Kgs	Industrial
Isopropyl Alcohol (Cas no:- 67-63-0)	200 Ltrs	Industrial
Dimethyl Sulphoxide (Cas no:- 67-68-5)	200 Lts	Indusr-trial
N-Methyl Piperazine (Cas no:- 109-01-3)	50 Ltrs	Industrial
Ofloxacin Q Acid (Cas no:- 82419-35-0)	50 Kgs	Industrial
Formic Acid (Cas no:- 64-18-6)	25 Kgs	Industrial
Formaldehyde (Cas no:- 50-00-0)	50 Ltrs	Industrial
Dichloromethane (Cas no:- 75-09-2)	200 Ltrs	Industrial
Sodium Borohydride (Cas no:- 16940-66-2)	25 Kgs	Industrial
Methane Sulfonyl Chloride (Cas no:- 124-63-0)	25 Ltrs	Industrial
Acetic Acid (Cas no:- 64-19-7)	50 Lts	Industrial
Hydroxylamine hydrochloride (Cas no:- 5470-11-1)	25 Kgs	Industrial
Erythromycin Base (Cas no:- 114-07-8)	25 Kgs	Industrial
Propionic Anhydride (Cas no:- 123-62-6)	25 Kgs	Industrial
Sodium Lauryl Sulphate (Cas no:- 151-21-3)	25 Kgs	Industrial
MDC (Cas no:- 75-09-2)	200 Kgs	Industrial
Stearic Acid (Cas no:- 822-16-2)	25 Kgs	Industrial
Acetone (Cas no:- 67-64-1)	200 Ltrs	Industrial
Ammonia (Cas no:- 7664-41-7)	50 Kgs	Industrial
Hyflow (Cas no:- 61790-53-2)	50 Kgs	Industrial
Activated Carbon (Cas no:- 7440-44-0)	25 Kgs	Industrial
Ethyl Succinyl Chloride (Cas no:- 14794-31-1)	25 Kgs	Industrial
Sodium Bicarbonate (Cas no:- 144-55-8)	25 Kgs	Industrial
Sodium Hydroxide (Cas no:- 1310-73-2)	25 Kgs	Industrial
Ethyl Acetate (Cas no:- 141-78-6)	200 Ltrs	Industrial
Erythromycin thiocynate (Cas no:- 231-723-1)	50 Kgs	Industrial
(4R)-3-[(25,5R)-5-(4-Fluorophenyl)-2-[(R)-[(4-fluorophenyl) amino] [4-[(trimethylsilyl)oxy]phenyl] methyl]-1-oxo-5-[(trimethylsilyl) oxy]pentyl]-4-phenyl-2- oxazolidinone (CAS NO:- 27277812-8)	500 Kgs	Industrial
(-)-1-[(4-Chlorophenyl)phenylmethyl]piperazine; (R)-1(p-Chlorobenzhydryl)piperazine (CAS NO:- 300543-56-0)	100 Gms	Industrial
2-[2-[4-[(R)-(4-Chlorophenyl) phenylmethyl]-1-piperazinyl] ethoxy]-acetamide (CAS NO:- 909779-33-5)	100 Gms	Industrial
Levocetirizine Dihydrochloride (CAS NO:- 130018-87-0)	100 Gms	Industrial
3-(Trifluoromethyl)-5,6,7,8-tetrahydro-triazolopyrazine Hydrochloride (CAS NO:- 762240-92-6)	2000 Kgs	Industrial
(3R)-N-(tert-Butoxycarbonyl)-3-amino-4-(2,4,5-trifluorophenyl) butanoic (CAS NO:- 486460-00-8)	2000 Kgs	Industrial
Carbonyl diimidazole (CAS NO:- 530-62-1)	2000 Kgs	Industrial
Details : Chemicals Required for Process development Lab Trials, More quantity required after test		

Product Name	Qty	Grade
Drums	2000 Drums	NA
Details : HDPE drums Capacity 200 ltr, 250 ltr, 300 ltr. Please reply at the earliest. Needed on recurring basis		

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Product Name	Qty	Grade
Bromoacetaldehyde Dimethyl Acetal CAS NO:- 7252-83-7	500 Kgs	Industrial
Details : We have the following requirement kindly send your best offer for the same with the lead time and specifications.		

Product Name	Qty	Grade
3-bromo-6-chloro-2-fluorobenzonitrile (CAS:- 943830-79-3)	1000 Kgs	Technical
Bicyclo[3.1.0]hexane-3-one (CAS:- 1755-04-0)	1000 Kgs	Technical
D-expoxone (CAS:- 18422-53-2)	1000 Kgs	Technical
3,5-Difluoroaniline (CAS:- 372-39-4)	1000 Kgs	Technical
Methyl piperidine-4-carboxylate (CAS:- 2971-79-1)	1000 Kgs	Technical
Details : Please Contact for more info		

Product Name	Qty	Grade
PyBOP (Cas no- 128625-52-5)	1 Tonnes	Industrial
Ethyl Pyruvate (Cas no:- 617-35-6)	1 Kgs	Industrial
Details : 1) We have a requirement of the below Chemical kindly quote your best. Pricing along With Recent batch COA and lead time. We need 100kg, 500kg & 1400kg. 2) We have a requirement of the below Chemical kindly quote your best pricing along With COA and lead time.		

Product Name	Qty	Grade
TRANS,TRANS-2,4-HEXADIENYL ACETATE (Cas no:- 1516-17-2) (Hs Code:- 29153900)	10 Tonnes	Chemical
Butyllithium 23% in Hexane (Cas no:- 109-72-8)	2 Tonnes	Industrial
Details : 1) Provide MSDS/Packing certificate. 2) Unit: butyllithium content base 2ton/month , (450L cylinder, 800L Cylinder). Could you give me an estimate of FCL, COA?		

Product Name	Qty	Grade
Anti-Foam/Defoamer	13 Tonnes	Industrial
EDTA 48% / CAS#: 6381-92-6	3 Tonnes	Industrial
Details : Required for Affluent Treatment Plant, about 30T-40T of 40% EDTA would be required per oiler for cleaning. Payment Terms: On Delivery		

Product Name	Qty	Grade
Methane Sulphonic Anhydride CAS NO:- 7143-01-3	30 Kgs	Industrial
Details : Please quote the best price.		

Product Name	Qty	Grade
5-Fluorocytosine CAS# :- 2022-85-7	500 Kgs	Industrial
Delivery: CIP MUMBAI AIR Descripiton:- Pls send best quote along with delivery period.		

Product Name	Qty	Grade
Manganese Dioxide (90%) CAS# :- 1313-13-9	12 Tonnes	Technical
Payment terms : 1 Month Description:- Please send best quote along with COA/MSDS, & 4 Kg Sample required for testing purpose.		

Product Name	Qty	Grade
1-Iodo-2,2-dimethylpropane CAS# :- 15501-33-4	500 Tonnes	Industrial
Details : 1. Quote us your best CIF Air (Shanghai, China) price. 2. Advise us the shortest leading time. 3. Attach your recent batch COA for quality approval.		

Product Name	Qty	Grade
Detergent Solvent "Solvesso 100 (C4 163-180 GOST 10214-78)	2000 Ltrs	None
Solvent 646 GOST 18188-72	90 Ltrs	None
Leads : 1. Technical documentation such as drawings, datasheets and etc./ if applicable 2. All applicable material certificates (COC , MTC, Calibration ,etc.,) 3. Exact or approximate packing information and HS codes. 4. Delivery term we prefer FCA or DAP Baku & for EXW term Pick-up Address. 5. Price offer should be valid 1 month. Other Techinical Details:- Color - transparent or yellowish Density at 200C - 0.860 gr./m3 Volatility (based on xylene) - 8 – 15 Sulfur content - 0.020% Ignition temperature (open crucible) - 270C		

Product Name	Qty	Grade
PeCeVis 100 PS // 39069090 // MBCC Group	1 Tonnes	Any
Leads : Broadways Chemtech		

Product Name	Qty	Grade
Potassium Chloride CAS#:- 7447-40-7	100 Tonnes	Industrial
Details : By product low grade.		

"Terra Science", Opening a New Chapter in the Korean Lithium Market

SEOUL, South Korea, July 18, 2023 /PRNewswire/ -- It's a time when resources are both weapons and measures of national power. Lithium is in the spotlight because it is a key mineral for the secondary battery industry.

South Korea's battery industry imports almost all of its lithium hydroxide, which is used to make battery cathodes, from China. Last year, South Korea's battery industry spent $3.23 billion (about 4.3 trillion won) to import lithium hydroxide from China.

Meanwhile, the Korean company "Terra Science" announced that it has discovered the first lithium salt lake in Korea and requested seawater analysis from a specialized laboratory and an authorized organization in the field of geology, and the analysis results showed that the lithium content was 100 times higher than that of ordinary seawater.

The land on Aphaedo Island of Sinan-gun secured by Terra Science is the first lithium-rich salt lake in South Korea. In late May, the company hired a lithium salt lake expert, Bong-chan Ban, and is in the process of recruiting employees.

In addition, Terra Science has established a subsidiary, "Sinan Lithium", and is preparing for mass production of lithium in Aphaedo Island.

Experts in the field emphasized that the Korean government's supportive policies are necessary for companies that are actually doing business and contributing to lithium self-sufficiency and the battery industry.

Read the full report : https://www.prnewswire.com/news-releases/terra-science-opening-a-new-chapter-in-the-korean-lithium-market-301879337.html

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

Rising Automotive and Textile Industries Fuel Demand for Disperse Dyes, Propelling Market Growth to 2028

DUBLIN, July 19, 2023 /PRNewswire/ -- The "Disperse Dyes Market- Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F Segmented By Type (Low Energy Dyes, Medium Energy Dyes, and High Energy Dyes), By Chemical Structure, By Application, By Region and Competition" report has been added to ResearchAndMarkets.com's offering.

The global disperse dyes market is poised to witness substantial growth in the coming years, driven by the rising demand for colouring thermoplastic fibres such as polyester, triacetate, nylon, and other synthetic materials.

Disperse dyes, characterized by their low solubility in liquids, colloidal dispersion properties, and non-ionic characteristics, are primarily used to dye synthetic or polyester fibres that do not absorb water.

The market is expected to experience significant growth due to the increasing demand for synthetic and polyester fabrics in a wide range of colours across various end-user industries. The textile sector, as well as the leather, paint and coatings, and plastic industries, are projected to contribute to the growing demand for disperse dyes.

Rising Demand from Automotive Industries is Propelling Market Growth

Automotive manufacturers are incorporating different types of glasses and transparent fibres to reduce the weight of vehicles. These transparent sheets allow sunlight and UV rays to enter the car and react with the fabrics used in the interiors, such as upholstery and floor coverings.

Disperse dyes, known for their excellent resistance to UV rays, are sought after by manufacturers to dye fabrics, ensuring they do not fade after exposure to UV rays. Apart from upholstery and floor fabrics, disperse dyes are used to paint the exterior plastic surfaces of vehicles and various interior components, including seat belts and airbags.

Recent studies indicate a 6.5% increase in global commercial vehicle sales in 2021 compared to the previous year. This data suggests a rise in demand for automobiles and related accessories. To meet the growing demand for attractive,

long-lasting fabric textures while reducing vehicle weight, the demand for disperse dyes is projected to rise during the forecast period.

Rising Demand for Dyes for Synthetic Fibres Drives Market Growth

The increasing utilization of synthetic fibres across various sectors, including textiles, industrial applications, indoor and outdoor products, and commercial segments, is expected to fuel the demand for dyes. Synthetic fibres offer superior characteristics compared to natural fibres like silk, cotton, and wool, including economical pricing, stain resistance, and low water absorption.
Moreover, synthetic fibres are known for their durability, elasticity, softness, and strength, making them an ideal raw material for a wide range of products such as seat belts, airbags, caps, raincoats, sportswear, ropes, and more. According to studies, approximately 62% of the total fibres produced annually are synthetic, with a significant portion originating from China. Given these factors, the demand for disperse dyes is expected to increase throughout the forecast period.

Efforts to Develop New Products Drive Market Growth

Companies and institutions are actively working on developing innovative techniques to enhance the environmental friendliness of disperse dyes. Manufacturers have made significant adjustments to ensure that dispersed dyes do not contain artificial surfactants, while ongoing research explores improved versions of disperse dyes, such as the use of liposomes as additional dispersion agents. These advancements aim to prevent dye molecule accumulation and enhance dispersion at high temperatures.

In a recent development, Dystar Colours Distribution GmbH (application number: CA2676212A) secured a patent for a type of disperse dye related to disperse azo dyes. This patented product exhibits outstanding wash fastness and sublimation fastness.

Read the full report : https://www.researchandmarkets.com/r/b7y472

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Global Membrane Water and Wastewater Treatment Systems Market Analysis 2023-2028: Versatile Solutions for Water Stress - Polymeric and Ceramic Membrane Treatment Systems Explored

DUBLIN, Aug. 4, 2023 /PRNewswire/ -- The "Global Membrane Water and Wastewater Treatment Systems Market" report has been added to ResearchAndMarkets.com's offering.

Global membrane treatment systems market will grow to $27.04 billion by 2028 with a CAGR of 6.5%. This study provides a comprehensive outlook on the water and wastewater treatment membrane market, focusing on membrane modules and treatment systems.

Encompassing both polymeric and ceramic membrane treatment systems, the study evaluates the revenue generated from sales in the municipal and industrial sectors. It further explores various end-user applications, including water treatment, wastewater treatment, and desalination, while analyzing membrane types, such as high-pressure and low-pressure membranes.

As membrane treatment systems offer solutions for micropollutant removal, treated water reuse, and desalination of seawater or brackish water, their versatility has made them a crucial response to combat water scarcity challenges.

Water demand grows annually due to urbanization, industrial growth, and agricultural needs. Several factors, such as droughts, lack of adequate rainfall, and pollution, create water stress and significant challenges, driving water end users to explore sustainable water management solutions.

Membrane treatment systems address different water-stress-related challenges and support sustainable water management. The value proposition of membrane treatment systems is their ability to sustainably produce high-quality water, easy scalability, and high versatility in treating varied types of water for different applications.

Membrane treatment systems have a relatively low footprint and are suitable for urban centers with space constraints. These systems allow end users in water transition to holistically improve resilience to disruptions caused by climate change or weather and implement a circular economy.

Read the full report : https://www.researchandmarkets.com/r/g5mrkd

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Air Liquide and KBR to Offer ATR-Based Low-Carbon Ammonia and Hydrogen Technologies

Air Liquide, through its Engineering & Construction Division, will work with KBR to offer fully integrated low-carbon ammonia solutions based on Autothermal Reforming (ATR) technology. Air Liquide is a world leader in ATR technology, one of the most suitable solutions for large-scale production of low-carbon hydrogen (H2), which is then combined with nitrogen (N2) to produce low-carbon ammonia (NH3). The solutions provided with KBR, the world leader in ammonia technology, will also contribute to the development of a global low-carbon hydrogen market as, when transformed into ammonia, hydrogen can be easily transported over long distances.

Air Liquide will provide its unique and proprietary expertise in Autothermal Reformer (ATR), and KBR its mastery and world leadership in ammonia production technology. Air Liquide has established its leadership in oxygen-based ATR technology through nearly seven decades of experience. Since 1943, KBR has licensed, engineered, or constructed over 250 grassroot ammonia plants worldwide. The Air Liquide and KBR solutions can achieve outstanding energy efficiency and world-leading reliability with a production process which also allows for a carbon capture rate of up to 99% in highly integrated industrial facilities when combined with carbon capture technology.

The global ammonia market size reached Ca. 78 billion US dollars in 2022 and is projected to surpass 129 billion US dollars by 2030; it is expected to grow by 6.5% per year on average between 2022 and 2030, according to Precedence Research[1]. Today, ammonia is mainly used as a fertilizer for agriculture.

In the longer term, Air Liquide and KBR will work together to contribute to the development of low-carbon hydrogen as a key enabler of the energy transition. Ammonia can be easily transported over long distances and a global supply chain infrastructure is already in place for the production, transportation and utilization of ammonia at large scale. Once transported, ammonia can be converted back into hydrogen to contribute to the decarbonization of industry and mobility. In March 2023, Air Liquide announced the construction of an industrial scale ammonia cracking pilot plant in the port of Antwerp, Belgium. Using innovative technology, this plant will make it possible to convert, with an optimized carbon footprint, ammonia into hydrogen.

Michael J. Graff, Executive Vice President, Air Liquide Group, said : Through this new offering, Air Liquide and KBR will combine their renowned respective expertise to provide efficient, reliable and competitive solutions for the production of ammonia and help the sector engage its low-carbon transition. These will enable customers to grow their business with an optimized carbon footprint, while also contributing to the development of the global hydrogen market. This further illustrates Air Liquide's commitment to sustainable development, supporting customers in industry and mobility to decarbonize their products and operations. This is a core element of our ADVANCE strategic plan, which inseparably links financial and extra financial performance.

Doug Kelly, KBR President, Technology, said: We are excited to align with Air Liquide to further expand KBR's low-carbon ammonia offerings for energy transition. Our differentiated ammonia synthesis technology has been the preferred choice for decades, with complete solutions for low-carbon and renewable ammonia with large-scale capacity of up to 10,000 MTPD. The addition of Air Liquide's ATR technology further complements our low-carbon ammonia offerings as we work to promote technology solutions to decarbonize the world.

Source : Air Liquide

DUPONT LAUNCHES FIRST NANOFILTRATION MEMBRANE ELEMENTS FOR HIGH PRODUCTIVITY LITHIUM-BRINE PURIFICATION

New FilmTec™ LiNE-XD nanofiltration membrane elements feature advanced membrane chemistry to support Direct Lithium Extraction (DLE) operations, which enable Lithium production from more sustainable and accessible sources

WILMINGTON, Del., July 12, 2023 – DuPont (NYSE:DD) announced the commercial launch of the new DuPont™ FilmTec™ LiNE-XD nanofiltration membrane elements for lithium brine purification. The FilmTec™ LiNE-XD and LiNE-XD HP represent DuPont's first product offerings dedicated to lithium brine purification – offering high lithium passage from typical chloride-rich Li-brine streams and an excellent selectivity over divalent metals such as magnesium.

"We are excited to support the growing demand for Direct Lithium Extraction (DLE) with our new FilmTec™ LiNE-XD nanofiltration membrane elements," said Alan Chan, Global Vice President and General Manager, DuPont Water Solutions. "As the world seeks to power devices from smartphones to electric vehicles with lithium-ion batteries, FilmTec™ LiNE-XD elements can help enable lithium production from resources such as salt lake brine, geothermal brine, and surface and sub-surface clay."

FilmTec™ LiNE-XD nanofiltration membrane elements are high-productivity membranes that allow for increased water and lithium recovery with reduced energy consumption. Employing expertly-designed and optimized membrane chemistry for lithium brine purification, FilmTec™ LiNE-XD nanofiltration elements offer the reliable operation and robust element lifetime that is synonymous with the FilmTec™ brand.

"Our customers came to us with the challenge of making lithium brine processing more efficient and environmentally friendly," said Verónica Garcia Molina, Global Marketing Leader, Industrial Water & Energy, DuPont Water Solutions. "In addition to being able to extract lithium from more sustainable sources, our FilmTec™ LiNE-XD can also enable more cost-effective extraction from lower grades of brine or even claystone."

DuPont's water technologies help purify more than 50 million gallons of water every minute around the world, enable water reuse and recycling, desalination, and the safe access of both ground and surface water. DuPont offers solutions to a variety of water and sustainability challenges faced by industrial water users and water treatment municipalities through a broad portfolio of membranes, resins and systems (including reverse osmosis (RO) membranes, ion exchange resins (IEX), ultrafiltration (UF), electrodeionization (EDI), nanofiltration (NF), membrane bioreactor systems (MBR), membrane aerated biofilm reactors (MABR), and closed-circuit reverse osmosis (CCRO) systems.

Source : Dupont

START-UP NUVOLA TECHNOLOGY ELIMINATES PRIMARY CAUSE OF LITHIUM-ION BATTERY FIRES

Nuvola Technology a venture-funded battery materials start-up, announces its patented SafeCoat Direct Deposition Separator material that eliminates the primary cause of lithium-ion battery fires. SafeCoat replaces the troublesome plastic sheet separator material used in today's battery manufacturing process. Its ingenious spray-on coating fully encapsulates and protects the battery's electrodes from a thermal runaway and a potential fire. Nuvola was selected as one of ten winners in LG Energy Solution's annual 2022 Battery Challenge, competing with over 100 companies. The LG Battery Challenge competition is designed to accelerate the adoption of new battery technologies and business models.

The primary cause of battery fires is a manufacturing error internal to the battery cells of today's electric vehi-

cles (EVs), e-scooters, e-bikes, and cell phones. These batteries can contain thousands of tissue-paper thin folded sheets of a porous plastic membrane that keeps the internal battery electrodes from coming in contact. This 50-year-old sheet separator technology is prone to manufacturing assembly errors and failure. During the battery assembly process, a single sheet separator can become damaged, creating an undetectable wrinkle, misalignment, misfolding, or even a tiny tear allowing the electrodes to come in contact. This may cause a fire -- days, months, or years later. SafeCoat solves this safety issue by replacing the sheet separator with a sprayed polymer electrode coating that ensures the electrodes never come into contact.

"Improving battery safety is one of the highest priorities for the EV market, with large, energy dense batteries representing a significant threat to public safety in the event of a fire," said James Hodgson, Research Director, Automotive at ABI Research. "Nuvola Technology's approach of separator coating offers the opportunity to improve both safety and production yield by modifying one step of the manufacturing process."

The recent EV and e-bike fires are examples of this insidious and tragic battery failure that SafeCoat can eliminate. The Nuvola SafeCoat product is now under evaluation by several major battery and car manufacturers, with products utilizing the technology expected in the market in 2025.

Source : Automotive Technology

ANALOG DEVICES AND FOXCONN WORK TOGETHER TO ADVANCE THE NEXT-GENERATION DIGITAL COCKPIT PLATFORM AND HIGH-PERFORMANCE BATTERY MANAGEMENT SYSTEM

Analog Devices, Inc., a global semiconductor leader, and Hon Hai Technology Group ("Foxconn"), the world's largest electronics manufacturing services provider, are pleased to announce the completion of a Memorandum of Understanding (MoU) towards the development of the next-generation digital car cockpit and a high-performance battery management system (BMS). The signing event was officiated by Vincent Roche, CEO and Chair of ADI, and Young Liu, CEO and Chair of Foxconn.

Together, the two companies are positioned to forge a transformative path by advancing software-defined and more sustainable, feature-rich vehicles, ultimately pursuing a new era of automotive excellence.

"The global automotive industry continues to digitalize and differentiate at the semiconductor level to deliver a more personalized, immersive, and sustainable driving experience," said Vincent Roche, CEO and Chair at ADI.

"ADI is delighted to work together with Foxconn to create a smarter mobility ecosystem and accelerate the breakthrough innovations the industry needs. With our joint expertise, we aim to transform the automotive industry towards a future of mobility that is better for humanity and the planet."

"Foxconn actively collaborates with international partners to link ecosystems and unlock greater value in electric car technology and smart transportation. We are looking forward to working with ADI to leverage its high-performance automotive electronics technology, enabling our clients to overcome obstacles and seize emerging possibilities," said Young Liu, CEO and Chair of Foxconn.

ADI's flexible hardware and robust software solutions, combined with Foxconn's expertise in electronic design, system-level integration capabilities, and manufacturing prowess, have the potential to deliver scalable vehicle platforms to disrupt the future of automotive manufacturing and create a more enjoyable and user-friendly cockpit experience. ADI's portfolio for automotive electrification, ADI RechargeTM, includes system-level solutions for BMS, electric powertrain, and power management to enable smarter, more efficient and longer-range EVs. Automotive cabin applications such as advanced infotainment, smart cockpits, and autonomous driving would leverage ADI A2BTM , Gigabit Multimedia Serial Link (GMSLTM) video links, and SHARC® DSP. Furthermore, ADI's innovations in edge processing is valuable in enabling sophisticated information ecosystems in the automobile to realize the potential of software-defined vehicles.

Foxconn remains steadfast in its commitment to reimagining the electric vehicle sector and propelling advancements in interconnected fields. ADI's technology helps enable Foxconn to deliver quality and high-performance products and solutions to its end customers. Foxconn has devised a comprehensive strategy for advancing the EV industry, encompassing vehicle design, key components, global manufacturing, and efficient supply chain services. This holistic approach caters to the demands of customization and rapid product development. With ADI's system level solutions, technology platforms, and engineering support, Foxconn can provide automotive customers access to highly competitive and cost-effective products, benefiting from vertically-integrated R&D resources and facilitating faster time-to-market (TTM).

ADI's Solutions for Electrification and Automotive Cabin Experience

As the world moves towards Net Zero, ADI's electrification solutions aim to accelerate the decarbonization of transportation and the energy grid. ADI's leadership in battery, power, and energy management is helping enable high performance, reliable, and resilient operations of the electrification ecosystem—including electric vehicles, energy storage systems, transmission/distribution, renewable energy generation, and more. Working alongside its customers, ADI is also enabling the digital cockpit and safe mobility revolution through its leadership in digital processing and data connectivity platforms. These are helping promote feature-rich applications and autonomous driving/advanced driver assistance systems (ADAS) in the vehicle. ADI's innovations leverage precision sensing, edge processing, software and wireless technologies to deliver secure insights at the sensor edge for localized, real-time decision making

Source : Automotive World

PAVING THE WAY FOR THE FUTURE OF SOLID-STATE BATTERIES

Ushering in huge performance gains for batteries

You might have heard about the new, cutting-edge technology of solid-state batteries (SSBs), thanks to which batteries will deliver much higher performance. In reality, the idea of using solid electrolytes in a battery instead of liquid ones has been around for decades. But thanks to recent developments and innovations, this technology is finally on the verge of becoming applicable on a large scale, heralding major changes in fields such as electric vehicles and energy storage, crucial areas for the decarbonization of human activities.

Solid-state batteries: stronger, safer, and more flexible

Offering double the energy density as currently available batteries, SSBs will quite simply allow an electric car to go twice as far on a single charge, and fast charging will be even quicker. "It's clear that solid-state batteries are going to be a game-changer in terms of performance," says Valérie Buissette, the Head of Solvay's Solid-State Battery Program. "Plus, they are made with intrinsically safer materials, offer more compact design possibilities and allow a simplification of heat management systems that will result in significant cost savings for users."

The term "solid-state" actually encompasses different technological options: from semi-solid batteries that offer incremental performance increases to all-solid-state batteries (ASSBs), capable of delivering the considerable boost mentioned above. Solvay, a long-standing materials provider in the field of batteries, decided to focus on the latter, the real breakthrough technology, "particularly sulfide-based, the most promising ASSB technology," says Valérie.

A solid-state electrolyte is a powder made of inorganic particles that ensure the mobility of lithium ions in the battery. Scientists were already familiar with the concept of ions moving through a solid – but not lithium ions, and not at low temperatures, until recently. These discoveries enabled the development of a new family of materials with the required properties in the early 2000s, but they still need to be fully developed at lab scale to fit with a viable battery application, before they can be scaled up to an industrial level.

"The work that lies ahead of us now consists in bringing this scientific discovery to commercial application," confirms Valérie. But that might come sooner rather than later: a recent convergence among industry players is likely to lead to the adoption of sulfide-based SSBs before the end of the decade.

"Very few industrial players can design, develop and industrialize the breakthrough materials required for solid-state batteries with the scale and reliability required by the industry, and Solvay is one of them." Valérie Buissette, Head of Solvay's Solid-State Battery Program

Because of all this, and thanks to the fact they require no compromise on performance in terms of fast charging properties or total cost of ownership, SSBs are set to eventually overshadow their liquid electrolyte counterparts. But as always, there are hurdles to overcome and technological choices to make.

Solvay, in the driver's seat for solid-state technology

Solvay is the front-runner in Europe for the design and scale-up of advanced inorganic solid electrolytes. These materials, developed in our R&D labs in Paris, are key components for ASSBs to be able to meet rising demand to power electric vehicles.

To demonstrate the industrial feasibility and scale-up to a semi-industrial level, we opened a pilot research unit at our plant in La Rochelle, France. These investments were supported by the European Commission's Important Projects of Common European Interest (IPCEI) programme, the French Nouvelle Aquitaine and Ile-de-France Regions, and the French government. "This one-of-a-kind pilot asset will expand Solvay's research and innovation capabilities in Europe and be one of the first tools allowing large-scale prototype production," adds Valérie. On top of that, Solvay has also developed specific binder technologies adapted to the new processing and performance challenges posed by solid-state designs.

With the most advanced Asian players already lined up to manufacture the first pilot SSB cells, announcements have been made for commercial releases as early as 2028, if not sooner. On the European and North American markets, Solvay is well positioned to be "in the leading seat," says Valérie. "Very few industrial players can design, develop and industrialize the breakthrough materials required for solid-state batteries with the scale and reliability required by the industry, and Solvay is one of them. We have synchronized our timeline with key stakeholders across the value chain." Stay tuned for the rapid emergence of solid-state batteries. The countdown may well have begun to the day you drive your first SSB-powered vehicle…

Source : Solvay

NEW EV BATTERY SAFE HANDLING & STORAGE GUIDANCE DEVELOPED BY GLOBAL AUTOMAKERS AND SUPPLIERS

In a collaborative effort to enhance safety measures and promote responsible handling of electric vehicle (EV) batteries, today at its 2023 Innovation Summit in Columbus, Ohio, the Suppliers Partnership for the Environment (SP) announced the publication of a new guidance document on Electric Vehicle (EV) Battery Safe Handling and Storage.

To address the proper management of EV batteries, the document succinctly summarizes some of the available resources, options and considerations related to handling of EV batteries after their removal from a vehicle, including topics related to 1) battery identification, 2) safety prevention, 3) thermal runaway, and 4), the roles of authorities. It also includes links to several relevant regulations and standards for those seeking additional information on the topic.

The document was produced through a collaborative process by a subcommittee of SP's Responsible Battery Work Group who pooled their expertise and knowledge to prioritize EV battery safety. Co-chaired by Call2Recycle and Blue Whale Materials, committee members include automotive original equipment manufacturers (OEMs) including, General Motors, Honda Development & Manufacturing of America, Stellantis, and Toyota Motor North America, as well as companies engaged in the EV battery value chain such as, Cellblock FCS, Cirba Solutions, Circulor, Energy Security Agency, Labelmaster, Li-Cycle, and, ORBIS.

"We recognize that companies handling EV batteries after they are removed from vehicles might lack essential information and training to ensure safe handling. Similarly, individuals may unknowingly take risks in their sincere efforts to act responsibly. This guidance document serves to bridge this information gap in a rapidly evolving industry, where real-life case studies and best practices are limited," stated Jeff Haltrecht, Executive at Call2Recycle.

The document is written with battery holders in mind, including vehicle dealerships, auto dismantlers and recyclers, independent garages, auto shredders, warehouse operators, transportation operators, tow truck operators and yard holders, first responders, aftermarket diagnostic sites, battery repurposers, and battery remanufactures.

"High-voltage batteries can present significant risks if mishandled and taking proactive steps such as developing a comprehensive emergency preparedness and fire prevention plan is key in mitigating those risks. Items like appropriate PPE and tools and materials for thermal runaway identification, containment, and extinguishing play an important role in minimizing potential hazards as well. This document was designed to help educate others on some of the key safety prevention factors they may want to consider when handling EV batteries" said, David Fauvre, Co-Founder and Chief Strategy Officer at Blue Whale Materials.

Batteries referenced in the document include lithium-ion (li-ion) electric vehicle traction batteries for battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and hybrid electric vehicles (HEVs) of light duty cars and trucks. Some of the guidance may be applicable to other types of lithium and nickel metal hydride (NiMH) batteries.

"Advancing best practice in the responsible management of electric vehicle batteries is a priority for SP and our member companies, particularly as the number of EV batteries reaching end of life begins to increase over the coming years. We sincerely thank the project co-chairs from Call2Recycle and Blue Whale Materials, along with each of our member volunteers, for leading this initiative and sharing their experience to help further educate others in the value chain on safe handling and storage of EV batteries," said Kellen Mahoney, Director at the Suppliers Partnership for the Environment.

Source : Automotive Technology

FDA CLEARS REDDYPORT® NON-INVASIVE VENTILATION DEVICE

SALT LAKE CITY, July 18, 2023 / PRNewswire/ -- ReddyPort announced today that the US Food and Drug Administration (FDA) granted 510(k) premarket clearance for the ReddyPort elbow device used in non-invasive ventilation (NIV).

"ReddyPort's patented elbow is central to the eco-system we are building to help mitigate clinical obstacles tied to NIV therapy from dry-mouth, oral biofilm accumulation to speech recognition," says Tony Lair, ReddyPort CEO.

ReddyPort's elbow features a self-sealing valve that provides seamless oral access to the patient's mouth without the need for mask removal, alleviating the risk of therapeutic pressure loss and maintaining lung compliance. With ReddyPort's elbow, bedside clinicians are empowered to use ReddyPort's oral care appliances (toothbrush, Yankauer, suction swab and applicator swabs) for routine Q2/Q4 oral care and dry mouth relief while minimizing un-planned mask removal that often leads to improperly fitted masks, pressure injuries and time-consuming re-fitting processes.1

The ReddyPort elbow also enables patients and clinicians to use the ReddyPort microphone. The ReddyPort microphone amplifies audible speech tones while minimizing background noise, helping patients to regain their ability to effectively communicate with caregivers and family members. The Joint Commission, supported by the Patient's Bill of Rights, incentivizes clinicians to protect every patient's ability to communicate with family members and caregivers as an essential part of quality patient care.2

Non-invasive ventilation (NIV) is the first line of therapy in respiratory insufficiency or failure, commonly seen with COPD, CHF3,4, Asthma5, pneumonia6 or ARDS.7 In addition, NIV is utilized to wean patients off mechanical ventilation. NIV therapy failure frequently occurs because the mask causes persistent dry mouth, biofilm formation, skin breakdown and difficulty communicating.8-10 When NIV failure occurs, patients face a transition to invasive ventilation, higher costs, longer length of stays and diminished outcomes.11 Furthermore, Q2 or Q4 oral care protocols performed on ICU patients are compromised by mask removal that results in alveolar collapse12 undermining the respiratory status of the NIV patient.

The ReddyPort System, with the ReddyPort elbow at its core, promotes NIV success by empowering clinicians with efficient access to provide oral care without removing the mask or loss of therapeutic pressures.

The ReddyPort elbow safely delivered 45,000 compliant oral care sessions to patients under FDA Emergency Use Authorization (EUA).

Source : PRNewswire

HAPPY HEAD LAUNCHES NEW ALL-IN-ONE HAIR GROWTH SUPERCAPSULE FOR WOMEN

LOS ANGELES, July 18, 2023 (Newswire.com) - Happy Head today announces the launch of its new hair-growing 3-in-1 SuperCapsuleTM for women under 50. Designed by top-of-the-line board-certified dermatologists and hair restoration experts, these once-daily hair growth capsules were formulated with the strongest prescription-grade ingredients designed specifically for women's hair growth. These SuperCapsulesTM are the first of their kind, infusing FDA-approved ingredients including Spironolactone, Minoxidil, and Vitamin D3 all into a single daily capsule.

Hair loss is a condition that affects millions of people, causing intense psychological and emotional distress. And women make up more than 40 percent of those struggling with hair loss and female pattern baldness. However, women are often left with limited treatment options: many treatments are designed only with male biology in mind. But with hair loss being so closely tied to hormone levels in the body, many treatment options come with undesirable side effects for women or are just flat-out ineffective.

Happy Head launched its first SuperCapsuleTM geared towards men and women over age 50 in Janu-

ary 2023. After seeing huge success with the product, the company has decided to expand the portfolio and launch a version especially designed for the needs of women under 50. This new formulation was designed specifically with women under 50 in mind. The main ingredients of the capsule include Spironolactone, Minoxidil, and Vitamin D3, which are some of the strongest, clinically proven hair growth medicines on the market. Dermatologists say three to six months of daily SuperCapsuleTM use will not only help regrow lost hair, but also prevent future hair loss.

"There are several key differences between hair loss patterns in men and women," said Dr. Ben Behnam, M.D., FAAD, and co-founder of Happy Head. "These differences are essential to consider when it comes to making an effective treatment plan. There is a lot of emotional suffering when people are dealing with hair loss. At Happy Head, we hope to ease some of the psychological effects of hair loss and aim to give both men and women renewed confidence regarding their hair."

Source : Newswire

MERCURY BIO AND HIMED ENTER R&D AGREEMENT TO DEVELOP NOVEL OSTEOGENIC MATERIAL FOR ORTHOPEDIC APPLICATIONS

SANTA FE, N.M. — Mercury Bio, (www.mercurybio.com) a Santa Fe, NM-based biotech company working in the area of drug delivery, has entered into a joint research, development, and licensing agreement with Old Bethpage, NY-based Himed (www.himed.com), a leading producer of bioceramics and biocompatible surface treatments for medical and dental implants. The two companies aim to develop a unique osteogenic material to be used in applications like bone cements, coatings for implantable devices, and many more.

Mercury Bio's new yEV technology harnesses natural extracellular vesicles (EVs) and engineers them to carry specific RNAs and small-molecule drugs, such as the protein BMP-9, to targeted cells. These allogeneic particles, when loaded into an organic calcium phosphate (CaP)-based scaffold created by Himed, will elute at desired rates into the surrounding tissue to promote bone healing and growth.

Himed, which also announced a partnership last week with medical 3D printer manufacturer Lithoz, is looking to strategic collaborations to design new approaches to healing using calcium phosphates. CEO Dana Barnard says, "These are exciting times—this agreement marks Himed's debut into organic materials, building on our long history of supplying top-level bioceramic materials and services to device manufacturers. Mercury Bio's technology is completely innovative—we think this collaboration has great potential and could chart new directions in bone repair."

Calcium phosphates, particularly hydroxyapatite (HA) and tricalcium phosphate (TCP), are natural minerals that compose about 70% of bone. While they've been utilized in bone repair since the 1920s, their use in implantable devices and bone putties has grown rapidly over the last few decades as a way to accelerate hard tissue healing at implantation sites. Owing largely to the world's aging population, orthopedic surgery is now one of the fastest-growing surgical categories—thus, improving surgical outcomes and shortening recovery times is critically important for patients and their providers.

Mercury Bio's CEO, Bruce McCormick, believes that layering these technologies will yield dramatic benefits for device implants and other bone surgeries: "Loading yEVs with BMP-9 and infusing them into bioactive coatings will provide a highly targeted, controlled release of bone morphogenic protein, which may dramatically speed up healing and reduce the risks of complications from long recoveries after surgery. We're excited to work with a world leader in calcium phosphates to bring the potential of advanced yEV drug delivery to the orthopedic field."

Source : MercuryWBio

GROUNDBREAKING CEMENT-FREE CONCRETE MADE BY C-CRETE TECHNOLOGIES GETS INAUGURAL POUR IN SEATTLE BUILDING

SAN LEANDRO, Calif., July 18, 2023 /PRNewswire/ -- C-Crete Technologies proudly unveiled its groundbreaking cement-free concrete, a first-of-its-kind innovation in the construction industry, with its debut pour in a commercial building in Seattle. The sustainable alternative to Portland cement produces almost no carbon dioxide in its manufacturing and actually absorbs CO2 from the air over time.

Portland cement is responsible for around 7 percent of total CO2 emissions worldwide. If used instead, the new material can help substantially reduce the environmental impact of the construction industry. Each ton of C-Crete binder that replaces Portland cement prevents approximately 1 ton of CO2 emissions. Furthermore, the product utilizes a suite of natural minerals and industrial by-products, ensuring an abundant feedstock.

Approximately 60 tons of the cement-free concrete were poured in the foundations and shear walls of the Seattle project at 7200 Woodlawn, an adaptive re-use development of a 120-year-old historic brick building that used concrete as part of a seismic retrofit.

The concrete had great flowability, was pumped and achieved a loading strength of over 5,000 pounds per square inch, greater than the ASTM standard of about 4,000 psi for most residential, commercial and infrastructure concrete applications. It also meets other key industry standards, shows outstanding durability — such as resistance to freeze-thaw cycles, alkali-silica reactions, and chloride and acid penetrations — and is compatible with conventional concrete admixtures, allowing for easy integration into existing construction practices.

"We are thrilled to introduce our cement-free concrete, a game-changer in sustainable construction," said C-Crete's founder and president, Rouzbeh Savary, PhD. "Our binder is a drop-in replacement for Portland cement that drastically reduces carbon emissions. Given that our product meets industry standards and has cost-parity with conventional concrete, it opens up an entirely new era in construction."

C-Crete used Heidelberg Materials, a worldwide building materials and ready-mix concrete company, to deliver the cement-free concrete for this project.

Donald Davies is owner of the Seattle building and chair of Building Transparency, a nonprofit dedicated to enabling the building industry to address embodied carbon's role in climate change. "As a developer, a structural engineer of 33 years, and a leader in low-carbon construction, I'm seeing many lower-carbon concretes being discussed," Davies said. "I'm seeing exciting advancements, but few are ready to scale into production the way C-Crete can now. No-cement, and low-carbon concrete isn't just a pipe dream. It is real, it is now, and it works. This project proves it's possible, today."

With the successful application of its concrete in Seattle, C-Crete is now poised to transform the construction landscape nationwide and beyond. The company looks forward to collaborating with architects, designers, general contractors, ready-mix companies, building owners and decision-makers for infrastructure projects to accelerate the adoption of its sustainable concrete.

About C-Crete Technologies: C-Crete Technologies is a leading materials science company committed to inventing, building, and scaling up the next generation of infrastructure materials with an ultra-low or negative CO2 footprint. With a relentless focus on environmental stewardship and technological innovation, C-Crete aims to address the global challenges of climate change while delivering scalable materials for everyday use.

Source : PRNewswire

JOHNSON MATTHEY AND DOOSAN ENERBILITY JOINTLY DEVELOP INTEGRATED AMMONIA CRACKING FOR POWER PLANTS

Johnson Matthey (JM), a global leader in sustainable technologies, and Doosan Enerbility, a leading expert in the power industry, are jointly developing integrated solutions for hydrogen-fuelled power plants in South Korea.

The joint development agreement follows the MOU signed in December 2022 and supports the South Korean

Government's plans to increase the share of clean hydrogen-based power generation from 0% in 2022 to 2.1% by 2030 and 7.1% by 2036.

Using hydrogen for power generation helps to reduce CO2 emissions. JM and Doosan are working together on technology to allow use of low carbon ammonia as a hydrogen source. Low carbon ammonia has been chosen because it can be transported globally more easily than pure hydrogen. Ammonia is then converted to hydrogen through cracking and used to power turbines.

Analysis from the Korea Institute of Machinery & Materials shows that using ammonia cracking technology to enable hydrogen-fuelled turbines could reduce carbon emissions by over 21% when a gas turbine is fired up with 50% hydrogen. Doosan Enerbility are working on a 100% hydrogen gas turbine, which is expected to reduce CO2 emissions even further. Doosan Enerbility expects to complete the development of the 380 MW 100% hydrogen gas turbine by 2027.

Alberto Giovanzana, Chief Commercial Officer of Catalyst Technologies at Johnson Matthey, says: "This is an important step forward and I look forward to demonstrating how JM's technology can support the decarbonisation of the South Korean power sector, in line with government targets."

Hongook Park, CEO of Doosan Enerbility's Power Services Business Group, remarked, "By engaging in a partnership with JM, a partner who has a good understanding of the combined cycle hydrogen power generation model being pursued by Doosan Enerbility, we expect this will help to usher in the era of high-efficiency combined cycle hydrogen power generation."

JM will provide engineering services alongside its ammonia cracking technology and catalyst. The clean hydrogen produced by this technology can be used to power turbines within pure or partial hydrogen-fired combined cycle power plants. Doosan will provide their latest development in hydrogen gas turbine technology for clean power generation.

This joint development project aims to maximise efficiency through deep integration of the technologies.

Source : Johnson Matthey

GINKGO BIOWORKS AND SUMITOMO CHEMICAL PARTNER TO DEVELOP SUSTAINABLE FUNCTIONAL CHEMICALS WITH SYNTHETIC BIOLOGY

Ginkgo Bioworks, a synthetic biology company, and Sumitomo Chemical, a Japanese chemical manufacturer, have announced an expansion of their partnership to develop functional chemicals using synthetic biology. The companies first partnered in 2017 to create a joint venture, Gingko Sumitomo, which aimed to use synthetic biology to produce high-performance materials and specialty chemicals. The expanded partnership will focus on developing new functional chemicals, including fragrances, flavors, and cosmetic ingredients, using Ginkgo's platform for genetic engineering and Sumitomo's expertise in chemical synthesis and production. The companies aim to create new, sustainable, and cost-effective products that can replace traditional chemical processes and reduce the environmental impact of the chemical industry.

Ginkgo's technology platform uses genetic engineering to create microorganisms that can produce chemicals, materials, and medicines. The company's platform has been used to develop a range of products, including fragrances, flavors, and food ingredients. Sumitomo Chemical, on the other hand, has expertise in chemical synthesis and production and has been developing functional chemicals for over a century.

The partnership between Ginkgo and Sumitomo is expected to leverage the strengths of both companies and accelerate the development of new functional chemicals. The companies are targeting a range of industries, including fragrances, flavors, cosmetics, and personal care products. The expansion of the partnership comes at a time when there is growing demand for sustainable and environmentally friendly products in the chemical industry. Synthetic biology has emerged as a promising technology for creating new, sustainable, and cost-effective products, and the partnership between Ginkgo and Sumitomo is expected to play a key role in driving innovation in this field.

The announcement of the expanded partnership between Ginkgo Bioworks and Sumitomo Chemical is a significant development for the chemical industry. By combining the power of synthetic biology and chemical synthesis, the companies aim to create new, sustainable, and cost-effective products that can replace traditional chemical processes and reduce the environmental impact of the industry. The partnership is expected to accelerate the development of new functional chemicals and drive innovation in the field of synthetic biology.

Source : Chemi

NEW FEATURE IN THE PERFORMANCE CALCULATOR PROVIDES USERS WITH EMBODIED CARBON VALUES OF GLAZING CONFIGURATIONS

Bertrange, Luxembourg – July 17, 2023 – Guardian Glass has introduced a new feature to its Performance Calculator tool. The feature allows users to calculate the embodied carbon for the glazing configurations they select. This means architects, specifiers and glass processors can better understand the environmental impact profile of the facades they design through the glass products they specify, allowing them to make more informed choices at a very early design stage.

The current Guardian Glass Performance Calculator is an online tool for modeling the thermal and optical properties of glass substrates, coatings and interlayers. The existing tool is part of Glass Analytics, a comprehensive suite of engineering and analytical tools from Guardian Glass that help demonstrate the benefits of high-performance glass in building facades.

The new Performance Calculator feature provides an estimate of the embodied CO2 equivalent for a wide number of glazing combinations, as it is available for any float glass, coated glass, laminated and coated laminated glass products produced by Guardian Glass in Europe.

How does it work?

Using the Performance Calculator, the user configures a suitable glazing make-up for their project and can view the corresponding performance data. The glazing can be virtually any construction, ranging from monolithic glass to multiple layers of glass, coatings and interlayers. In addition to the extensive performance properties generated by the Performance Calculator, the new feature provides an estimate of the embodied CO2 eq. for the configured glazing (only for the glass components manufactured by Guardian Glass, not for additional components in the build-up such as spacers or frame). Multiple glass configurations and options can be compared, allowing the user to better understand the impact of, for example, additional layers of glass or the incorporation of a high-performance coating or laminated layers (where the data is available).

The embodied carbon data is the CO2 equivalent in kg per square meter of glass (CO2 eq.), emitted during the glass production (Cradle-to-gate*). The calculation is an estimation based on the material's Embodied Carbon Factor (ECF) derived from the Regional Environmental Product Declaration (EPD), third-party, independently verified document that communicates transparent information about the lifecycle environmental impacts of a product.

Source : Press Release

ARKEMA, POLYMEM, AND TERGYS COLLABORATE ON INNOVATIVE AUTONOMOUS FILTRATION SYSTEMS FOR CLEAN DRINKING WATER SUPPLY

COLOMBES, 14-Jul-2023 — /EuropaWire/ — The innovation is the result of a three-way development between the companies to develop innovative autonomous filtration systems that bring drinking water to remote and disaster-stricken territories.

Access to drinking water remains one of the world's biggest social problems with an estimated 1.8 billion humans affected globally by 2025. Arkema is proud to collaborate with its partners in tackling this major issue.

For many years, Arkema and French membrane producer Polymem, recently acquired by US life sciences company Repligen Corporation, have been partners in the development of Neophil® advanced hollow fiber ultrafiltration membranes based upon Arkema's Kynar® FSF® PVDF. These fibers are well known for their tremendous durability

in terms of physical strength and chemical resistance. They are tailored to offer extremely long-lasting permeability and long-term repeated cleanability.

Both companies collaborated with Tergys, a manufacturer of autonomous water treatment systems powered by solar panels and rechargeable batteries to develop containerized solutions that enable drinking water production from off graded water. These filtration systems are ideally suited for deployment in remote and disaster-stricken regions, where filtration capacity can range from just a few cubic meters to several hundred cubic meters. The Kynar® FSF® PVDF based membranes are compliant with demanding French Sanitary standards ACS and ensure effective and durable filtration of contaminants in the scale of tens of nanometers allowing the efficient in-situ production of safe drinking water.

Arkema and Polymem have had a long and successful relationship on water ultrafiltration thanks to Neophyl® membranes manufactured with Kynar® PVDF. We are proud to collaborate with Tergys on this exciting innovation that enables safe access to drinking water in isolated territories." Guillaume De Crevoisier, Global General Manager – Fluoropolymers & Fluoromonomers At Arkema

Source : Europawire

EASTMAN LAUNCHES ADVANTIS™ ADHESION PROMOTERS TO MITIGATE MATERIALS OF CONCERN

Eastman is introducing the next generation of adhesion promoters to keep paint and coatings users compliant with regulatory changes. Advantis™ adhesion promoters limit or remove materials of concern, allowing formulators and end users to deliver dependable results while improving product sustainability and meeting regulatory requirements.

Given the regulatory changes coming to the European Union (EU) later this year, this proves especially important and has been confirmed by trends in the industry.

"With materials like cumene being recategorized as carcinogens, formulators have two choices — continue to use these materials with their new hazardous labeling, or switch to solutions that limit or remove these materials. Eastman's Advantis adhesion promoters offer a simple alternative to help our customers remain compliant without the need for reformulation," said Tom Klug, segment market manager for Eastman's automotive coatings business.

Advantis products consist of modified polypropylene and polyethylene polymers that adhere better to untreated plastics and other difficult-to-bond-to surfaces.

"Advantis solutions improve adhesion in three ways — as a primer between the substrate and subsequent coating, as a primer or tie coat between coating layers and as a stir-in formulation additive," said Doug Wagner, technology director in Eastman's coatings business. "Formulators tell us that reclassification of materials is a major trend across our industry, so we developed these new products as drop-in alternatives to formulations benefiting from our traditional promoters. One immediate challenge faced by formulators is the upcoming EU reclassification of cumene as carcinogenic category 1B. Our Advantis adhesion promoters are a solution that enables customers to avoid relabeling concerns of their current coatings products."

Leveraging decades of proven science, Advantis was developed as an effortless, drop-in alternative to formulations that use traditional Eastman adhesion promoters. For those using non-Eastman products, an experienced team of technical specialists can find the right Advantis solution for your formulation.

Advantis adhesion promoters are commercially available as solutions, water-based dispersions and solid resins.

Source : Eastman

HYCO1 AND KANSAS ETHANOL COLLABORATE ON WORLD'S LARGEST BIOGENIC CO2 UTILIZATION FACILITY

HOUSTON, July 18, 2023 /PRNewswire/ -- HYCO1, Inc. announces that it has entered into a 20-year carbon dioxide supply agreement with Kansas Ethanol, located in Lyons, Kansas for the planned construction of the world's largest biogenic carbon dioxide utilization facility, Green Carbon Synthetics Kansas, LLC. HYCO1 is a Houston, Texas (USA) based technology company that has created a disruptive CO2 conversion catalyst and related low-cost CO2 process technology. HYCO1 CUBE™ Technology (Carbon Utilization, Best Efficiency) cost-effectively utilizes carbon dioxide and various methane source feedstocks to create low-cost, low-carbon chemical grade syngas in a single pass. The syngas produced is used to produce low carbon intensity (CI) downstream products. HYCO1 technology not only lowers the resultant carbon score of the downstream products by 50% to 100% but does so at a competitive cost compared to fossil feedstock derived products and without the requirement of incentives like many other technologies. HYCO1 technology enables green syngas to be used for making products such as Hydrogen, Synthetic Base Oils, Low-Carbon Jet Fuels, Green Methanol, and many others. The new HYCO1 project to be co-located with Kansas Ethanol will utilize all of their 800 tons per day of CO2 to produce approximately 60 million gallons per year of low-carbon and zero-carbon products.

Kurt Dieker, Chief Development Officer, and Co-founder of HYCO1, stated "HYCO1 is excited to announce this innovative, next generation project and to collaborate with the Kansas Ethanol team, which runs one of the most advanced ethanol production facilities in the country. I have worked with the Kansas Ethanol team for the last fifteen years, including my tenure as Director of Technology Strategy at ICM, Inc., the world's largest ethanol technology provider." Dieker continued "While there are many paths that an ethanol facility can take to improve sustainability and margins, ranging from additional energy efficiencies to protein separation, in my opinion CO2 utilization represents the leading value-added step for an ethanol production facility." Lastly, "As a native Kansan, I am especially proud to be able to build the first of many HYCO1 Carbon Negative, Planet Positive™ facilities starting with this flagship project in Kansas."

The Lyons HYCO1 project is in the engineering stage with plans to complete the pre-construction engineering in 2024. The facility will produce approximately 4,000 barrels per day of first-of-a-kind synthetic Base Lubricating Oils and Low-Carbon Jet Fuel made from CO2. High-performance products include four centistoke base oil for use in the highest grade synthetic motor oils; and a two centistoke base oil currently being tested by EV manufacturers for its ideal battery and drive-train heat transfer and lubrication properties. The projects' products are produced with more than 80% reductions in carbon footprints versus traditional fossil-derived products. Approximately half of the weight of these new sustainable products will consist of biogenic CO2 that would have previously been emitted into the atmosphere.

Mike Chisam, CEO of Kansas Ethanol, said of the project, "Although most ethanol producers are considering or pursuing underground carbon sequestration in our industry to decarbonize, we believe that carbon utilization, which supports a circular carbon economy, represents the best use of our CO2, and positions us more competitively in the market. Value added products made from CO2 that displace fossil derived

products represents a win for us at Kansas Ethanol, a win for the U.S. Ethanol Sector, and a win for the global environment. We are looking forward to the construction of the HYCO1-based Green Carbon Synthetics Kansas, LLC facility next to ours. The co-location benefits: carbon dioxide utilization, natural gas offset through waste heat steam production, and additional electricity offsets will position our facility as a world leader of low-carbon ethanol resulting in significant shared savings." Chisam also noted "HYCO1's carbon utilization technology enables us to sustainably produce all products, even if, or when, government support incentives are no longer available. That is incredibly important to us."

HYCO1 is currently evaluating additional project sites and partners to mirror the Green Carbon Synthetics Kansas, LLC project, while also collaborating with downstream technology providers to produce other low-carbon products.

Source : PRNewswire

GINKGO BIOWORKS AND SUMITOMO CHEMICAL ANNOUNCE EXPANDED PARTNERSHIP TO DEVELOP FUNCTIONAL CHEMICALS WITH SYNTHETIC BIOLOGY

TOKYO and BOSTON, July 18, 2023 /PRNewswire/ -- Sumitomo Chemical Co., Ltd (TSE:4005), one of Japan's leading chemical companies, and Ginkgo Bioworks (NYSE: DNA), which is building the leading platform for cell programming and biosecurity, today announced a new program to develop functional chemicals with synthetic biology and expand upon the companies' existing biomanufacturing partnership.

Sumitomo Chemical and Ginkgo Bioworks have been collaborating since 2021 using Ginkgo's synthetic biology platform for the production of products in industries ranging from personal care and cosmetics, to agriculture and pharma. Today's announcement marks the start of a third project between the companies which aims to enable the mass production of functional chemicals via fermentation.

As part of this latest project, Ginkgo Bioworks plans to utilize its strain design technology to develop a microbial strain and related fermentation process to produce the target molecule, while Sumitomo Chemical will develop the manufacturing process and its scale-up for commercialization. By mass-producing the functional chemicals through microbial fermentation instead of traditional fossil fuel-based chemical synthesis, the companies aim to provide products with a lower carbon footprint that contribute toward a carbon-neutral society.

As the rapid development of biotechnology and digital technologies continues, synthetic biology, in which organisms are genetically engineered to express desired functions, is attracting more attention in various fields. In particular, leaders in the chemical industry expect synthetic biology to have the potential to replace raw materials and create energy-saving processes, replacing the current high-temperature, high-pressure processes that use petroleum as a raw material.

"In the field of chemicals, there is an urgent need to develop products and processes with low environmental impact, and we believe that the use of synthetic biology will meet this need," said Hiroshi Ueda, Executive Vice President of Sumitomo Chemical. "By strengthening our collaboration with Ginkgo Bioworks as a partner in synthetic biology, we aim to accelerate the development of innovative technologies that could be a game changer for the chemical industry and ultimately consumers."

"Sumitomo Chemical is a valued long-term partner to Ginkgo Bioworks, and we are as excited as ever about our work together to introduce bio-based products across multiple industries. Our ongoing relationship provides an invaluable opportunity to generate continuous learning and create scalable processes that allow our partners to make more and more sustainable products through synthetic biology," said Jason Kelly, CEO and co-founder of Ginkgo Bioworks. "We're so proud of the fruits already borne by our unique collaboration, and we look forward to continuing to work through the pipeline of products of interest that we share with our fantastic colleagues at Sumitomo Chemical."

Source : PRNewswire

SINOPEC PAVES THE WAY FOR HIGH-QUALITY GROWTH IN PETROCHEMICAL INDUSTRY USING INNOVATIVE DRIVE, ENERGY EFFICIENCY AND CONSUMPTION OPTIMIZATION APPROACHES

BEIJING, July 25, 2023 – Ma Yongsheng, Chairman of China Petroleum & Chemical Corporation (HKG: 0386, "Sinopec"), has remarked that China's petrochemical industry is looking at profound adjustment and transformation in times of change at the forum for petrochemical industry development trends under the context of "Dual Carbon" goals (the "Forum") hosted on July 22 in Beijing.

"As China pledges to peak carbon emissions by 2030 and achieve carbon neutrality by 2060, global and domestic oil demand will also peak, leading to excess production capacity of major chemical products in China," noted Ma. "The petrochemical industry needs to take the initiative to accelerate transformation and upgrading in response to the challenges and explore a high-quality development path centering on building unique advantages."

Sinopec has carried out an "Energy Efficiency Improvement" plan and "Green Enterprise Action", taking a holistic approach to implement eight major carbon peaking actions to promote the energy transformation. In 2022, Sinopec recovered more than 1.5 million tons of carbon dioxide. Since it introduced the "Energy Efficiency Improvement" plan in 2014, it has conducted 5,000 projects that have saved 8.36 million tons of standard coal.

Energy structure and consumption optimization lead to a greener future

Sinopec is actively adjusting the energy structure towards clean energy development targets, laying out multiple energy sectors to achieve complementary growth, promoting Project Deep Earth with continuous breakthroughs in shale gas and shale oil exploration and production, strengthening the oil and gas production, supply, storage, and sales mechanisms, and consolidating its leading position in geothermal heating and waste heat utilization while pushing forward the industrialization of biomass fuels.

Racing to develop green hydrogen, its green hydrogen pilot plant in Kuqa city of Xinjiang, now harnessing solar energy to generate green hydrogen, is China's first and the world's largest solar-to-hydrogen green hydrogen facility with an annual capacity of more than 10,000 metric tons. Sinopec has also launched the Inner Mongolia Erdos Wind-Solar Green Hydrogen Project, the world's largest green hydrogen-coal chemical project.

Recently, Sinopec's Yuanba Gas Field, the world's first 7,000-meter-deep ultra-high sulfur biohermal gas field, has achieved cumulative natural gas production exceeding 30 billion cubic meters, which reduces carbon emissions by 40 million tons.

To advance green, low-carbon operations and clean energy utilization at scale, Sinopec is optimizing the energy consumption structure, promoting partially replacing coal with biomass pellets, extending the upgrade and application of electric equipment for drilling, fracturing, well repair, and more, and developing clean energy projects including photovoltaic and wind power.

The company has strengthened efforts in greenhouse gas emission reduction and high-concentration carbon dioxide recovery to further improve resource utilization efficiency. In 2022, it flooded more than 650,000 tons of carbon dioxide into oil reservoirs, completed China's first megaton carbon capture, utilization, and storage (CCUS) project, the Qilu-Shengli Oilfield CCUS, and launched the operation of its first high-pressure carbon dioxide transmission pipeline to transport the captured carbon dioxide from the CCUS project for further displacement, storage, and well stimulation.

Aiming to push forward the high-end,

green, and intelligent development of the petrochemical industry, Sinopec is empowering energy transformation with innovative, green, and low-carbon technologies. It has established CO2-driven displacement and storage in low-permeability reservoirs, high-efficiency waterflooding in reservoirs with medium to high permeability, cold production of thick oil, and multi-sector energy integration of wind, solar, geothermal energies, and more.

Source : Sinopec

TOTALENERGIES, ARAMCO AND SABIC COMPLETE MENA REGION'S FIRST PROCESSING OF OIL FROM PLASTIC WASTE AT SCALE TO MAKE CERTIFIED CIRCULAR POLYMERS

Dhahran, Saudi Arabia, July 17th, 2023 – TotalEnergies, Aramco and SABIC have for the first time in the Middle East and North Africa successfully converted oil derived from plastic waste into ISCC+ certified circular polymers. The plastic pyrolysis oil, also called plastic waste derived oil (PDO), was processed at the SATORP refinery jointly owned by Aramco and TotalEnergies, in Jubail, Saudi Arabia. It was then used as a feedstock by Petrokemya, a SABIC affiliate, to produce certified circular polymers.

The project aims to pave the way for the creation of a domestic value chain for the advanced recycling of plastics to circular polymers in the Kingdom of Saudi Arabia. The process allows the use of non-sorted plastics, which can be difficult to recycle mechanically, and consequently contributes to solving the challenge of end-of-life plastics.

A first milestone for the project was obtaining ISCC+ certification to assure transparency and traceability of the recycled origin of feedstock and products. Three industrial plants were involved in the process: SATORP refinery, Aramco's Ju'aymah NGL Fractionation Plant and Petrokemya. All successfully obtained the ISCC+ certification, enabling the production of circular materials.

Mohammed Y. Al Qahtani, Aramco's President of Downstream, said: "This achievement illustrates the importance of the petrochemical sector in creating more sustainable products and solutions. Our aim is to create circular solutions for plastic waste, while also making progress on our ambition to achieve net-zero Scope 1 and Scope 2 greenhouse gas emissions across our wholly-owned operated assets by 2050. By leveraging spare capacity of existing infrastructure, we aim to produce circular products that could be scaled up at low cost. Aramco is considering multiple ways of tapping into new technologies and leveraging existing assets to support the deployment of circular, more sustainable and lower-carbon products."

Bernard Pinatel, President, Refining & Chemicals, TotalEnergies, said: "This advanced plastic recycling initiative reflects TotalEnergies' ambition to concretely contribute to addressing the challenge of end-of-life of plastics. Several other circular economy projects are being studied, leveraging the partners' technical expertise and experience to further contribute to plastics recycling. "It is a major pathway towards TotalEnergies' target to produce 30% of circular polymers by 2030, and its strategy to build a multi-energy company with the ambition to get to net zero by 2050, together with society."

Sami Al-Osaimi, SABIC EVP Petrochemicals (A), said: "SABIC is a national champion in chemicals that supports Saudi Vision 2030, ensuring sustainable future growth by focusing on environment, energy and climate. This project is aligned with SABIC's commitment to avoid landfill and incineration through its innovation competencies and advanced technology. This project shows collaboration across the petrochemical value chain to overcome upstream and downstream challenges in circular plastics. To this end, SABIC recently announced its target of one million metric tons of TRUCIRCLE ™ solutions by 2030, which intends to help provide our customers with more sustainable solutions."

SABIC and TotalEnergies are founding members of the non-profit organization Alliance to End Plastic Waste (AEPW), which aims to bring collective knowledge, resources and experience to address current waste management challenges.

Source : TotalEnergies

Enhancing Performance and Durability with Chaolite Adhesive-Activated Yarn by Hengli

At Hengli, we offer Chaolite Adhesive-Activated Yarn that is specifically designed to enhance performance and durability in various applications. Our yarn possesses key characteristics that make it a superior choice for demanding industries.

Characteristics of Chaolite Adhesive-Activated Yarn

With its high breaking tenacity, our Chaolite Adhesive-Activated Yarn provides exceptional strength and durability. This makes it suitable for applications that require resistance to heavy loads or other stresses. Whether it's reinforcing rubber hoses, tire cords, or enhancing the performance of conveyor belts, our yarn delivers unmatched reliability.

Another remarkable characteristic of our yarn is its stable hot air shrinkage. This ensures that the yarn maintains its original size and shape even when exposed to high temperatures. By resisting shrinkage or deformation, our yarn remains stable, allowing for consistent performance in challenging environments.

Applications of Chaolite Adhesive-Activated Yarn

Our Chaolite Adhesive-Activated Yarn finds extensive applications in the dipping system of mechanical rubber goods. It acts as a reinforcement material, effectively enhancing the structural integrity and performance of products such as dipped cloth for conveyor belts, tire cords, and other rubber-based materials.

In the rubber hose industry, our adhesive-activated yarn plays a critical role in improving the quality and functionality of hoses. The strong adhesion provided by our yarn ensures reliable bonding between the layers, resulting in enhanced durability and resistance to external factors.

Storage and Transportation of Chaolite Adhesive-Activated Yarn

To maintain the quality and functionality of our Chaolite Adhesive-Activated Yarn, proper storage conditions are essential. It is crucial to store the yarn in a clean, dry, and well-ventilated area, away from direct sunlight and moisture. By adhering to these storage guidelines, we ensure that our yarn retains its exceptional properties for extended periods.

During transportation, we prioritize appropriate packaging and handling to safeguard the integrity of the yarn. We use protective packaging materials that shield the yarn from potential damage during transit. Additionally, our experienced logistics team ensures careful handling and loading procedures, minimizing the risk of any physical or environmental harm during transportation.

Conclusion

At Hengli, we take pride in offering Chaolite Adhesive-Activated Yarn that enhances performance and durability across various industries. With its high breaking tenacity, stable hot air shrinkage, and strong adhesion to rubber, our yarn provides unmatched reliability and strength. From reinforcing mechanical rubber goods to improving the performance of conveyor belts, our yarn plays a vital role in enhancing the quality and longevity of products. With proper storage and transportation practices, we ensure that our Chaolite Adhesive-Activated Yarn maintains its exceptional characteristics throughout its shelf life. Trust Hengli for superior solutions that elevate performance and maximize durability in your applications.

Source : Hengli

Evonik's SPHINOX® Immulance wins Ringier Technology Innovation Awards for Personal Care 2023

For the fifth consecutive year the Care Solutions business at Evonik has been recognized by the local industry for its innovations that deliver superior outcomes in sustainability and functionality.

- A new ceramide that protects the skin by balancing the skin's immune barrier
- Reinforces Evonik's leading position as a preferred sustainable specialties partner for the personal care industry
- Ringier Technology Innovation Awards for Personal Care are among the most prestigious awards in China's beauty industry

Evonik has received the Ringier Technology Innovation Awards for Personal Care 2023 for its newly launched ceramide SPHINOX® Immulance, which protects the skin by balancing its immune barrier. This is the fifth consecutive year that the Care Solutions business at Evonik has been recognized by the local industry for its innovations that deliver superior outcomes in sustainability and functionality.

Evonik's Care Solutions business is guided by a vision that puts sustainability, innovation and collaboration at its core. Ceramides are an integral part of many System Solutions for customers in the cosmetics industry. System Solutions are multi-component offerings across products, technologies and services that are tailored to a unique customer need and often have proven sustainability benefits. The life sciences division at Evonik, Nutrition & Care is home to the Care Solutions business and has a goal of increasing its share of System Solutions from 20 percent today to 50 percent by 2030.

"This award recognizes Evonik's consistent efforts to decode the full potential of ceramides, which are becoming increasingly popular with end-consumers in China," says Madeline Tan, regional business director in Asia North of Evonik's Care Solutions business line, "we will continue to support local customers with innovative and scientifically proven solutions that enable and enhance their formulations to meet the more diversified market demands."

SPHINOX® Immulance is a unique ceramide based on uneven fatty acid side chains that are known for its various health benefits as a food supplement. With this new product, Evonik is the first to explore ceramides with odd-numbered fatty acids and their cosmetic benefits. In combination with phytosphingosine as a base, SPHINOX® Immulance boosts the skin's antimicrobial defense mechanisms by induction of antimicrobial peptides, strengthens the skin's immune barrier and sooths overreactive skin.

Source : Evonik

Archroma Announces Certification of Compostability for Range of Paper Dyes

Pratteln, Switzerland, 1 August 2023 - Archroma, a leading global provider of specialty chemicals and sustainable solutions, announces the certification of a color range of dyes for compostable paper. Colorants from our Carta®, Cartasol® F and Cartafix® range have been meticulously selected to meet the growing demand for environmentally friendlier coloration in the paper industry.

As the paper industry strives to adopt more sustainable practices and minimize its environmental impact, compostable materials have gained considerable attention. Compostability plays a crucial role in the circular economy, enabling waste reduction and the generation of valuable organic matter.

To ensure the safe and efficient composting of paper products, stringent evaluation criteria have been established, encompassing heavy metals and fluorine content, biodegradation, ecotoxicity and plant growth test assessments. Recognizing the importance of meeting these criteria, Archroma has introduced a range of compostable dyes and fixatives for paper applications that fully satisfy these standards set forth.

Archroma's compostable dyes and fixatives for colored paper not only provide exceptional color performance but also meet the most rigorous compostability standards. When applied to compostable materials in a specified concentration of dry weight, our dyes fulfill the evaluation criteria for heavy metals and fluorine, biodegradation, ecotoxicity and plant growth test, as outlined in EN 13432 (2000), NF-T51-800 (2015), ASTM D6400 (2012, 2021), and ISO 17088 (2012).

Source : Press Release

Evonik Expands its Rubber Silanes Production in China

- **Expanded facility greatly increases rubber silanes production capacity to meet growing demand for sustainable solutions**
- **Advanced technology implementation boosts efficiency, reduces waste, and lowers CO2 emissions**
- **Expansion reinforces Evonik's global rubber silanes production network and commitment to tire and rubber industries**

Evonik, one of the world leaders in specialty chemicals, has expanded and started production at its rubber silanes plant, Evonik Lanxing (Rizhao) Chemical Industrial Co., Ltd. This state-of-the-art facility, a joint venture between Evonik Industries AG, DEG (Deutsche Investitions-und Entwicklungsgesellschaft mbH), and Rizhao Lanxing Chemical Industry Co., Ltd., is strategically located in the Rizhao Lanshan Chemical Industrial Park in Shandong province. The expanded plant is specifically designed to meet the growing demand for sustainable solutions within the global tire and rubber industry.

The expansion of the regional product portfolio substantially increases capacity and provides a stable supply for customers with demand for liquid and solid rubber silane products. The regional production footprint was enlarged with grades previously produced only in Evonik's European production sites. This capacity expansion further strengthens Evonik's production network for tire silanes, solidifying its commitment to supporting the evolving needs of its customers in the tire and rubber industries worldwide.

With a focus on sustainability and efficiency, the expanded plant has implemented advanced technology during the manufacturing process. The facility and technology is upgraded to reduce waste and side reactions while increasing product purity. Additionally, the plant will feature reduced carbon emissions, increased automation, and improved auxiliary facilities, including a wastewater pre-treatment plant.

"The expansion represents our continuous efforts to promote sustainability in China," says Fuliang Xia, president of Evonik Greater China. "We are able to better serve local customers from the tire industry with high-value, sustainable solutions. Furthermore, we are also contributing to the country's green development agenda through reducing our footprint in production."

Head of business line Silanes, Peter Friesenhahn, further emphasizes the benefits of the expanded plant, stating, "The expanded production capacity, coupled with cutting-edge technology, ensures a stable and dependable product supply while facilitating our collaborative efforts with customers and partners to achieve sustainability goals in the silanes market."

Alongside the existing sulfur-functional silane Si 69 and the solid silane admixture X 50-S produced on site, the product range will now also produce grades such as Si 75, Si 266 as well as the corresponding admixtures X 75-S and X 266-S. This expanded portfolio underscores Evonik's commitment to sustainability while optimizing tire and rubber properties like low rolling resistance, high abrasion resistance, high mechanical properties such as tensile strength and low compression set.

Evonik continues to forge ahead in delivering sustainable solutions and remains dedicated to supporting the tire and rubber industries through innovation, expansion, and strategic partnerships.

Source : Evonik

Polyplastics Launches DURACIRCLE (TM) Sustainability Initiative for Recycling Engineering Plastics

TOKYO, Aug. 3, 2023 /PRNewswire/ -- Polyplastics Group, a leading global supplier of engineering thermoplastics, has launched the DURACIRCLE (TM) initiative for recycling engineering plastics. This effort applies to a wide variety of sustainable solutions that contribute toward achieving a 100% recycling rate for engineering plastics, without being confined to the existing business model of manufacturing and selling plastics. Polyplastics' goal is to achieve carbon neutrality by 2050.

Phase one of the sustainability initiative consists of the opening of Polyplastics' new DURACIRCLE (TM) Re-compounding Service business which will offer high-quality mechanically recycled materials starting by March 2024. Mechanical recycling is a method to melt plastic waste with heat and process it back into pellets for reuse.

DURACIRCLE (TM) Re-compounding Service is a clear departure from conventional recycling. Its aim is to perform horizontal recycling which is considered difficult with engineering plastics since these materials require high quality in subsequent uses. Horizontal recycling is a recycling method to recycle products into the same products, such as recovering plastic bottles and recycling them back into plastic bottles.

Pre-consumer materials with manufacturing histories that can be traced and pose no concerns of contamination from environmentally hazardous substances are anticipated for use as raw materials. Pre-consumer materials are raw materials such as hot runners and non-conforming products that arise in manufacturing processes before products reach consumers, also referred to as post-industrial recycling (PIR) materials.

In addition to expanding DURACIRCLE (TM) to markets outside Japan, Polyplastics plans to develop and offer recycling technologies for post-consumer recycled (PCR) materials which are even harder to reprocess. As environmental needs evolve, Polyplastics is developing future solutions for mechanical recycling, chemical recycling, and biogenic carbon cycles.

Source : PRNewswire

US' Walmart & Rubi Laboratories Launch Zero-waste carbon capture pilot

- **American retailer Walmart and Rubi Laboratories are collaborating on pilot projects to capture carbon emissions from manufacturers and facilities in Walmart's supply chain.**
- **The manufacturing pilot will explore Rubi's technology integration in Walmart's supply chain, while the brand pilot will test the performance of Rubi's fibres in prototype garments.**

Walmart and Rubi Laboratories have announced pilot projects aiming to capture carbon emissions from manufacturers and facilities in the Walmart supply chain and convert them into a garment prototype – with zero waste.
The manufacturing pilot will examine how Rubi's technology could be integrated at a larger scale in the Walmart supply chain and test the capture of carbon emissions at some of Walmart's own facilities. The brand pilot will test Rubi's fibre performance in a prototype garment, with a goal of producing garment samples. If successful, a larger apparel collection could follow and be available in our stores.

"At Rubi, our goal is to ensure a thriving future by restoring earth's ecological balance with re-imagined supply chains," said Neeka Mashouf, co-founder and CEO of Rubi Labs. "Walmart's ability to mobilise positive impact across its supply chain of diverse US partners could be massively impactful in scaling our production and delivering on our commitments. We're thrilled to partner with them."

Walmart's sustainability efforts are grounded in Rubi's belief that it can use the scale to have a positive impact everywhere it operates, meaning doing more good, not just less harm. Importantly, sustainable should also mean affordable, so it can also focus on prototyping an apparel line that can be produced at scale and widely available to customers – who seek the right value and price in what they purchase in stores. Rubi Laboratories is confident that, if successful in these pilots, there is a real possibility of creating garments that offer value and contribute to a better environment for everyone – and think that customers will be excited to be a part of that.

"At Walmart, we're helping make the sustainable choice the affordable choice as we continue our journey to becoming a regenerative company. And that means tackling complex problems and finding innovative solutions across our supply chain. We see great potential beyond apparel as these pilots could have implications across so many products and industries: packaging, building materials, food and even the creation of new raw material. The possibilities are staggering, and we're excited to see where this journey takes us as we work toward a more sustainable and equitable future," Walmart said on its website.

Source : Fibre2Fashion

Henkel's "Dragon Factory" in Shanghai Produces New PUR Hot Melt Adhesive Reactor

On July 31, the new PUR hot melt adhesive reactor at Henkel's "Dragon Factory" in Shanghai officially began production, marking a new milestone for the world's largest adhesive factory.

As society progresses and people's living standards improve, our requirements for living conditions have also increased. In the field of laminate furniture, the glue used for flat pasting and edging has gradually evolved towards more environmentally friendly, aesthetically pleasing, and weather-resistant products. Among them, PUR (moisture-reactive polyurethane hot melt adhesive) has been favored by the market, with annual market demand maintaining double-digit growth. To meet the growing needs of customers, Henkel has not only committed to continue investing in the Chinese market, but has also further expanded the production capacity of the Shanghai Dragon Factory.

It is worth noting that the new PUR hot melt adhesive reactor invested by Henkel at the Shanghai Dragon Factory will be put into production this year. It adopts leading German technology, making it a masterpiece in terms of intelligent control, process flow, and mixing capacity, surpassing domestic counterparts. With the launch of the new reactor, Henkel's total production capacity of PUR hot melt adhesive has been further increased, bringing innovative products with higher cost-effectiveness and stability to the Chinese and even the entire Asian market.

It is understood that Henkel's "Dragon Factory," the world's largest adhesive factory, was completed in Shanghai in 2013. The factory's products mainly cover automobile manufacturing and various consumer goods, with an expected annual production capacity of 428,000 tons and an investment of over 400 million yuan.

PUR hot melt adhesive is mainly used in the fields of furniture and building materials bonding. In May 2022, Henkel upgraded its PUR hot melt adhesive solutions for flat pasting and wrapping, launching the outstanding series of flat pasting adhesive TECHNOMELT PUR 4506 and the newly upgraded wrapping adhesive TECHNOMELT PUR 4916. This fully satisfies the needs of furniture and building material customers in terms of bonding performance, environmental sustainability, and quality improvement, demonstrating Henkel's strength in empowering green home production and creating a new era of green home "sticking."

Source : Echemi

China Tightens Control on New Coal-to-Chemical Projects to Prioritize Energy Security

The Chinese government has announced that it will "strictly control" the approval and size of new coal-to-chemical projects in a bid to strengthen the supply of coal to power plants. The decision comes as part of the country's efforts to prioritise energy security and reduce its reliance on imported energy sources.

Coal-chemical processing uses coal as a feedstock to create a variety of industrial chemicals, including synthetic ammonia and polyester. However, the industry has been criticised for its negative environmental impact, with concerns raised about the release of greenhouse gases and other pollutants.

The National Development and Reform Commission (NDRC) released a statement on Thursday stating that a previous policy of adding 20 million metric tons in new coal-chemical capacity in so-called demonstration zones from the previous 13th Five Year Plan would not be continued. The NDRC also stated that new projects in the industry would be subject to strict controls, with the approval process and project size being tightly regulated.

The move by the Chinese government reflects its growing concern over energy security, particularly in the wake of global energy supply disruptions caused by the COVID-19 pandemic. By prioritising coal supply to power plants, the government aims to ensure a stable supply of electricity to households and businesses across the country.

China is the world's largest producer and consumer of coal, with the fossil fuel accounting for over half of its total energy consumption. However, the country has also been making significant investments in renewable energy sources, including wind and solar power, in a bid to reduce its reliance on coal and cut greenhouse gas emissions.

The decision to limit the expansion of the coal-chemical industry is a positive step towards reducing China's carbon footprint and improving its environmental performance. However, the country still has a long way to go in its efforts to transition towards a more sustainable energy future.

Source : Echemi

Solvay Named Runner-Up in 'Future of Lightweighting' of the 2023 Altair Enlighten Award

Alpharetta, Georgia, USA, August 2, 2023 - Solvay, a global market leader in specialty materials, has been honored with the runner-up Altair Enlighten Award 2023 in the 'Future of Lightweighting' category for slot liners using Ajedium™ PEEK Film in the battery pack and e-motor design of electric vehicles (EV). Presented in association with the Center for Automotive Research (CAR), the Altair Enlighten Award is the industry's only award dedicated to vehicle lightweighting and honors sustainability and lightweighting advancements that have significant potential to reduce carbon footprint, mitigate water and energy consumption, and leverage material reuse and recycling efforts.

The award was received by Solvay's Dr. DeeDee Smith, E-Mobility Marketing Manager, and Brian Baleno, Head of Automotive Marketing, in an awards ceremony on August 1st.

"We are very proud of receiving this prestigious award, which recognizes our firm commitment to greater sustainability in e-mobility with high-performance specialty polymers," says Brian Baleno. "As EV manufacturers are moving from 400 volt systems to 800 volts or higher, conventional paper laminate slot liners can no longer live up to the challenges arising from this trend. In comprehensive simulation testing, our Ajedium™ PEEK Film has demonstrated its outstanding property profile for improving the thermal, electrical and mechanical performance of slot liners, while enabling thinner secondary insulation and providing a more sustainable mono-material solution."

The distinguished Ajedium™ PEEK Film slot liners were selected by the Altair jury for offering a potential mass reduction of 12 kg in the battery pack and 4 kg in the e-motor of EVs compared to the weight of systems using traditional laminates. This can make a big difference in terms of EV power consumption and reach. By achieving the same electrical resistance at only two thirds of the typical laminate thickness, the innovative PEEK slot liners also increase the available stator slot space for additional magnet wire and thus higher copper slot fill factors.

Moreover, the superior electric insulation and thermal heat dissipation of Ajedium™ PEEK enhances the thermal management efficiency, which allows designers to downsize the aluminum casting and create more sustainable e-motors with less energy and material consumption. The PEEK film shows excellent chemical resistance to automatic transmission fluids (ATF) and good adhesion to varnish. In addition, it eliminates the need for dedusting equipment and climate controlled storage, reducing energy costs and improving workspace conditions.

Source : Press Release

Asahi Kasei America, Inc. Expands Operations with a State-of-the-Art Novi Office to Strengthen Automotive Industry Presence

Asahi Kasei America, Inc., the regional headquarters of the Asahi Kasei Group for North America, announces the successful relocation of its Novi Office to a newer, larger facility. This strategic move is part of the company's commitment to strengthen marketing activities centered on the dynamic automotive industry.

The field of mobility has always been a key focus for Asahi Kasei, renowned for its cutting-edge car interior materials, plastic compounds, battery separators, and electronic components. Asahi Ka-

sei's high-quality products have found widespread adoption in numerous vehicle models by major OEMs. As the industry ventures into the era of electric vehicle propulsion, the automotive materials and components landscape is changing dramatically. Asahi Kasei's new, larger office will serve as a hub to showcase several materials during this significant surge in demand.

By relocating to Novi, near Detroit, the group aims to foster stronger relationships with major automakers and their extensive network of suppliers in the region. The expanded Novi Office will catalyze and reinforce marketing and sales promotion functions, enabling the adaptation to emerging changes in demand swiftly.

"We are excited to embark on this journey of growth and innovation. As the mobility world continues to accelerate in various areas, Asahi Kasei is committed to building a stronger foundation for the future. The office expansion allows us to strengthen collaborations with our esteemed OEM and Tier One partners while showcasing our latest technologies. It aligns with our growth plan, driving us to continuously offer innovative products to an ever-changing market," said Iichiro Kitsuda, Executive Vice President of Strategic Planning and Marketing for Asahi Kasei America.

The Novi Office is a functional space where people from Asahi Kasei Group operations throughout North America and beyond, along with partner companies and customers, can come together. The facility has been thoughtfully designed to host exhibits, events, and technical demonstrations, providing a platform to showcase Asahi Kasei's product characteristics and features while promptly understanding customers' evolving needs. The Novi Office features a dedicated product showroom showcasing Asahi Kasei's AKXY® POD vehicle interior concept and a demonstration car presenting cutting-edge future technologies.

Beyond mobility, Asahi Kasei's other business operations will utilize the Novi Office to explore new opportunities, particularly in decarbonization, in close collaboration with the company's various business units and R&D functions headquartered in Japan.

The expansion of the Novi Office reaffirms Asahi Kasei's unwavering commitment to being at the forefront of innovation, consistently delivering world-class products and solutions to meet the ever-evolving demands of the automotive industry.

Source : Asahi Kasei

Solvay partners with Compact Membrane Systems on a breakthrough solution to help decarbonize hard-to-abate industries

The Group's investment in Compact Membrane Systems (CMS) will help advance efforts to tackle climate change using carbon capture technologies.

Solvay Ventures, the venture capital fund of Solvay, has invested in Compact Membrane Systems (CMS), a US company that creates membrane solutions that can reduce greenhouse gas emissions and help decarbonize heavy industries through the use of carbon capture technologies. The investment is part of Solvay's ongoing efforts to invest in sustainable solutions and grow its offering and expertise in this area.

CMS is a pioneer in membrane solutions for highly-demanding industrial applications, which help improve sustainability in a wide range of industries. This involves developing low-cost, low-energy and solvent-free separation and carbon capture technologies, which play a vital role in enabling the clean energy transition and achieving carbon neutrality, especially in hard-to-abate sectors, such as steel, cement, materials and chemicals.

"Investing in sustainable solutions, as well as developing products that help protect climate is a priority for Solvay and we're excited to support

CMS' efforts to enable the clean energy transition and ensure all industries can achieve carbon neutrality in the near future" said David Thomas, Vice President Research & Innovation at Solvay Speciality Polymers. "We work in partnership with the companies we invest in, acting as an innovation accelerator to create shared opportunities for sustainable growth."

"We already have a strong relationship with Solvay, which supplies us with materials for the development of our advanced membrane solutions," said Erica Nemser, CEO of CMS. "The Group's investment is a welcome next step in our relationship, which will allow both companies to advance efforts to provide sustainable solutions for industrial applications."

As part of its development plan, CMS has successfully piloted its Optipermtm technology in an olefin paraffin separation application at a leading polyolefins company, and has signed multiple field deployments for CO2 capture demonstration in 2023 and onwards.

Source : Solvay

As E-Bikes proliferate, so do Deadly Fires Blamed on Exploding Lithium-Ion Batteries

NEW YORK - The explosion early on a June morning ignited a blaze that engulfed a New York City shop filled with motorized bicycles and their volatile lithium-ion batteries. Billowing smoke quickly killed four people asleep in apartments above the burning store.

As the ubiquity of e-bikes has grown, so has the frequency of fires and deaths blamed on the batteries that power them - sparking a push to better regulate how the batteries are manufactured, sold,reconditioned, charged and stored.

Consumer advocates and fire departments, particularly in New York City, are urging the U.S. Consumer Product Safety Commission to establish national safety standards and confiscate imports that don't comply with regulations at the border, so unsafe e-bikes and poorly manufactured batteries can be taken off the streets and out of homes.

The matter comes under discussion when the commission convenes a public hearing Thursday in Washington.

"We've been sounding the alarm for months," New York City Mayor Eric Adams said a day after an exploding battery ignited the Chinatown e-bike shop fire last month. "We need real action, not only on the state level, but on the federal level."

With some 65,000 e-bikes zipping through its streets - more than any other place in the U.S. - New York City is the epicenter of battery-related fires. There have been 100 such blazes so far this year, resulting in 13 deaths, already more than double the six fatalities last year.

Nationally, there were more than 200 battery-related fires reported to the commission - an obvious undercount - from 39 states over the past two years, including 19 deaths blamed on so-called micromobility devices that include battery-powered scooters, bicycles and hoverboards.

New York's two U.S. Senators, Democrats Chuck Schumer and Kirsten Gillibrand, introduced legislation last month that would set mandatory safety standards for e-bikes and the batteries that power them.

Because mandatory standards don't exist, Schumer said, poorly made batteries have flooded the U.S., increasing the risk of fires.

Earlier this year, New York City urgently enacted a sweeping package of local laws intended to crack down on defective batteries, including a ban on the sale or rental of e-bikes and batteries that aren't certified as meeting safety standards by an independent product testing lab.

The new rules also outlaw tampering with batteries or selling refurbished batteries made with lithium-ion cells scavenged from used units.

Meanwhile, New York City officials also announced they had received a $25 million federal grant for e-bike charging stations across the city - which fire marshals hope will reduce the risk of fires.

These aren't typical fires, said New York City Fire Commissioner Laura Kavanagh. The batteries don't smolder; they explode.

"When they fail, they fail quite spectacularly," said Kavanagh, who will speak at Thursday's forum and advocate for national safety standards and stronger measures against possibly dangerous devices. "Once one of these ignites, there is a huge volume of fire, often so much so that the person in their home

can't get out and the firefighters can't get in to get them."

Such was the case in April when two siblings, a 7-year-old boy and his 19-year-old sister, died when a scooter battery ignited a fire in Queens.

Because of the fire hazard, some residential buildings have banned e-bikes. Last summer, the New York City Housing Authority sought to prohibit tenants in all of its 335 developments from keeping or charging e-vehicles in their units, only to back down a few months later after protests from delivery workers.

Use of motorized bicycles grew dramatically in the city during the COVID-19 pandemic as homebound people turned more to food delivery workers for meals and groceries.

With the rash of fires, delivery workers like Lizandro Lopez say they are now more mindful about precautions.

"As soon as the battery is charged, I disconnect it. You shouldn't leave it charging for too long," Lopez told The Associated Press in Spanish, "because if you leave it on there too long, that's when you can cause a fire."

Los Deliveristas Unidos, which represents app-based delivery workers in the New York area, estimates that fewer than 10% of e-bikes sold in the city have been deemed safe by a third-party evaluator, such as UL Solutions, a product testing company that certifies safety compliance for a host of electrical products, including Christmas lights and televisions.

E-bike batteries rely on the same chemistry to generate power as the lithium-ion batteries in cellphones, laptops and most electric vehicles - products that were initially prone to overheating.

Tighter regulations, safety standards and compliance testing drastically reduced the risk of fires in such devices, according to Robert Slone, the senior vice president and chief scientist for UL Solutions.

The same can happen with e-bike batteries, he said, if they are made to comply with established safety standards.

"We just need to make them safe, and there is a way to make them safe through testing and certification," Slone said, "given the history that we've seen in terms of fires and injuries and unfortunately, deaths as well - not just in New York, but across the country and around the world."

In London, the fire brigade says lithium batteries are the city's fastest growing fire risk, with one fire erupting about every two days. Last year, there were a total of 116 fires involving e-bikes and e-scooters. At least one death has been attributed this year to an overheated battery.

In San Francisco, there have been at least 21 battery fires so far this year - compared with just 13 battery-related fires in 2017, according to an analysis by the San Francisco Chronicle.

Last year, some 1.1 million e-bikes were imported into the U.S., according to the Light Electric Vehicle Association, an industry group. In 2021, more than 880,000 e-bikes came into the country - about double from the year before and triple the number in 2019.

Many of the batteries now on the road are aftermarket products that are cheaply made and popular with delivery workers because of their lower prices.

"But that product is so cheap because it hasn't gone through those design and testing. ... It doesn't meet a standard, so that's why they're inexpensive," said Matt Moore, the general and policy council for the PeopleForBikes Coalition, which will also take part in the forum. "Even if there was a regulation, there will still be the ability of foreign sellers and manufacturers to send these products into the United States."

Source : The Economic Times

Brookfield signs MoU with Reliance Industries for onshore renewable power and decarbonization equipment manufacturing in Australi

Mumbai, August 01, 2023: Brookfield Asset Management has signed a Memorandum of Understanding (MoU) with Reliance Industries, a Fortune 500 company and India's largest private sector enterprise, to explore opportunities to manufacture renewable energy and decarbonization equipment in Australia.

The MoU aims to both accelerate and de-risk Australia's energy transition by enabling it to locally produce clean energy equipment such as PV modules, long duration battery storage and components for wind energy.

Under the terms of the MoU, Brookfield will work with Reliance to explore avenues of direct capital investment and development of skills, knowledge and expertise in the renewable energy sector of Australia to facilitate the nation's transition to a net zero future.

EVENTS AND CONFERENCES

INACOATING 2023

Date: August 23-25, 2023
City: (JIEXPO) Kemayoran, Jakarta – Indonesia
Country: Indonesia
Website: https://www.inacoating-exhibition.net/

Description: The paint and coating industry is one of few business sectors in Indonesia with strong domestic players with local brands dominating the paint and coating market. The country's key market growth drivers include, the rapid rates of urbanization, the rising population, the augmenting construction sector, and the surging middle class. The base year considered for the market study is 2020, and the forecast years are from 2021 to 2025.

INACOATING brings an essential focus to finished products, raw material suppliers and equipment manufacturers. marine and protective coatings technologies and offers attendees an opportunity to discover new ideas, find answers to technical challenges and source information for immediate use in their working environment.

The 11th edition of INACOATING will take place from 23 – 25 August 2023 at Jakarta International Expo (JIEXPO) Kemayoran, Jakarta – Indonesia. As the influential paint and coating show in Indonesia, INACOATING 2023 will be held together with INAMARINE 2023 (for Marine & Shipbuilding coating) and Chemical Indonesia 2023.

9TH ANNUAL SALES & MARKETING EFFECTIVENESS IN CHEMICALS SUMMIT

Date: Sept 26-27, 2023
City: Cologne, Germany
Country: Germany
Website: https://fleming.events/sales-marketing-effectiveness-in-chemicals/

Description: Welcome to the Sales & Marketing Effectiveness in Chemicals Conference, the premier two-day industry event designed to empower sales and marketing professionals in the dynamic chemical sector. Maximize your chemical business potential and join us for a captivating experience where cutting-edge strategies, insights, and innovative techniques converge, boosting profitability in the dynamic chemical industry and propelling your organization towards unparalleled success

CPHI BARCELONA

Date: Oct 24-26, 2023
City: Fira Barcelona Gran Via, Spain
Country: Europe
Website: https://www.cphi.com/europe/en/lp-ppc/barter.html

Description: CPHI Frankfurt is the largest pharma event of the year. Join thousands of pharma professionals and industry experts from across the entire supply chain to grow your knowledge and expand your network. CPHI Frankfurt is the place for you to make meaningful connections, enhance your knowledge and expertise, and to grow your business potential. Join us at the heart of pharma where innovation and collaboration combine to drive business forward.

EVENTS AND CONFERENCES

DYE+CHEM BANGLADESH INTERNATIONAL EXPO

Date: Sept 13 -16, 2023
City: Bangabandhu Bangladesh–China Friendship Exhibition Center
Country: Bangladesh
Website: https://www.cems-dyechem.com/

Description: 42nd DyeChem Bangladesh 2023 is a Comprehensive International Exhibition featuring Worldwide Dyestuffs & Fine & Specialty Chemical Manufacturers, focusing on the entire Textile & Apparel Industry of Bangladesh and also the other important Manufacturing Industries of the country. DyeChem Bangladesh is the Oldest, Biggest & Only International Exhibition of Bangladesh serving the Textile & Apparel Industry of Bangladesh for the past 22 years. Bangladesh has emerged as one of the major textile clothing products exporting nations. The demand for textile chemicals (dyes and auxiliaries) in the country has increased sharply in the recent years. In the fiscal year 2021-2022, Bangladesh exported Apparels worth US $42.613 billion, making it the second-largest apparel exporter in the world. The Dyestuff sector is one of the important segments of the chemical industry in Bangladesh, with a variety of sectors like textiles, leather, paper, plastics, printing inks and foodstuffs. The textile industry accounts for the largest consumption of dyestuffs at nearly 70%. Bangladesh is fully dependent on foreign Dyestuff and Chemicals. Every year, compared to local production, 95% of the Dyestuff and Chemicals are imported in Bangladesh mainly from China, India, Thailand, Taiwan, South Korea, USA, Germany, Italy, Spain, Singapore, Switzerland, Turkey. The Bangladesh Garment Manufacturers Exporters Association (BGMEA) revealed it is eyeing a 10% share of the global apparel market by 2025 and is aiming for an export target of US$100bn by 2030, making Bangladesh a highly potential market for Dyestuff and Fine & Specialty Chemicals. Participate in 42nd DyeChem Bangladesh 2023 Int'l Expo. Meet and connect with potential buyers through the Expo

CPHI KOREA

Date: Aug 30 - Sept. 1, 2023
City: COEX, Seoul, Korea
Country: Korea
Website: https://www.cphi.com/korea/en/home.html

Description: We are thrilled to announce that CPHI Korea will return in 2023, when it will take place from 30 August - 1 September at COEX in Seoul. With increasing need for the industry to regroup, we will concentrate our efforts on ensuring a thriving and successful comeback show that gives you the second-to-none business opportunities you have come to expect from our event.

ASIA PACIFIC COATINGS SHOW

Date: Sept 6 - 8, 2023
City: Bangkok International Trade & Exhibition Centre, Thailand
Country: Thailand
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.

Reliance and Brookfield will evaluate the establishment of advanced operations in Australia to make/or assemble equipment used in the construction of renewable energy projects supplying equipment to all players in the market including Origin Energy Markets. Reliance has strong expertise in solar panel technology and long duration battery storage technology. It is currently in the process of setting up one of the world's largest integrated renewable energy manufacturing facilities in India.

The MoU with Reliance is one of the key initiatives being undertaken by Brookfield to bring global manufacturing technology and expertise to Australia. In March this year, it signed a binding agreement with EIG to acquire Origin Energy. The proposed acquisition is currently going through the relevant approvals processes. As part of its proposed acquisition of the Origin Energy Markets division, Brookfield along with its institutional partners and global institutional investors GIC and Temasek have set out a plan to invest between A$20 billion and A$30 billion over the next ten years to accelerate its energy transition.

The MoU with Reliance intends to support this investment to ensure consistent and adequate supply of the clean energy equipment required to develop up to 14 GW of new, large-scale generation and storage capacity in Australia. Independent analysis undertaken for Brookfield indicates the establishment of onshore sovereign manufacturing capability for the energy transition has the potential to create approximately 18,000 direct and indirect jobs, many in regions most impacted by the transition such as the Hunter Valley in New South Wales and the La Trobe Valley in Victoria

Luke Edwards, Brookfield Renewable Head of Australia, said: "Australia has a proud history of manufacturing and an abundance of raw materials, but the industry is not currently cost competitive. The energy transition creates an opportunity to bring advanced manufacturing processes created offshore to Australia, which would secure the supply of critical equipment for the transition to help drive down Australia's emissions faster and contribute significantly to job creation. We want to help kickstart a new era in local manufacturing that will benefit domestic renewables developers, including Origin Energy Markets, and many communities around Australia. We are establishing these types of global partnerships in manufacturing now to allow us to get started as quickly as possible given the ever-reducing timeline for Australia to reach its first emissions-reductions targets in 2030."

Anant Ambani, Director, Reliance New Energy Limited, said: "At Reliance, we are firmly committed to the mission of creating a global clean energy ecosystem that is both beneficial to humanity and compatible with nature. Towards this end, Reliance is pursuing opportunities of investment in India and globally with great enthusiasm and passion. We are confident that Reliance and Brookfield will explore avenues in green energy in Australia, accelerating the nation's transition to a Net Zero future and providing a fillip to the global green energy movement."

Brookfield is uniquely placed to support these manufacturing initiatives given its track record in committing long-term capital to enable the energy transition, and its innovative approach to largescale investments in re-shoring of essential and strategic manufacturing processes and supply chains such as its investment in the US$30 billion Intel Chip plant in Nevada.

Source : Reliance Industries Limited

Nippon Paint China Develops Air-Purifying Architectural Coatings

Nippon Paint (China) Co., Ltd., East China University of Science and Technology (ECUST), and East China Normal University (ECNU) formally launched the "Photocatalytic Purification Coating Technology Innovation Platform."

This platform seeks to promote innovation and application of photocatalytic purification coating technology through a cooperative industry-academia model of innovation. Taking this launch as an opportunity, Nippon Paint China is committed to leading the development of future efficient solutions for urban air pollution control, improving living environments, and accelerating the construction of a beautiful China.

As China's "3060" dual-carbon goals and the new round of the Shanghai Clean Air Action Plan starting from 2023 progress, the "green transformation" of the coating industry has accelerated.

Dr. Xiu Guangli, rofessor of the ECUST School of Resource and Environmental Engineering, director of key laboratories endorsed by Ministry of Ecology and Environment and Shanghai Municipal Bureau of Ecology and Environment, emphasized the significance of updating architectural coating technology to reduce volatile organic compounds (VOCs) for greener buildings and greener cities.

Photocatalysis refers to the oxidation-re-

duction reaction generated by specific catalyst materials when exposed to light sources of a specific wavelength. Dr. Sun Zhuo, professor at the ECNU School of Physics and Electronic Science and academician of the Asia Pacific Academy of Materials, explained that nanocrystalline titanium nanomaterials have been demonstrated to be environmentally friendly, safe, and effective.

Currently, nanocrystalline titanium materials are utilized in the R&D of Nippon Paint China. Recent studies have proved that Nippon Paint China's photocatalytic purification coating technology used in Interior coating has formaldehyde removal, odor removal, antibacterial, and antiviral properties, whereas exterior coating can reduce nitrogen oxides effectively, with the removal rate of nitrogen dioxide reaching more than 80% in 2 hours[i].

This launch event marks the beginning of a strategic partnership between Nippon Paint China, ECUST, and ECNU that will strengthen joint scientific research, talent development, brand promotion, and technology transfer.

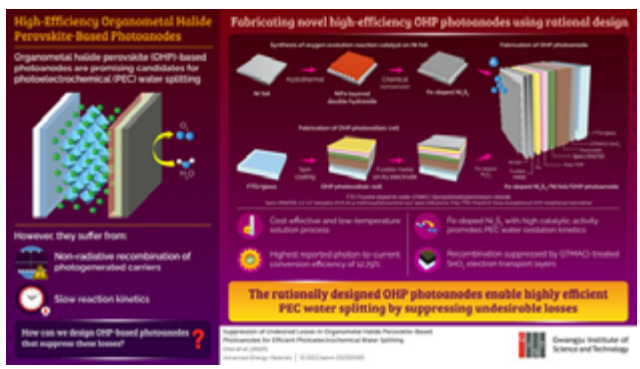
"Adhering to the corporate vision of 'building the most valuable ecological platform with technology and becoming the leader of the overall coating solutions', we will make technological innovation, talent cultivation, and industrial applications closely linked through this cooperation, creating a green future for the coating industry," said Eric Chung, CEO of Nippon Paint China.

Source : Coating World

Gwangju Institute of Science and Technology Researchers Develop Highly Efficient Organometal Halide Perovskite Photoelectrodes for Water Splitting

GWANGJU, China, Aug. 10, 2023 / PRNewswire/ -- Currently, hydrogen is mainly produced by natural gas, which, unfortunately, also generates greenhouse gases such as carbon dioxide as by-products. Scientists argue that hydrogen produced this way, while economical, is not truly sustainable, and thus requires a more eco-friendly approach for its generation. Photoelectrochemical (PEC) water splitting based on solar energy is one such promising approach. However, its widespread application is limited by a lack of efficient photoanodes for catalyzing the rate-limiting oxygen evolution reaction (OER), an important reaction in PEC water splitting.

Recently, organometal halide perovskites (OHPs) have emerged as a promising photoanode material on this front. Unfortunately, OHP-based photoanodes suffer from two undesired losses that limit their efficiency. One is an internal loss resulting from a recombination of photogenerated charge carriers (required for electricity generation) within the anode itself, which, in turn, hinders water splitting. The other is external loss due to the slow reaction kinetics of water splitting, resulting in a loss of charge carriers at the interface of the anode and electrolyte.



Against this background, a team of researchers from Korea and USA, led by Professor Sanghan Lee from Gwangju Institute of Science and Technology and including Associate Professor Jangwon Seo from Korea Advanced Institute of Science and Technology, has now developed a highly efficient OHP-based photoanode using a rational design approach, which overcomes the above limitations. Their study was published in the journal Advanced Energy Materials on June 17, 2023.

"The high efficiency of the photoanode for photoelectrochemical water splitting was achieved through the simultaneous suppression of internal and external losses of photogenerated carriers," highlights Prof. Lee.

In their work, the team fabricated a nov-

Booking price as on 11/08/2023		
Current Exchange rate-$1= 82.39 INR		
Chemicals name	Current Prices	Type
Acetic Acid	400	CFR India
Acrylonitrile	1130	CFR India
Benzene	745	FOB India
Phenol	890	CFR India
Acetone	730	CFR India
Butyl acrylate monomer	1200	CFR India
C9 solvent	950	CFR India
LAB	1510	CFR India
IPA	900	CFR India
Methanol	245	CFR India
VAM	800	CFR South Asia
Toluene	950	CFR India
Styrene monomer	980	CFR India
NBA	900-950	CFR India
2-eha	1150-1200	CFR India
Iso butanol	910-950	CFR India
MEG	470	CFR India
Mix xylene	980	CFR India
Gycerine	500	CIF India
DMF	780	CFR India
Acrylic acid	950	CIF India
Adipic Acid	1250	CIF India
Ethylene	945	CIF India
PTA	800	CFR India
Propylene	765	CIF India
THF	1500	CIF India
Note- All above booking prices have been directly collected from intenders and importers and verified.		

Mumbai Market Price as on 10/08/2023				
Name of Chemical	Packing type	Units	Current Price	Exclusive of
Acetic Acid	Imported Repack	Rs/Kg	47	GST
	Domestic Intact	Rs/Kg	57	GST
	Domestic Repack	Rs/Kg	47	GST
Acetone	Imported Intact	Rs/Kg	NA	GST
	Imported Repack	Rs/Kg	90	GST
	Domestic Intact	Rs/Kg	108	GST
	Domestic Repack	Rs/Kg	90	GST

Acetonitrile	Imported Intact	Rs/Kg	145	GST
	Domestic Intact	Rs/Kg	NA	GST
	Domestic Repack	Rs/Kg	NA	GST
Acrylonitrile	Imported Intact	Rs/Kg	135	GST
	Imported Repack	Rs/kg	130	GST
Aniline	Imported Intact	Rs/Kg	170	GST
	Imported Repack	Rs/Kg	165	GST
	Domestic Intact	Rs/Kg	172	GST
	Domestic Repack	Rs/Kg	NA	GST
Benzene	Domestic Repack	Rs/Litre	84	GST
Cyclohexane	Imported Intact	Rs/Kg	135	GST
	Imported Repack	Rs/Kg	NA	GST
	Domestic Intact	Rs/Kg	117	GST
	Domestic Repack	Rs/Kg	114	GST
Cyclohexanone	Imported Intact	Rs/Kg	135	GST
	Imported Repack	Rs/Kg	118	GST
	Domestic Intact	Rs/Kg	140	GST
	Domestic Repack	Rs/Kg	136	GST
C9 Solvent (99.99% purity)	Imported Repack	Rs/Kg	116	GST
C9 Solvent (Arham Petrochem)	Imported Repack	Rs/Kg	115.75	GST
Dibutyl Phthalate	Domestic Intact	Rs/Kg	126	GST
Dioctyl Phthalate	Imported Intact	Rs/Kg	NA	GST
	Domestic Intact	Rs/Kg	136	GST
Ethyl Acetate	Domestic Intact	Rs/Kg	87	GST
	Domestic Repack	Rs/Kg	85	GST
Formaldehyde(37%)	Domestic Intact	Rs/Kg	18.5	GST
	Domestic Repack	Rs/Kg	18	GST
Methanol	Imported Repack	Rs/Litre	31.75	GST
Methyl Ethyl Ketone	Imported Intact	Rs/Kg	120	GST
	Imported Repack	Rs/Kg	110	GST
Methyl Isobutyl Ketone	Imported Intact	Rs/Kg	178	GST
	Imported Repack	Rs/Kg	145	GST
	Domestic Repack	Rs/Kg	NA	GST
Methyl Methacrylate	Imported Intact	Rs/Kg	155	GST
	Imported Repack	Rs/Kg	NA	GST
Mixed Xylene	Imported Repack	Rs/Kg	98	GST
	Domestic Repack	Rs/Kg	98	GST
Monoethylene Glycol	Imported Intact	Rs/Kg	61	GST
	Imported Repack	Rs/Kg	55	GST
	Domestic Intact	Rs/Kg	63	GST
	Domestic Repack	Rs/Kg	56	GST

Iso propyl Alcohol	Imported Intact	Rs/Kg	NA	GST
	Imported Repack	Rs/Kg	108	GST
	Domestic Intact	Rs/Kg	120	GST
	Domestic Repack	Rs/Kg	108	GST
nButanol	Imported Intact	Rs/Kg	101	GST
	Imported Repack	Rs/Kg	93	GST
	Domestic Intact	Rs/Kg	104	GST
	Domestic Repack	Rs/Kg	93	GST
Ortho Xylene	Imported Repack	Rs/Kg	106	GST
Phenol	Imported Intact	Rs/Kg	NA	GST
	Imported Repack	Rs/Kg	108	GST
	Domestic Intact	Rs/Kg	111	GST
	Domestic Repack	Rs/Kg	108	GST
Phthalic Anhydride	Imported Intact	Rs/Kg	105	GST
	Domestic Intact	Rs/Kg	105	GST
Purified Terethaic Acid	Domestic Intact	Rs/Kg	NA	GST
Styrene Monomer	Imported Repack	Rs/Kg	109	GST
Toluene	Imported Repack	Rs/Kg	104	GST
	Domestic Repack	Rs/Kg	106	GST
Vinyl Acetate Monomer	Imported Repack	Rs/Kg	80	GST

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

International market prices as on 10/08/2023

Products	Regions	Current prices
Feedstock Prices $/unit		
Crude Oil ($/barrel)	WTI CRUDE	84.36
	BRENT CRUDE	87.48
	MARS US	85
	OPEC BASKET	87.61
Natural Gas	New York	2.96
Gasoline	RBOB	2.93
Heating Oil	US	3.2
Ethanol	US	2.19
Naphtha ($/mt)	FOB Singapore	630
	European	635
	CFR Far East Asia	661
Propane	New York	0.73
Aromatics prices $/MT		
Benzene	FOB Korea	885
	CFR Japan	905

Styrene	CFR Japan	1005
	CFR South East Asia	1040
	CFR China	1005
	FOB Korea	1010
Toluene	CFR China	945
	CFR South East Asia	1045
	FOB Korea	940
	CFR Japan	945
Iso-mix xylene	CFR South East Asia	960
	CFR Taiwan	1010
	FOB Korea	990
MEG	CFR China	470
	CFR South East Asia	480
Methanol	CFR China	262
	CFR Korea	286
	CFR South East Asia	287
	CFR Taiwan	282
Solvent-MX	CFR South East Asia	1040
	FOB Korea	975
	CFR China	980
Ortho xylene	CFR South East Asia	1110
	FOB Korea	1095
	CFR China	1085
Para xylene	CFR South East Asia	1050
	FOB Korea	1020
	CFR Taiwan	1035
Propylene	FOB Japan	785
	FOB Korea	755
	CFR China	805
	CFR South East Asia	780
Propylene Glycol	FOB Korea	895
	CFR China	920
	CFR South East Asia	925
	CFR Taiwan	920
Ethylene	CFR North East Asia	805
	CFR South East Asia	805
	FOB Japan	780
	FOB Korea	785
Ethylene Di Chloride (EDC)	CFR Far East Asia	290
	CFR South East Asia	280

Butadiene	CFR China	770
	CFR South East Asia	655
	FOB Korea	725
FOB Rotterdam USD/MT	Benzene	895
	Methanol	230
	Ortho xylene	1395
	Para xylene	1175
	Xylene solvent	1160
	Styrene	1400
	Toluene	1240
USA Aromatics prices FOB US Gulf	Benzene C/G	330
	Toluene C/G	407
	Styrene C/LB	54.8
	Para xylene $/MT	1115
	Mix xylene C/G	410
	Methanol C/G	70
Intermediates prices $/MT		
Acrylonitrile	CFR Far East Asia	1165
	CFR South East Asia	1165
	CFR South Asia	1020
EDC	CFR Far East Asia	250
	CFR South East Asia	250
VCM	CFR Far East Asia	680
	CFR South East Asia	690
MTBE	FOB Singapore	944
	FOB US Gulf	1181
Phenol	CFR China	930
	CFR South East Asia	990
	FOB US Gulf	950
	FOB Rotterdam	1008
Acetone	CFR China	750
	CFR South East Asia	910
	CFR Far East Asia	685
	FOB US Gulf	850
	FOB Rotterdam	821
Caprolactum	CFR Far East Asia	1555
	CFR South East Asia	1555
Caustic Soda	FOB North East Asia	310
	CFR South East Asia	355

Ethyl acetate	FOB US Gulf	1697
	FOB Rotterdam	876
	FD North West Europe(Euro/mt)	900
Butyl acetate	FOB US Gulf	2180
	FOB Rotterdam	1117
	FD North West Europe(Euro/mt)	1120
MEK	FOB Rotterdam	1007
	FD North West Europe(Euro/mt)	1007
IPA	FOB US Gulf	992
	FOB Rotterdam	909
	FD North West Europe(Euro/mt)	930
NBA	CFR China	1105
	CFR South East Asia	1125
	CFR Far East Asia	1100
Octanol	CFR China	1300
	CFR South East Asia	1280
	CFR Far East Asia	1295
DOP	CFR China	1345
	CFR South East Asia	1370
	CFR Far East Asia	1340
Phthalic anhydride	CFR China	1045
	CFR South East Asia	1055
	CFR Far East Asia	1040
	CFR South East Asia	790
Acetic Acid	CFR Far East Asia	445
	CFR South East Asia	445
	CFR South Asia	430
	FOB China	365
VAM	CFR China	860
	CFR South East Asia	820
	CFR South Asia	845
Polymers prices $/MT		
PVC Suspension	CFR Far East Asia	800-820
	CFR South East Asia	800-830
ABS Injection	CFR Far East Asia	1240-1290
	CFR South East Asia	1250-1300

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

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
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.			

Opening Ports Price (Rs/kg) of Chemicals as on 10/08/2023

USD Exchange Rate: 82.83 INR

Alphabets	Chemicals Name	Current Prices (INR/kg)	Prices in USD/mt Equivalent to INR/kg	Location
A	Acetic Acid	38	458.77	Ex-Mumbai
	Acetic Acid	37.5	452.73	Ex-Kandla
	Acetonitrile-imported intact	145	1750.57	Bhiwandi
	Acetone	80-82	Not Available	Ex-Mumbai
	Acrylic acid	95	1146.93	Ex-Mumbai
	Acrylonitrile	90	1086.56	Ex- Kandla
	Adipic acid	130	1569.48	Ex-Bhiwandi
	Aniline oil	128-130	Not Available	Ex-Kandla
	ABS Resin	127	1533.26	Ex-Mumbai Market
B	Benzene	70	845.10	Ex-Vizaz
	Butyl Acetate	110	1328.02	Ex-Kandla
	Butyl Acrylate monomer	104	1255.58	Ex-Kandla
	Butyl Glycol	105	1267.66	Ex-Kandla
E	EDC	29	350.11	Ex-Kandla
	Epoxy Resin	170	2052.40	Ex-Nhava Sheva
	Ethyl Acrylate	NA	Not Available	Ex-port

C	C10	104	1255.58	Ex-Kandla
	C9	100	1207.29	Ex-Kandla
	Carbon Black- regular grade	65	784.74	Mumbai
	Caustic Soda Lye	29	350.11	Ex-Dahej
	Caustic Soda Flake	38.5	464.81	Ex-Mumbai
	Chloroform	18.5	223.35	Ex-Dahej
	Citric Acid-ANHYD	74	893.40	Ex-Bhiwandi
	Citric Acid-Mono	64	772.67	Ex-Bhiwandi/Ex-Mumbai
	Cyclohexane	95	1146.93	Ex-Hazira
	Cyclohexanone	106	1279.73	Ex-Kandla
D	DMF Drum	82	989.98	Ex-Bhiwandi
	DIBP & DINP intact drum	127&134	Not Available	Mumbai Market
	DEG	NA	Not Available	Ex Hazira
F	Formic Acid	70	845.10	Ex-Bhiwandi
G	Glycerine	NA	Not Available	CIF Nhava Sheva
H	N-Heptane	150	1810.94	Ex-Bhiwandi
	Hexane	71	857.18	Ex-Kandla
	Hydrogen Peroxide-50%	NA (30.5 NPL, 32 Maghmani)	Not Available	Ex-Bhiwandi
I	Isobutanol	82-83	Not Available	Ex-Kandla
	IsoPropyl Alcohol	99-100	Not Available	Ex-Kandla/Ex-Mumbai
L	LAB	105	1267.66	Imported
M	Maleic Anhydride-Drum	NA	Not Available	Ex-Mumbai
	MDC	34	410.48	Ex-Dahej
	MEG	49	591.57	Ex-Mumbai
	MEK	94	1134.85	Ex-Kandla
	Melamine	NA	Not Available	Imported
	Meta Para Cresol	85	1026.20	Ex-Bhilai
	Methanol	22.5	271.64	Ex-Kandla/Ex-Mumbai
	MIBK	131	1581.55	Ex-Kandla
	Mix Xylene- Solvent Grade	90.5	1092.60	Ex-Kandla
	Mix Xylene-Solvent Grade	89	1074.49	Ex-Mumbai
	Mix Xylene-Iso Grade	90.5	1092.60	Ex-Kandla
	Mix Xylene-Iso Grade	NA	Not Available	Ex-Mumbai
	MMA	149	1798.87	Ex-Hazira

N	N-Butanol	82.5	996.02	Ex-Kandla
	N-Propanol	97	1171.07	Ex-Kandla
O	Octanol	105	1267.66	Ex-Kandla
	Ortho Cresol	250	3018.23	Ex-Bhilai
	Ortho Xylene	95	1146.93	Ex-Mumbai
P	Phenol	94-96	Not Available	Ex-Kandla
	Phenolic Resin	150	1810.94	Ex-Indore
	Phthalic Anhydride	105	1267.66	Ex-Mumbai
	Propylene Glycol	108	1303.88	Ex-Kandla
	PVC Resin	82	989.98	Ex-Mumbai Market
S	Sodium Nitrate (50Kg Bag)	61	736.45	Ex-Taloja Plant(-Make-Lasons)
	Soda ash light	NA (33 Kolkata)	Not Available	Ex-Bhiwandi
	Styrene Monomer	97	1171.07	Ex-Kandla
	Styrene Monomer	98	1183.15	Ex-Mumbai
	Sulphuric Acid	5 Vapi / 4.5 kolkata	Not Available	Ex-Vapi
T	Tio2(Anatase Grade)	190	2293.85	Ex-Bhiwandi
	Tio2(Rutile Grade)	215	2595.68	Ex-Bhiwandi
	Toluene	97	1171.07	Ex-Kandla
	Toluene	97.5	1177.11	Ex-Mumbai
V	VAM	71	857.18	Ex-Kandla
	VAM	72	869.25	Ex-Hazira
Numbers	2,4-2,5 Xylenol	200	2414.58	Ex-Bhilai

Producer Prices (Rs/kg) of Chemicals as on 10/08/2023

Producers	Chemicals Name	Current Price(Rs/kg)	Import parity price in USD/MT	Production capacity	Location
Deepak Phenolics	Phenol	89.5	1080.53	200,000 tonnes/year	Dahej
	Acetone	73	881.32	80.5	Dahej
	IPA Bulk	95.5	1152.96	30,000 tonnes/year	Dahej
TATA Chemicals	Soda Ash light	41	498.24	900,000 tonnes/year	Mithapur
GACL	Soda Ash light	NA	Not Available		

RIL	Toluene	(96 Jamna-gar)	Not Available	100,000 tonnes/year	Hazira
	Mix Xylene	(90 Jamna-gar)	Not Available	120,000 tonnes/year	Dahej
	MEG	51.8	625.38	750,000 tonnes/year	Jamnagar
	DEG	64.5	778.70	65,000 tonnes/year	Jamnagar
	TEG	111.7	1348.55	NA	Jamnagar
	LAB	135.5	1635.88	180,000 tonnes/year	120ktpa Patal-ganga, 60ktpa Vadodra
	PTA	82	989.98	1,300,000 tonnes/year	Dahej
IOCL	LAB	NA	Not Avail-able	120,000 tonnes/year	Koyali, Gujarat
	MEG	47.2	569.84		Ex-Odisha(Paradip
	MEG	51.4	620.55		Ex-Panipat
	DEG	63	760.59		Ex-Odisha(Paradip
	DEG	67.1	810.09		Ex-Panipat
	Banzene	69	833.03		Vadodara, Gujarat
	Paraffin Wax	NA	Not Available		
Adipic acid	Ex-Deepak	NA	Not Available		
	Ex-BASF	134	1628.39	210,000 tonnes/year	Germany
NIRMA	LAB	135	1640.54	120,000 tonnes/year	Vadodra
GNFC	Acetic Acid	36.5	443.55	160,000 tonnes/year	Bharuch
	Aniline Oil	137	1664.84		Bharuch
GSFC	Cyclohexane	89	1081.54	NA	Gujarat
	Cyclhexanone	NA	Not Avail-able	NA	Gujarat
GNFC	Acetic Acid	37	446.70	160,000 tonnes/year	Bharuch
	TDI Drum	192	2318.00	67000 tonnes/year	Bharuch
	Aniline Oil	132	1593.63		Bharuch

Arham Petrochem Pvt Ltd (Kandla Energy & Chemicals Ltd Refinery)	C9	99.75	1204.27	69,000 tonnes /year	Kandla
	C9	100.75	1216.35	69,000 tonnes /year	Ahmedabad
	C10	103.5	1249.55	30,000 tonnes /year	Kandla
	C10	103	1243.51	30,000 tonnes /year	Ahmedabad
	C10 - Imported Repack	125.5	1515.15	30,000 tonnes /year	Bhiwandi Warehouse
	MTO/White Spirit(kl)	59.65	720.15	75000 tonnes / Year	Kandla
	MTO/White Spirit(kl)	60.65	732.22	35,000 tonnes /year	Ahmedabad
	De-Aromatised D40	130	1569.48	75000 tonnes / Year	Kandla
	De-Aromatised D40	131	1581.55	35,000 tonnes /year	Ahmedabad
	De-Aromatised D60	139	1678.14	75000 tonnes / Year	Kandla
	De-Aromatised D60	140	1690.21	35,000 tonnes /year	Ahmedabad
HOCL	Phenol	108	1303.88	40,000 tonnes/year	Kochi
	Acetone	79	953.76	24640 tonnes/year	Kochi
SI GROUP	Phenol	NA	Not Available	39500 tonnes/year	Ratnagiri, Maharashtra
	Acetone	64	772.67	24000 tonnes/year	Ratnagiri, Maharashtra
	Phthalic Anhydride	88	1062.42	11000 tonnes/year	Ratnagiri, Maharashtra
	Benzene	NA	Not Available	NA	NA
Andhra Petrochemicals	Octanol	110	1328.02	70,000 tonnes/year	Vishakhapatnam
	N-Butanol	79	953.76	30,000 tonnes/year	Vishakhapatnam
	Iso-Butanol	79	953.76	4000 tonnes/year	Vishakhapatnam
Adipic acid	Ex-Deepak	NA	Not Available		
	Ex-BASF	134	1617.77	210,000 tonnes/year	Germany

BPCL	Benzene	67.5	814.92	90,000 tonnes/year, Mumbai Refinery,	87000 tonnes/year,Ko-chi
	Toluene	95	1146.93	16,000 tonnes/year	Kochi Refinery
	Hexane(kl)	88.4	1067.25	35,000 tonnes/year, Kochi	Mumbai Refinery
	Hexane(MT)	133.1	1606.91	35,000 tonnes/year, Kochi	Mumbai Refinery
	MTO(kl)	NA	Not Available	19,000 tonnes/year	Mumbai Refinery
	Paraffin Wax	NA	Not Avail-able		
	Sulphur(Molten)	9.5	114.69	19,000 tonnes/year	Kochi Refinery
	Acrylic Acid (Bulk)	80	965.83	47000 tonnes/year	Kochi Refinery
	Acrylic Acid (Packed)	94	1134.85		Kochi Refinery
	2-Ethyl Hexanol (B)	97	1171.07	47000 tonnes/year	Kochi Refinery
	2-Ethyl Hexanol (P)	120.6	1455.99		Kochi Refinery
	N-Butanol(B)	82	989.98	38000 tonnes/year	Kochi Refinery
	N-Butanol(B)	82.5	996.02		Kandla Installation
	N-Butanol(P)	100.3	1210.91		Kochi Refinery
	Iso-Butanol(B)	79	953.76	7000 tonnes/year	Kochi Refinery
	Iso-Butanol(P)	100	1207.29		Kochi Refinery
	Butyl Acrylate (B)	96	1159.00	180000 tonnes/year	Kochi Refinery
	Butyl Acrylate (B)	103.5	1249.55		Kandla Installation
	Butyl Acrylate (P)	128	1545.33		
	2-Ethyl Hexyl Acrylate(B)	125	1509.12	10000 tonnes/year	Kochi Refinery
	2-Ethyl Hexyl Acrylate(P)	138	1666.06		Kochi Refinery
NIRMA	LAB	135	1629.84	120,000 tonnes/year	Vadodra
TATA Chemicals	Soda Ash light	41	494.99	900,000 tonnes/year	Mithapur
GACL	Soda Ash light	NA	Not Available		
GSFC	Cyclohexane	93.5	1128.82	NA	Gujarat
	Cyclhexanone	NA	Not Available	NA	Gujarat

MDC	Grasim	26	313.90	33000 tonnes/year	Nagda, Madhya Pradesh
	Meghmani	30	362.19	397500 kg/ month	Ankleshwar, Gujarat
	Rayalseema	NA	Not Available	40 tonnes/month	Bharuch, Gujarat
	GACL	26	313.90	NA	Bharuch, Gujarat
Ethyl Acetate	GNFC	75.5	911.51	50000 tonnes/year	Bharuch, Gujarat
	Accord	73.5	887.36		
	Satyam	NA	Not Available	50 tonnes/day	Nevasa, Maharashtra
	Bhange	NA	Not Available	400ltr/day	Ahmednagar, Maharashtra
	Jubilant	75	905.47	280 tonnes/day	Gajraula, U.P
	Laxmi	73.75	890.38	100000 tonnes/annum	Mahad, Maharashtra
Caustic Soda Lye	Meghmani	28.5	344.08	400000 tonnes/annum	Bharuch, Gujarat
	GACL	NA	Not Avail-able		
	RIL	NA	Not Available	69500 tonnes/annum	Kurnool Distric, Andhra Pradesh
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 de-pends on last changing.					

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el Fe-doped Ni3S2/Ni foil/OHP photoanode in three steps. They first synthesized the Fe-doped Ni3S2 catalyst for OER on Ni foil through a hydrothermal method followed by a chemical conversion. They then separately fabricated the OHP photovoltaic cell consisting of SnO2 electron transport layers (ETLs) through spin coating. Finally, they combined the two components to obtain the photoanode.

The team found that adding glycidyltrimethylammonium chloride (GTMA-Cl) to the anode passivated the defects at the OHP/ETL interface, effectively suppressing the undesired charge carrier recombination within the anode. Further, it enhanced the light-soaking stability of the OHP cell, a crucial factor in real-world PEC water splitting. Additionally, the high catalytic activity of Fe-doped Ni3S2 ensured a high OER rate at the anode, reducing the loss of photogenerated carriers within the electrolyte.

Consequently, the Fe-doped Ni3S2/Ni foil/OHP photoanode exhibited an unprecedented applied bias photon-to-current conversion efficiency of 12.79%, higher than that reported for OHP-based photoanodes in existing studies.

Overall, this study provides important insights into the prospects of rationally designed OHP-based photoelectrodes, as Prof. Lee highlights: "The proposed technology is expected to contribute to the vitalization of the hydrogen economy and carbon neutrality by enabling a large-scale and eco-friendly hydrogen production using solar energy without external voltage in the next 10 years. This, in turn, will help realize hydrogen as an ideal renewable source of energy in the future."

Source : PRNewswire

Backdrop Paint Manufacturer Teams with Porsche for New Paint Palette

Porsche German automaker, recently partnered with Backdrop, a paint manufacturing company, to create a palette of four interior paints based on colors from Porsche's most recognizable sports cars.

The limited-edition collection celebrates Porsche's history, coinciding with Porsche's 75th anniversary and will be available now until the end of the year exclusively at Backdrop's website.

"Everything we do at Backdrop centers around our love of color," said Backdrop co-founder Natalie Ebel. "Naturally, we jumped at the chance to work with an iconic brand like Porsche, which has always been synonymous with its bold statement-making color palette. I'm incredibly excited to translate our shared love of design and spirit of self-expression into a collection that will take on a new life in our homes and on our walls."

The palette features:

- Irish Green: A dark hunter green first seen on a 356C sports car in 1964. This shade is also one of the first colors to appear on the Porsche 911.

- Ruby Star: This color dates back to 1991 on the Porsche 911, 928, and 944. It is a deep magenta red that is distinct and bold.
- Speed Yellow: This vibrant yellow is distinctly connected to the Porsche brand and t the sports car. It first appeared in 1991 on the Porsche 911.
- Rivera Blue: An electric bright blue that was developed in 1994. This color has been featured on the 911, 928, and 968 models.

"Individualization is at the core of Porsche," commented VP of marketing of PCNA Ayesha Coker. "Whether it's a custom-built Taycan or your home office, we want to

inspire all to dream in full color. Together with Backdrop, we've curated a series of bright, saturated colors that have significance to us and are sure to bring the beloved Porsche aesthetic to your home interior design."

The four-piece limited-edition collection comes in a co-branded paint can an includes a limited-edition Porsche 75 leather key chain, which will retail for $75 per gallon.

Backdrop was founded in 2018 and offers Green Wise certified and low-VOC paints that are delivered to your door. In 2020 Backdrop became the first paint company to become Climate Neutral certified. Backdrop was acquired by F. Schumacher & Co in 2021.

Source : Coating World

Sun Chemical to Present Extensive Range of Sustainable Solutions for Labels and Packaging at Labelexpo Europe 2023

SOUTH NORMANTON, UK – July 31, 2023 – Sun Chemical will highlight its growing range of sustainable solutions for the labels and flexible packaging industries at Labelexpo Europe 2023 (Hall 5, Stand E45), highlighting its unique position as a provider of inks, coatings, adhesives, packaging design, colour management and sustainability analysis. Based on a "5R" (Reuse, Reduce, Renew, Recycle, and Redesign) sustainability framework and associated product portfolio, Sun Chemical aims to help packaging producers and converters to drive their businesses forward in a more environmentally sustainable way.

Sun Chemical will also be showcasing solutions to boost efficiency and productivity and will be highlighting key specialty products, as well as its latest digital inkjet solutions. Mark Walkling, Product Manager, Energy Curing Packaging Products and Narrow Web Labels Europe will present a segment titled 'Specialist Inks and Coatings' during the Wine Labeling Master Class on 14th September at 11:05am. Registration is required.

Product solutions on display that enable sustainability will include:

- The SolarFlex CRCL and SolarWave CRCL deinkable UV and UV LED flexo ink systems, and Solvawash deinking solvent-based inks for crystallisable PET sleeves, which meet APR performance protocols.
- Retention primer, ink and coating systems, including SolarWave UV LED flexo inks, which also meet industry design for recycling protocols.
- SolarWave FSP UV LED food compliant inks, independently tested and certified as non-ecotoxic, making them suitable for compostable packaging. Samples on the stand will be printed on a compostable pouch created in partnership with Flexprinter, Belgium.
- Innovative UV coatings based on recycled polyester and with high biosourced raw material content.
- A complete range of flexographic, offset and screen UV LED and Electron Beam product solutions for labels and packaging, including coatings and adhesives.

Specialty Products displayed on the stand will include:

- A full range of screen inks and coatings for specialty labels, including opaque whites, food compliant, tactile and full matt products, and more.
- A new range of high-performance SolarWave Panther flexo UV LED black inks.
- The SunInspire portfolio of special effect products, including MirrorTech, a printable foil replacement solution.
- Ranges of metallics for flexo and offset printing suitable for curing under UV LED and Hg UV for standard and migration-compliant applications.
- Inks for printed electronics / antennas for smart labels and RFID.

Solutions to improve productivity and efficiency will include:

- Adapted dispensing solutions for small and larger converters.
- Sun Chemical will also showcase its own Extended Colour Gamut (ECG) solution, SunECG. Part of SunColorBox, SunECG is a unique set of tools and services that enables consistent and accurate digital color commu-

nication throughout the entire packaging supply chain. SunECG reduces changeover and make-ready time for multiple print jobs using expanded colour gamut printing.

Digital inkjet solutions

SunJet inkjet inks for labels and packaging applications will be another highlight on the Sun Chemical stand. Using proven technology gained over many years of developing and manufacturing inkjet inks for OEM and integration partners around the world, the latest and most demanding application and regulatory compliance requirements can now be met for all printhead and press configurations. With global inkjet manufacturing facilities in US, Europe, China and Japan, SunJet inkjet UV, LED and Aqueous inkjet inks can be supplied with maximum shelf life and with reduced environmental footprint and costs.

SunJet is the supplier of choice for most OEMs and integrators in the labels sector. As inkjet technology is increasingly adopted for packaging applications, Sun Chemical's breadth and depth of expertise in the wider packaging market is helping to drive the implementation of SunJet inkjet inks in this rapidly growing sector.

The latest SunEvo offerings for digital printed packaging will also be featured. SunEvo is a unique toolbox of analogue-applied primers, coatings and lamination adhesives that enhance digitally printed packaging. SunEvo digital coatings range from bespoke primers for a variety of substrates and printing applications to overprint varnishes, adhesion promoters and lamination adhesives optimised for use in combination with digital inks.

Luminescence, Sun Chemical's dedicated global security solutions business unit, will also showcase its wide-range of high-quality security solutions to help protect high-value narrow web applications from counterfeiters.

Nicolas Betin, Director of Product Strategy, EMEA & Global Sustainability Business Leader at Sun Chemical, says: "After a four-year hiatus, Labelexpo Europe 2023 provides a valuable opportunity for Sun Chemical to promote its sustainable solutions for the labels and flexible packaging markets and to demonstrate our commitment to working towards a circular economy. Key to achieving this aim is making sustainable decisions ourselves, while also making it easier for our customers and partners to do the same."

Source : Sun Chemical

PPG Inaugurates Center of Excellence in Italy, Increases Efficiency for Automotive Color Development

PPG has inaugurated a center of excellence at its Quattordio, Italy site that will increase the efficiency for automotive color development and application. The $2.6 million (2.3 million euros) investment combines color development and application in a single process, reducing the lead time to bring new colors to market, optimizing costs and maximizing color performance.

The facility is equipped with artificial intelligence (AI) tools that will be used in the color development and quality control processes. These include a statistical and machine learning tool that can reduce the number of color adjustment steps, reducing costs and overall cycle time during the development of basecoats and colored products.
"With this new facility, PPG will elevate its color development to a new level, utilizing digital tools to simplify and modernize the processes," said Federico Menta, PPG global director, decorative business, Automotive Coatings. It is also a critical enabler to fulfill our customer expectations in terms of speed, accuracy and quality."

Quattordio is a key production site and innovation hub for PPG's Automotive Coatings in Europe. It also has a styling center, which is used to support the study and development of new automotive colors.

"This project reflects PPG's ambition to be the first-choice partner to meet customers' evolving needs for innovative paints and coatings and provide industry-leading solutions that provide productivity and sustainability benefits," said Isabella Ercole, PPG operations director EMEA, Industrial Coatings, segment." This new center of excellence, an end-to-end combination of the development and application of colors, is also an investment in our employees, who will benefit from an innovative workspace and will be able to improve their skills working together as a One PPG Team."

Source : Coatuings World